# Introduction

# Graywulf Concepts

Clusters

Federations

Database Definitions

Databases

Remote Databases

Jobs and Queues

MyDB

Controller Machine

Worked nodes

The bulk-op service

# Quick Start Guide

How to build, install and configure a Graywulf cluster

## Hardware configuration

## Platform configuration

### Hardware configuration

### Windows configuration

### Database Server configuration

#### Configure tempdb

By default, tempdb files are located on the system disk. To move them to the RAID volume, execute:

ALTER DATABASE tempdb

MODIFY FILE (NAME = tempdev, NEWNAME = tempdev\_0, FILENAME = '[path\_to\_data\_volume\_0]\tempdev\_0')

ALTER DATABASE tempdb

MODIFY FILE (NAME = templog, NEWNAME = templog\_0, FILENAME = '[path\_to\_data\_volume\_0]\templog\_0')

Restart the server for the changes to take effect. It is important to move the files first and set the file size later because files are moved to the new location only after a server restart and growing the files residing ont he system volume may eat up all the disk space and crash the system.

In case of multiple volumes, add more files:

ALTER DATABASE tempdb

ADD FILE (NAME = tempdev\_1, FILENAME = '[path\_to\_data\_volume\_1]\tempdev\_1', SIZE = 50GB, FILEGROWTH = 0)

ALTER DATABASE tempdb

ADD LOG FILE (NAME = templog\_1, FILENAME = '[path\_to\_data\_volume\_1]\templog\_1', SIZE = 10GB, FILEGROWTH = 0)

You can verify the settings by executing

exec sp\_helpfile

It is very important to turn off file growth as a runaway query may easily eat up all the disk space on a server.

### Setting up a Windows account for the services.

In order to centrally manage security of the system, a Windows domain account is required. All Graywulf services will run under or impersonate themselves under this domain account. We suggest to name this account MYDOMAIN\Graywulf. By default, the account should only have basic domain user privileges with no remote desktop access.

The following checklist can be used to configure the permission this account must have:

* Member of domain users
* Full access to all data directories on the worker nodes
* Full access to the network shares of all data directories of the worker nodes
* Windows user account added on all SQL Servers
* Member of dbcreator role on all SQL servers on the worker nodes
* Full control access to %windir%\temp on the webserver

Create graywulf domain account, very important to run everything under this account

* grant access to the shared directories, pay attention to mounted volumes!
* DB creator under sql server
* run service under this account
* grant access to %windir%\temp so serializer classes can be generated on the web server

Setting up the Graywulf Registry

Setting up the log

Setting up the database for workflow persistence

- Create an empty database called Graywulf\_Persistence

- Run SqlWorkflowInstanceStoreSchema.sql and SqlWorkflowInstanceStoreLogic.sql located in %windir%\Microsoft.NET\Framework64\v4.0.30319\SQL\en

Installing the bulk-op server

Open port 5055

Setting up the Graywulf Cluster Administration Console

How to run the admin console with windows credentials

Creating a Federation

Configuring MyDB location

Configuring existing monolithic databases

Setting up the front-end for a federation

# In-depth Configuration

# Developing Databases for Graywulf

# Credits

# References

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