

Converting Exaquantum/PIMS from Data to Combined Server role

KB-0030-22

Document Summary	
Article Type	User Guide
Products Affected	Exaquantum/PIMS
Function Affected	Server Roles
Audience	System Integrators & Administrators
Summary	This User Guide provides the steps required to convert an existing Exaquantum/PIMS Data Server role installation to a Combined Server role installation.
Review Date	Document to be reviewed before November 2024

Blank Page

Table of Contents

Table of Contents	1
Chapter 1 Introduction	2
1.1 Audience.....	2
Chapter 2 Preparation	3
2.1 Preparation	3
2.2 Other Yokogawa Products	4
2.2.1 Exaquantum/ARA	4
2.2.2 Exaquantum/ORM	5
2.2.3 Exaquantum/OTM.....	5
2.3 System Rollback Option.....	6
2.3.1 Preparation	6
2.3.2 Execution.....	6
Chapter 3 Procedure.....	7
3.1 Uninstallation	7
3.2 Server Roles, Features, & Exaquantum Prerequisites	7
3.3 Installation.....	7
3.4 Exaquantum Patches.....	7
Chapter 4 Function Check	8
4.1 List of Exaquantum Function Checks	8
Chapter 5 Further Reading.....	9
Copyright and Trademark Notices	10
Highlights.....	11

Chapter 1 Introduction

Deployment of Exaquantum services will be well planned in advance of installation of server roles. However, in the circumstance of needing to convert a Data Server role to a Combined Server role, this User Guide contains the conversion steps.

Note the target version for the Combined Server role is assumed to be the same as the Data Server.

1.1 Audience

This guide is intended for system integrators and administrators with full administrative access to the Exaquantum server. If the Standard Domain security model is in use, a domain administrative account may be required.

Knowledge and familiarity of SQL Server is expected to backup the relevant databases if necessary.

Chapter 2 Preparation

2.1 Preparation

If the licence key for installation has not expired, then this can be reused. If the same hardware is to be used, then the keycode should not need to be re-entered. If there is no Exaquantum Web Server on the licence, then a new licence key will be required. In this case or for other licence enquires, please contact support.ymx@yokogawa.com.

A backup location is required with sufficient space for either a full Exaquantum server checkpoint or a full backup of all Exaquantum databases and any additional Exaquantum application databases.

Consideration must be given for all other Yokogawa products and all systems affected by a change to the Exaquantum system. It is recommended that the installation and configuration steps for each of the products is reviewed prior to commencement of the conversion steps.

2.2 Other Yokogawa Products

This is not an exhaustive list of affected products and it is necessary to consider all other Yokogawa products that could be affected by the Exaquantum server change. If unsure about the impacts of converting the Exaquantum server will have on a product, please contact support.ymx@yokogawa.com for advice.

A function check of all applications should be carried out once work on the Exaquantum is completed.

Known product considerations are:

2.2.1 Exaquantum/ARA

2.2.1.1 Pre-Uninstallation Tasks:

1. Disable the ARA Update Job as per the Exaquantum/ARA Engineering Guide. Wait for any current running ARA Update Job to complete by opening the SQL Job Activity Monitor.
2. Open the Windows Services Manager or the SQL Server Configuration Manager and note the service user for the SQL Server Agent role.
3. The Exaquantum/ARA databases to backup:
QApplicationConfig
QApplicationData
EventsAnalysis

Note the Exaquantum/ARA databases should not be affected by the installation of the Combined Server role and a backup is taken for rollback option only.

The IT Security Tool will reset the SQL Server Agent to the default user of Quantumuser or QTM_SQLSERVER, depending on the security model used.

2.2.1.2 Post-Installation Tasks

After the Exaquantum installation is complete:

1. If necessary, change the SQL Server Agent user as noted (e.g. "ARA_PROCESS").
2. The ARA Update Job can be re-enabled once the conversion has been carried out and the function checks in Chapter 4 completed.

2.2.2 Exaquantum/ORM

Take a backup copy of the ORM configuration files. These files are found in <Exaquantum/ORM installation path>/Configuration.

2.2.2.1 Pre-Uninstallation Tasks:

1. Uninstall ORM patch 1 as per the Uninstallation Instructions in the Patch Summary. Note these instructions include a repair of the OPC Core Components required by Exaquantum.
2. Uninstall ORM using the Windows Server Control Panel Add/Remove Programs feature.

2.2.2.2 Post-Installation Tasks

After the Exaquantum installation is complete:

1. Reinstall Exaquantum/ORM as per the Exaquantum/ORM Installation & Configuration Manual.
2. If required, install Exaquantum/ORM patch 1 as per the Patch Summary.
3. Restore the ORM configuration files to their appropriate location in the Exaquantum/ORM directory.
4. If necessary, recomplete the Exaquantum/ORM patch 1 configuration items as per the Patch Summary.

2.2.3 Exaquantum/OTM

No known current steps needed other than a function check of services after the conversion is complete.

2.3 System Rollback Option

2.3.1 Preparation

If the Exaquantum system is virtualized then the easiest rollback option is to take a system checkpoint at this time. If not, take a full backup of all Exaquantum databases and any additional Exaquantum application databases.

The Exaquantum databases to backup:

QConfig

QHistorianAdmin

QHistorianData

QWeb

Please consider carefully any configuration files and documents (or reports) that will be needed in the event of a rollback. Backups of these files should be taken before commencing the Exaquantum server conversion.

2.3.2 Execution

Stop Exaquantum services on the Exaquantum/PIMS server using the Exaquantum Services Manager.

Depending on the backup option used, either:

- Revert to the checkpoint.
- Restore the Exaquantum databases and re-install the Exaquantum/PIMS Data Server role with the option of overwriting the databases *not* selected. This is the default option during Exaquantum installation. The IT Security Tool that runs at the end of the installation will recreate permissions on the databases.

It is recommended the function checks detailed in Chapter 4 are carried out if a rollback option is exercised.

Chapter 3 Procedure

The following steps can be followed to convert an Exaquantum Data Server to an Exaquantum Combined Server.

3.1 Uninstallation

1. Uninstall Exaquantum/PIMS as per the Exaquantum Installation Guide Chapter 12.7. Note this will not remove any prerequisites that were installed as a part of Exaquantum.
2. After the uninstall has completed, reboot the server.

3.2 Server Roles, Features, & Exaquantum Prerequisites

3. Install any additional Windows Server roles and features for Exaquantum/PIMS Combined Server. The required roles and features can be found in the Exaquantum Installation Guide Chapter 3.3.
4. Install and verify all Exaquantum prerequisites are installed using Disk 1 of the Exaquantum installation media.

3.3 Installation

5. Install Exaquantum/PIMS Combined server using Disk 2 of the Exaquantum installation media.
6. After the IT Security Tool has run, it is necessary to reboot the server.

3.4 Exaquantum Patches

7. Install any Exaquantum/PIMS patches as per their corresponding Patch Summary.
8. Run the IT Security Tool after completing patch installations.
9. Confirm to reboot the server after the IT Security Tool has run.

Chapter 4 Function Check

4.1 List of Exaquantum Function Checks

Some advised checks are tabled below to check the operation and functionality of Exaquantum once the role conversion has been completed.

Check	Pass
Start the Exaquantum Services	
Check operation of History Catchup	
Check OPC DA data collection	
Check OPC Alarm & Event collection	
Check Excel Add-In functions	
Check Exaquantum performance counters and Diagnostics tags*	
Check Exaquantum Web Services	

*Please refer to Exaquantum Engineering Volume 1 Chapter 4.11 for details on Exaquantum diagnostic data stored in Exaquantum tags.

Any errors in testing the above checks will generally be detailed in the application event logs. If necessary, review the event logs as the first step in investigating an Exaquantum issue.

If additional support is required, the event logs along with a detailed explanation of the issue can be submitted to the Yokogawa support email address support.ymx@yokogawa.com.

Chapter 5 Further Reading

It is recommended that the installation and configuration steps for each of the products is reviewed prior to commencement of the conversion steps.

Product documentation and support can be found on the Yokogawa website
<https://ymx.yokogawa.com/support>.

Any further inquiries can be made to the Yokogawa support email address
support.ymx@yokogawa.com.

Copyright and Trademark Notices

© 2022 Yokogawa Electric Corporation

■ All Rights Reserved

The copyright of the programs and online manuals contained in the software medium of the Software Product shall remain with YOKOGAWA.

You are allowed to print the required pages of the online manuals for the purposes of using or operating the Product; however, reprinting or reproducing the entire document is strictly prohibited by the Copyright Law.

Except as stated above, no part of the online manuals may be reproduced, transferred, sold, or distributed to a third party in any manner (either in electronic or written form including, without limitation, in the forms of paper documents, electronic media, and transmission via the network).

Nor it may be registered or recorded in the media such as films without permission.

■ Trademark Acknowledgements

- CENTUM, ProSafe, Exaquantum, Vnet/IP, PRM, Exaopc, Exaplog, Exapilot, Exasmoc and Exarqe are registered trademarks of Yokogawa Electric Corporation.
- Microsoft, Windows, Windows Server, SQL Server, Excel, Internet Explorer, SharePoint, ActiveX, Visual Basic, Visual C++, and Visual Studio are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
- Adobe and Acrobat are registered trademarks of Adobe Systems Incorporated and registered within particular jurisdictions.
- Ethernet is a registered trademark of XEROX Corporation.
- All other company and product names mentioned in this manual are trademarks or registered trademarks of their respective companies.
- We do not use TM or ® mark to indicate those trademarks or registered trademarks in this manual.
- We do not use logos in this manual.

Highlights

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

- **Summary of Changes**

This is Issue 2.0 of the document related to Product Library version 7.0.

- **Detail of Changes**

The changes are as follows:

Chapter/Section/Page	Change
Front page	Review Date updated
Pages 3,4,8,9	Email address updated