

Cross-domain Setup Guide

KB-0032-22

Document Summary	
Article Type	FAQ
Products Affected	Exaquantum/PIMS
Versions Affected	Any
Function Affected	Cross Domain Deployment
Available Resolution	N/A
Audience	System Integrators and Administrators
Summary	This FAQ documents the steps involved with deploying Exaquantum server and client services across multiple domains.
Review Date	Document to be reviewed before November 2024

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Chapter 1 Introduction

This document describes the steps required to configure Exaquantum services and clients across multiple domains. It is typical for customers to logically separate process and office domains in line with their business layer. Exaquantum services will often be used at both these business layers, therefore there is a requirement to expand on the installation steps provided by the Exaquantum Installation Guide to include this type of deployment.

There is the additional complication that often, the Standard Domain security model is utilized in domain deployments, therefore additional detail is required for the install and configuration process to ensure server and client communications function across domains.

The principles of this document will apply to versions of Exaquantum R3.01 and newer. The document references apply to Exaquantum version R3.30.

1.1 Audience

This guide is intended for Exaquantum system integrators and administrators for deployment of Exaquantum services, along with domain administrators to configure Exaquantum domain users and groups.

It is expected the documents referenced in chapter 3 of this guide have been read and understood prior to carrying out these steps.

Chapter 2 Procedure

2.1 Installation across 2 domains

2.1.1 Domain Configuration

There are 2 domains in this configuration. Both are child domains with a transitive relationship with the parent domain, therefore the 2 domains have implied outgoing and incoming trust relationships.

In this configuration, domain A contains the Exaquantum combined server and the Exaquantum users & groups. The server and clients in domain A are installed using the Standard Domain security model, whereas the clients in domain B are installed as Standard Standalone security model. However, the domain users in domain B with access to the Exaquantum client services are managed by the domain administrator.

This configuration assumes that all Exaquantum administrative duties will be carried out in domain A, and domain B will only require read access. It is possible to extend administrative permissions to domain B using the same below steps with the appropriate permission groups, however this is currently an untested setup.

DNS services across both domains are expected to maintain forward and reverse lookup entries. This means a host in domain A is expected to be able to carry out a forward or reverse lookup for a host in domain B.

There are no additional steps to the configuration of DCOM ports or firewalls outside of the normal behavior of the IT Security Tool. Additional details on the configuration of firewalls (with regards to Exaquantum), and the restriction of DCOM ports, can be found in the Exaquantum Engineering Guide Volume 2, Chapter 2.3.

If a non default password is used for the local QTM_PROCESS user, this password will need to be also set on all clients in both domains. This change will need to be repeated for subsequent runs of the IT Security Tool.

2.1.2 Domain A

Security model: Standard Domain

1. Follow the steps in the Exaquantum Installation Guide Chapter 2.24 to create the domain Exaquantum groups:
 - a. EXA_MAINTENANCE
 - b. QTM_DATA_READ
 - c. QTM_DATA_WRITE
 - d. QTM_EXPLORER_DESIGN
 - e. QTM_MAINTENANCE
 - f. QTM_OPC
2. Generate the domain user account to be used to install Exaquantum.
3. Add domain installation user to EXA_MAINTENANCE domain group.
4. On the Exaquantum server, login as a local user who is a member of the local Administrators security group.
5. Add domain installation user to local Administrators group of the Exaquantum server (or Domain Admins).
6. Run QTMPreSetStdModelDom using the Run as Administrator option. This will create a local EXA_MAINTENANCE_LCL security group and add the current local user.
7. Add the Exaquantum server to the domain and reboot the PC.

8. Carry out the installation of Exaquantum as per the Exaquantum Installation Guide. This will include the installation of the server install prerequisites and the installation of the product. Use the domain installation user and the Standard Domain security model. Steps for completing this are detailed in chapters 3 & 4 of the Exaquantum Installation Guide.
9. Add the domain service user to run the Exaquantum services (such as “Quantumuser”).
10. Add domain service user to domain Exaquantum security groups
11. Add domain service user to local Administrators of the Exaquantum Combined Server.

2.1.3 Domain B

Security model: Standard Standalone

1. Create a domain group for Exaquantum users (in this example we use “ExaquantumUsers”)
2. Change the *domain A* QTM_DATA_READ security group to Universal type and add the *domain B* ExaquantumUsers security group.
3. On the client PC, login as a local user who is a member of the local Administrators security group.
4. Run the QTMPreSetStdModel file on the client PC using the Run as Administrator option. This will create a local EXA_MAINTENANCE security group and add the current local user.
5. Install the Exaquantum Client software prerequisites and the Exaquantum client product using Standard Standalone security model using the local Administrative user who is a member of the local EXA_MAINTENANCE security group. Steps for completing this are detailed in chapters 3 & 4 of the Exaquantum Installation Guide.
6. Add the client PC to domain B using a domain administrator account and reboot.
7. Add the ExaquantumUsers domain security group to the local QTM_DATA_READ security group.
8. Add the domain Exaquantum user to the ExaquantumUsers security group. This user will then be able to login to the client PC and use the Exaquantum client services.

2.1.4 Function Checks

1. Launch the Exaquantum Services Manager on the Exaquantum server as the domain service user and start the Exaquantum services.
2. Check the services start and that any errors are understood and if necessary rectified.
3. Test Exaquantum client services from a client in the domain A. This client will be installed using the Standard Domain security groups and so the steps are not detailed in this document. Ensure to check connectivity for Explorer, Web Trends, Excel worksheets etc.
4. Test Exaquantum client services from a client in the domain B. This client will need to be logged in as a domain B user that is a member of ExaquantumUsers. Ensure to check connectivity for Explorer, Web Trends, Excel worksheets etc.

Chapter 3 Further Reading

The Exaquantum Installation Guide should be used as a reference when following the steps in this guide.

Volume 2 of the Exaquantum Engineering Guide contains details regarding IT Security, DCOM and network configuration across many network scenarios.

Further information can be found at ymx.yokogawa.com. Queries on this information can be sent to the Yokogawa Marex customer support email address: support.ymx@yokogawa.com.

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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 2.0 of the document related to Product Library version 5.0.

- **Detail of Changes**

The changes are as follows:

Chapter/Section/Page	Change
Front page	Review Date updated
Page 5	Email address updated