QGrip-UI

Jobs Menu

GRIP ON SQL

2024-04-16

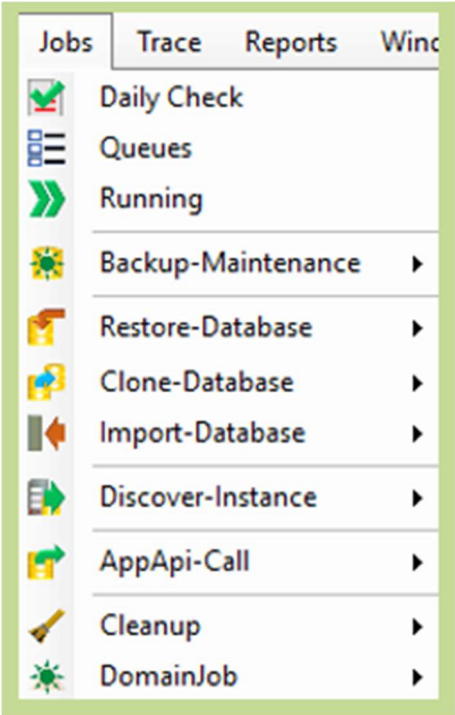
Contents

1 Introduction 4
2 Daily Check 4
3 Queues 5
3.1 Not Started jobs 5
3.2 RestoreClone – Progress 5
4 Running 7
4.1 Kill Long Running Jobs 7
4.2 RestoreClone – Progress 7
5 Backup-Maintenance (BM) 9
5.1 BM - Request 9
5.1.1 Backup Options 11
5.1.2 Job Specification DBBackup 11
5.1.3 Job Specification LogBackup 12
5.1.4 Job Specification CheckDB 13
5.1.5 Job Specification Optimise 13
5.2 BM - History 14
6 Restore Database 16
6.1 Restore Request 16
6.1.1 Restore – Get Script 17
6.2 Restore Delete 18
6.3 Restore History 18
7 Clone Database 19
7.1 Clone Request 19
7.1.1 Clone Specification 20
7.1.2 Post Clone Actions 21
7.2 Clone Edit 22
7.2.1 Clone Postpone 22
7.2.2 Clone Finish Now 23
7.2.3 Clone Delete 23
7.3 Clone History 24
8 Import Database 25
8.1 Import Database Request 25
8.1.1 Import-Database Specification (Source) 26
8.1.2 Post Import-Database Actions 27

8.2 Import-Database Delete 27
8.3 Import-Database History 28
9 Discover 29
9.1 Discover Request 29
9.2 Discover History 30
10 AppApi-Call - History 31
11 Clean-up 32
11.1 Request 32
11.2 History 32
12 DomainJob 34
12.1 Request 34
12.2 History 35

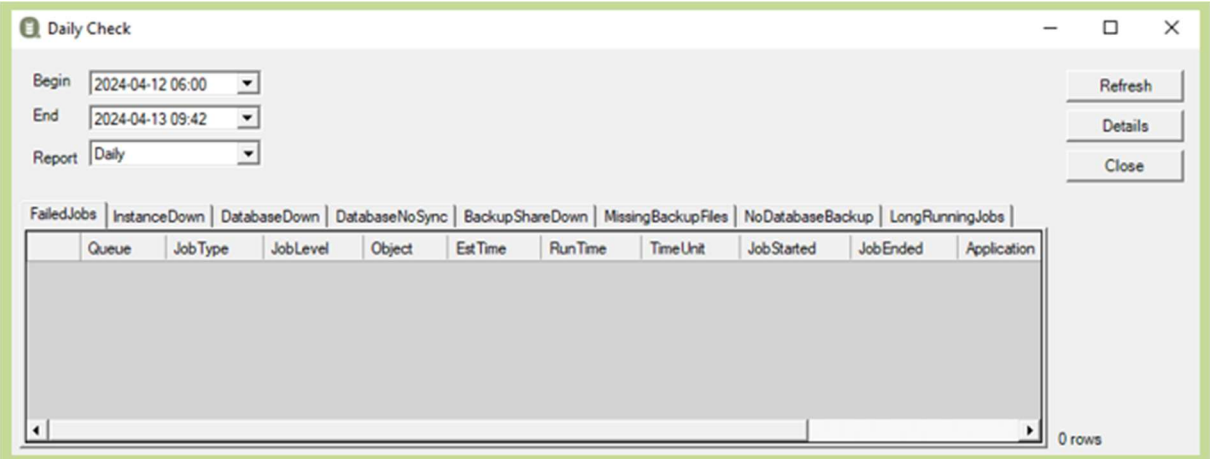
1 Introduction

This document describes all items in the Jobs Menu of the QGrip-UI.



2 Daily Check

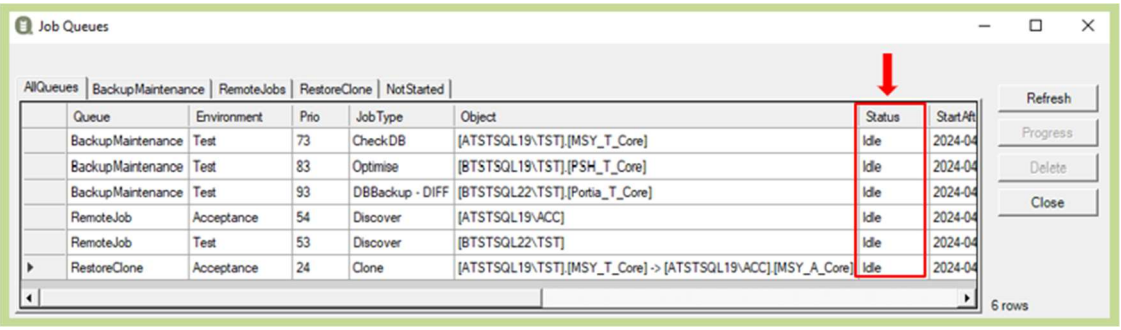
Required Authorisation	Menu
View Daily Check	Jobs -> Daily Check



The morning ritual. This window contains a quick overview of important information that might need some attention like Failed Jobs, Instances/BackupShares that are/have been down, Missing Backup Files, Databases that have not had a DBBackup and LongRunningJobs (Still running).

3 Queues

Required Authorisation	Menu
View Queues	Jobs -> Queues

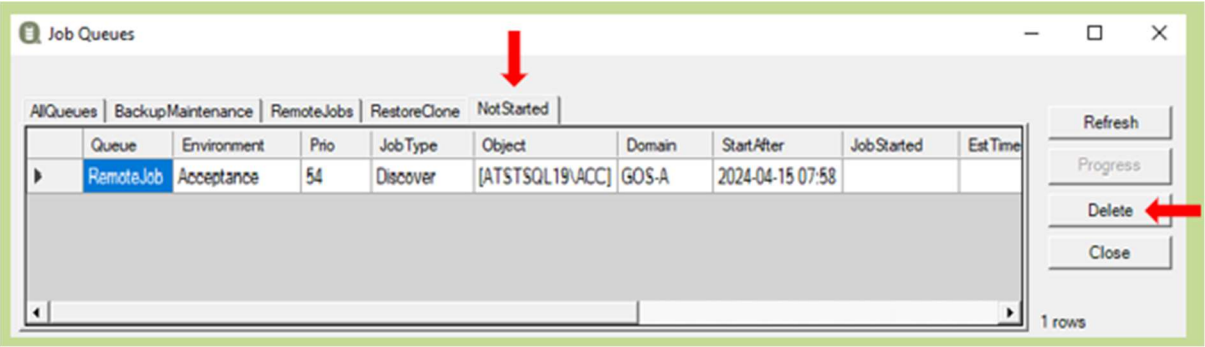


In this window you can see the content on the different Queues.
Remember that scheduled jobs will not be pushed on the Queues more than a few minutes before they should run. The first tab (All Queues) is an overview of all 3 QGrip queues.

Job Status	Description
Idle	Waiting to be picked up by QGrip Server process.
Running	Job is currently running.
Awaiting Approval	The job needs approval before it will run.
Paused	The job (Optimise or CheckDB) has been paused because it could not finish within its' Window and will start running again after StartAfter date.

3.1 Not Started jobs

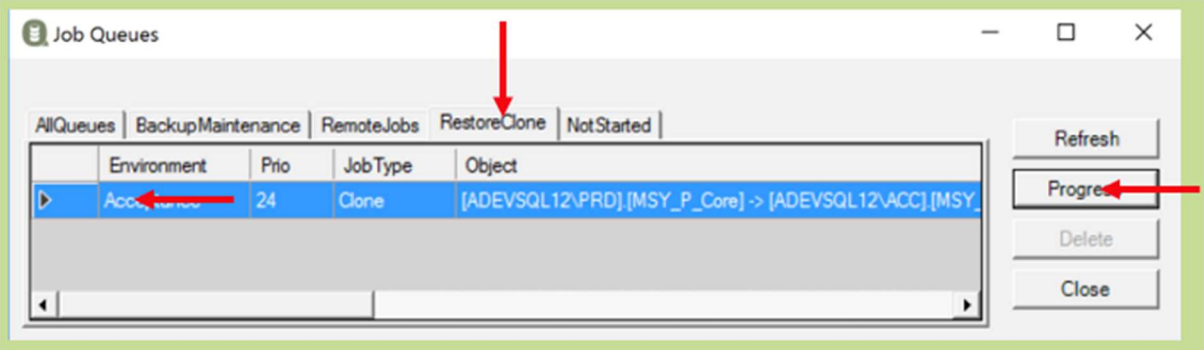
The tab NotStarted and the button delete is only visible to QGrip-Admins.



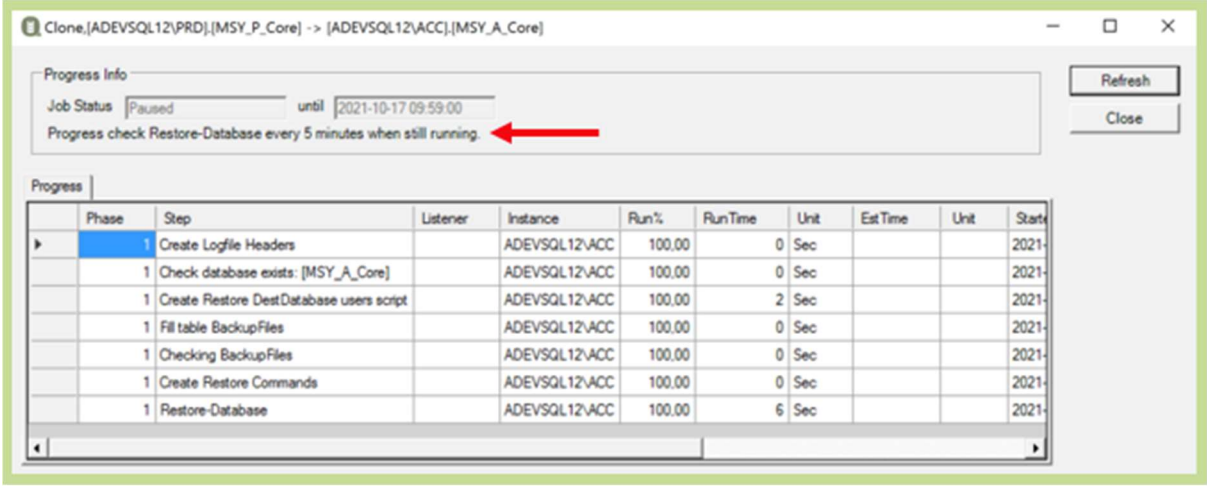
If a job has not started 1 hour after it should have, it will be visible under the tab NotStarted. The QGrip-Admin can delete this job from the Queue. This happens very rarely and mostly just after an Instance has initially been added to QGrip.

3.2 RestoreClone – Progress

When a Restore, Clone or Import-Database job is running, you will be able to see the Progress of the job. A separate job will be triggered run every 5 minutes to see how far the Restore of the database has come, and an estimate of time remaining will be shown.



Select the RestoreClone tab page, this will enable the Progress button.
Select the row of the required job and hit Progress.

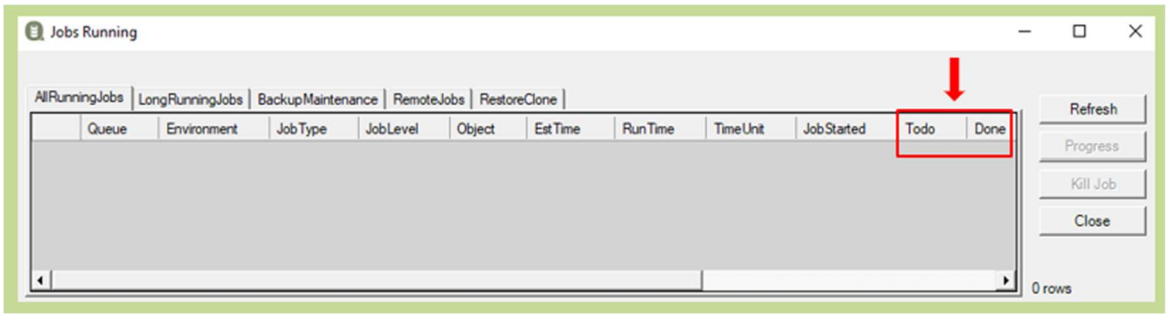


In the Progress window you will be able to see what the job is currently doing and if you are Restoring a large database an estimate will be given of how long it will take.

4 Running

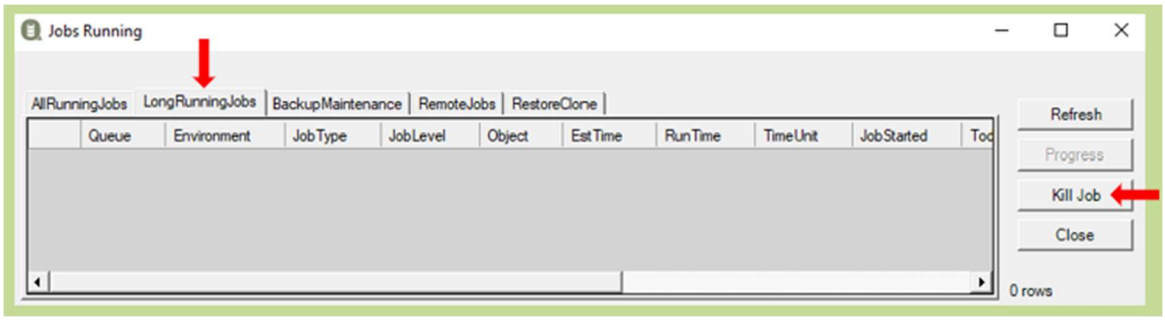
Required Authorisation	Menu
View Running	Jobs -> Running

In this window you can see all jobs that are currently running on the different Queues. The first tab shows All Running Jobs. The second tab, LongRunningJobs, shows job that exceed the estimated runtime.



The column Todo shows the number of Sub Jobs that need to be executed and Done is the how many of these Sub Jobs that have already finished.

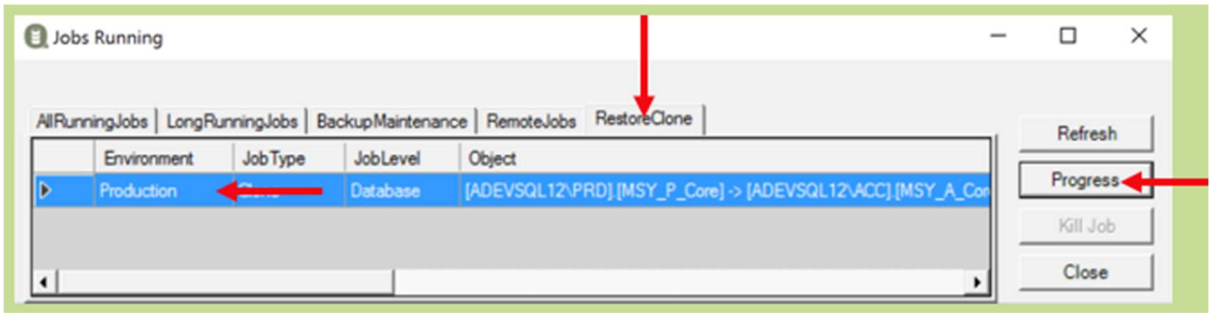
4.1 Kill Long Running Jobs



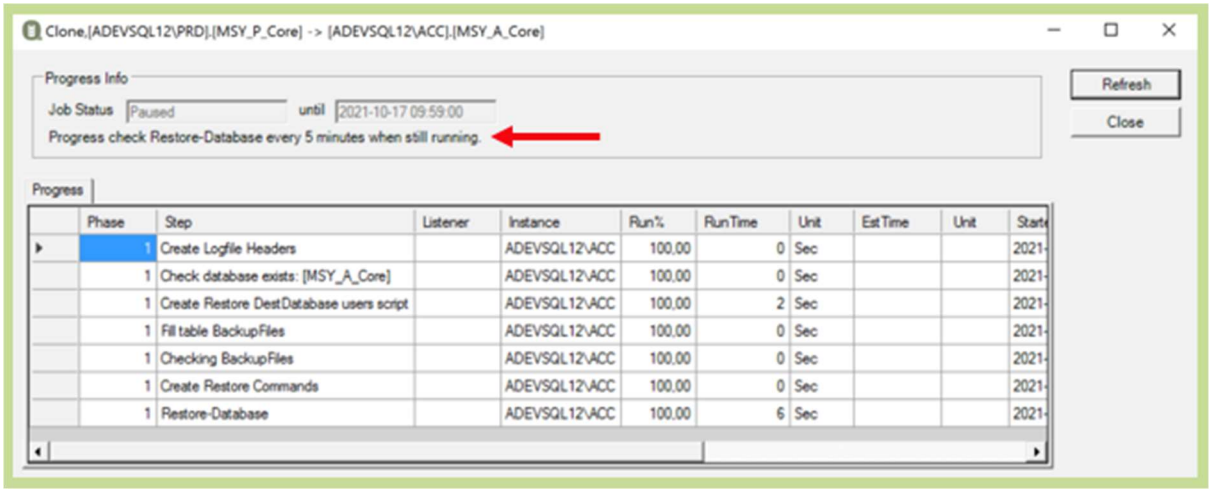
Jobs that are running longer than expected can be found under the tab LongRunningJobs. If there has been a problem during the job, the connection might have been broken, QGrip still thinks that the jobs are running. If you are QGrip-Admin, you can remove these running jobs in QGrip, by selecting the jobs and pressing [Kill Job]. This should only be done after you have verified that the job is no longer running on the remote Instance. The job will only be marked as Failed in the QGrip administration and a running process on an Instance will NOT be removed.

4.2 RestoreClone – Progress

When a Restore, Clone or Import-Database job is running, you will be able to see the Progress of the job. A separate job will be triggered run every 5 minutes to see how far the Restore of the database has come, and an estimate of time remaining will be shown.



Select the RestoreClone tab page, this will enable the Progress button.
Select the row of the required job and hit Progress.



In the Progress window you will be able to see what the job is currently doing and if you are Restoring a large database an estimate will be given of how long it will take.

5 Backup-Maintenance (BM)

Required Authorisation	Menu
Backup/Maintenance	Jobs -> Backup-Maintenance -> Request Jobs -> Backup-Maintenance -> History

Recommended documentation

Doc-Tab	Title
Jobs	Backup & Maintenance Jobs
Jobs	QGrip Backup Encryption

You will only be able to request a Backup-Maintenance job for the Application/Environments you are Authorised for. If you are authorised for Backup- Maintenance, you will be able to see the history for all Backup-Maintenance jobs of all Instances.

Always On

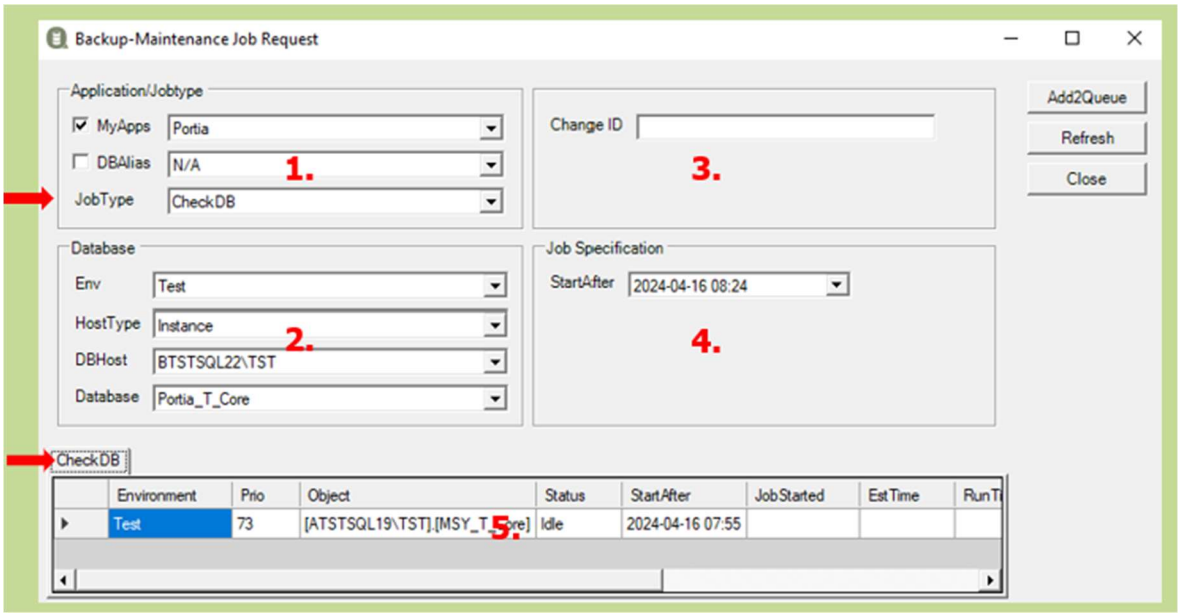
- **DBBackup & LogBackup**
  - **Preferred Replica**
- **CheckDB**
  - **All Replicas, per Instance**
- **Optimise**
  - **Primary Replica**

In an Always On cluster, the DBBackup and LogBackup will run on the Preferred Replica as defined in the availability group of the database. CheckDB can run on all Replicas. The Optimise job will run on the Primary Replica.

Note

A requested Backup-Maintenance job will always run even if the Database is part of Exclude (Database) Job.

5.1 BM - Request



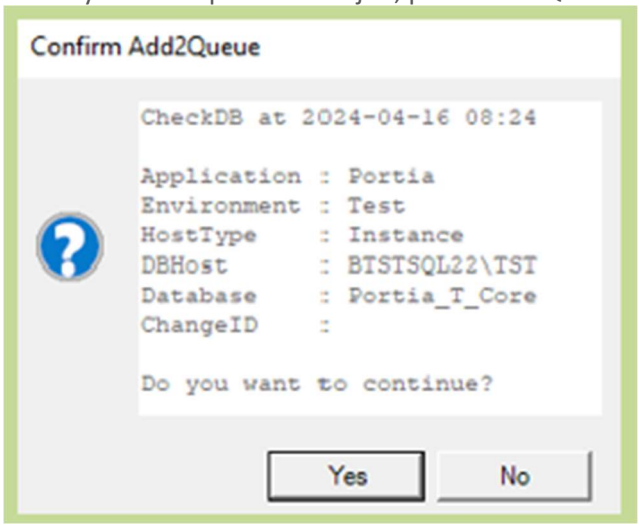
The request window consists of 5 parts:

1. Application / (Database Alias) / Job Type selection
2. Database Selection
3. Change ID if required
4. Job Specification
5. Queue content for selected Job Type
   The refresh button will renew the content

Selecting a new value will update the rest of the window with new, valid options. In the database selection, the Host Type will be Listener if the database is running on an AlwaysOn Cluster. QGrip will determine on which replica the job should run.

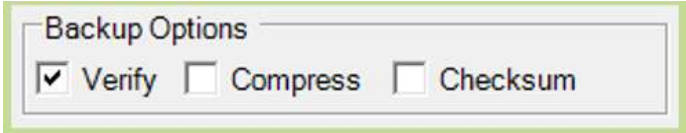
The Job Specifications of the different job types are described below.

When you have specified the job, press Add2Queue.



You will need to confirm the Request. After confirming the job, it will appear in the overview (5.). If you are not authorised for Auto-Approval, the job will have status Awaiting Approval. You will receive a Personal message when the job has finished or your job request has been denied.

5.1.1 Backup Options



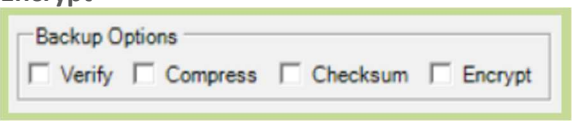
For both DBBackup and LogBackup, options can be enabled. The options are copied from the Instance schedule but can be overruled when requesting a Backup.

Verify Backup
This option will verify the backup. To prevent that the backup jobs are being delayed, a separate Verify-Backup job will be pushed on the queue with low priority when the backup job has finished at Instance level. The Delete Backup files job keeps track of Backup files that still need to be verified to ensure that needed backup files are not deleted.

Compress
SQL Server compresses the file before it is written to disk. This does increase CPU usage but normally shortens the backup time as less needs to be written to disk.

Checksum
Checksum value is recorded into each page of the backup file. This does slow down the backup significantly.

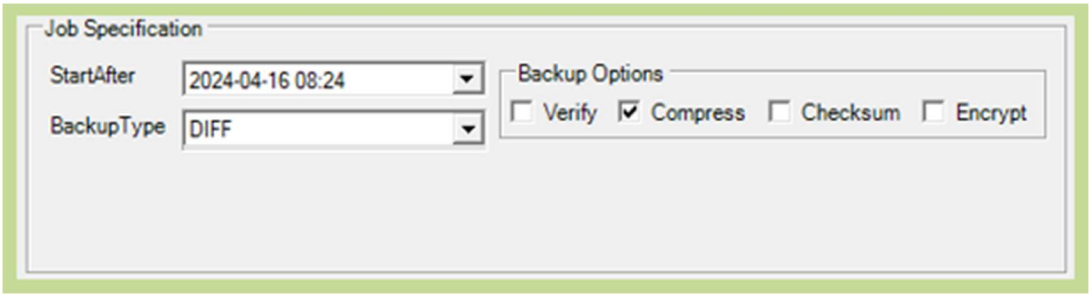
Encrypt



If QGrip Backup Encryption has been enabled, you will also see the Backup Option 'Encrypt' if the version of the current SQL Server Instance is 2014 or higher.

5.1.2 Job Specification DBBackup

Regular DBBackup

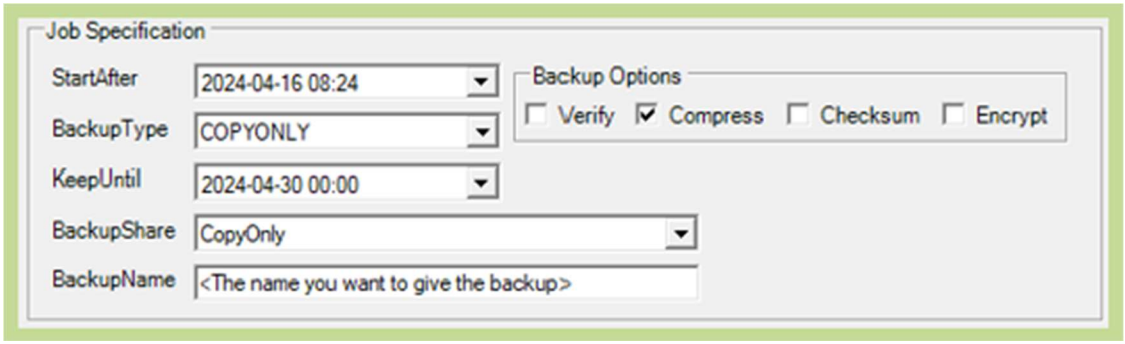


The backup will take part of the restore strategy and will be stored on the same backup share as the scheduled backups. You can choose between the following backup types:

Backup Type	Description
DIFF	Differential backup will contain all changes made in the Database since the last FULL backup. Quick and mostly sufficient.

FULL	A complete backup of the database. If the database is large this might take some time.
FULL_COPYONLY	Only option in AlwaysOn. A complete backup of the database. If the database is large this might take some time.

Copy Only DBBackup



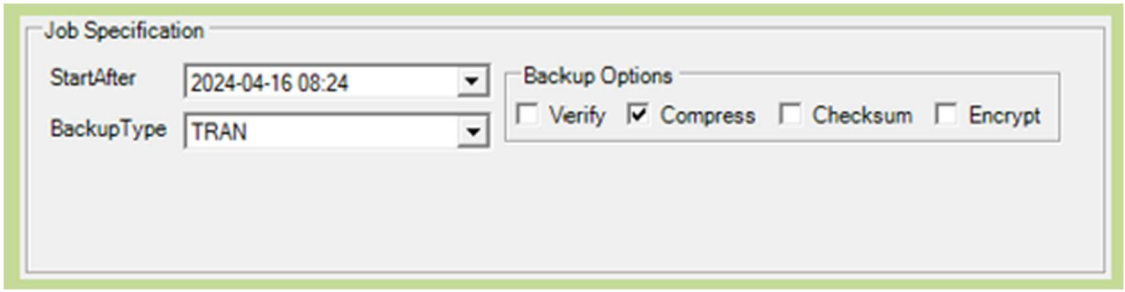
The backup will *not* take part of the restore strategy and will be stored on a separate backup share that needs to be chosen. A date until when the backup file should be kept is also mandatory. Optionally, you can add your own logical backup name.

Backup Type	Description
COPYONLY	Which of the 3 types you choose depend on the purpose of the backup.
BASELINE	
ARCHIVE	

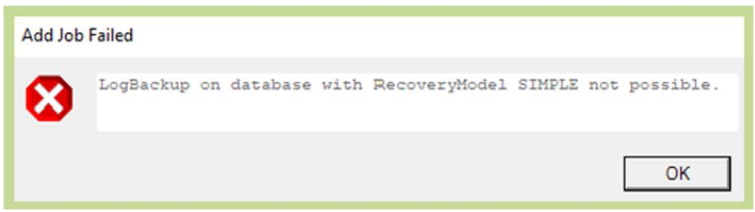
Charges

Requested DBBackup job (except for backup type DIFF) are registered and the application can be charged extra for these jobs depending on how your QGrip-Admin has configured the Charges, Split Costs module in QGrip.

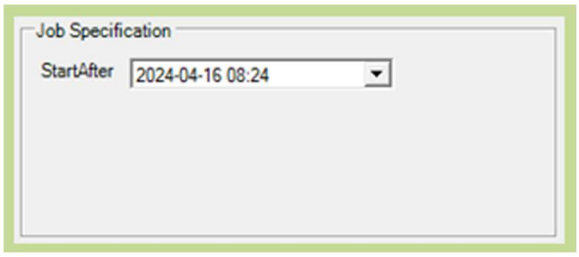
5.1.3 Job Specification LogBackup



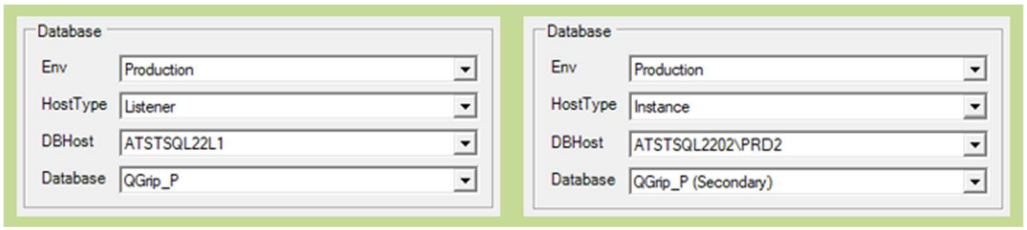
For a LogBackup, only StartAfter date + backup options need to be specified. LogBackup of database in SIMPLE mode is rejected:



5.1.4 Job Specification CheckDB

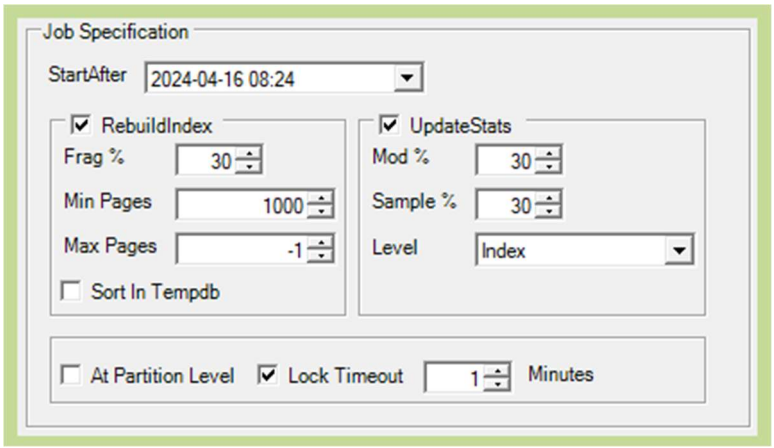


CheckDB Always On



When requesting a CheckDB job of an AlwaysOn database you can choose the database either by Listener or Instance. If you choose Listener, the job will run on the Primary replica.

5.1.5 Job Specification Optimise



Option	Parameter	Description
RebuildIndex		Rebuild index or not
	Frag %	Fragmentation percentage, default 30
	Min Pages	Minimal number of pages, default 1000
	Max Pages	Maximum number of pages, unlimited = -1
	Sort in Tempdb	Default, in memory
UpdateStats		Update Statistics of not
	Mod %	Modification Percentage, default 30
	Sample %	Sample percentage, default 30
	Level	Index, Columns or Index+Columns

At partition level		
Lock Timeout		Max wait-time when locked

5.2 BM - History

- **Scheduled**
  - **Instance**
    - **All Databases**
- **Requested (User)**
  - **Instance**
    - **Specific Database**

When a job is executed, it is always started at Instance level. If the job is scheduled, it will run on all Databases on the Instance. If the job is requested, it will only run on the database specified in the request.

- **Instance Job History**
  - **Database Job History**
  - **Database Job History**
  - **Database Job History**

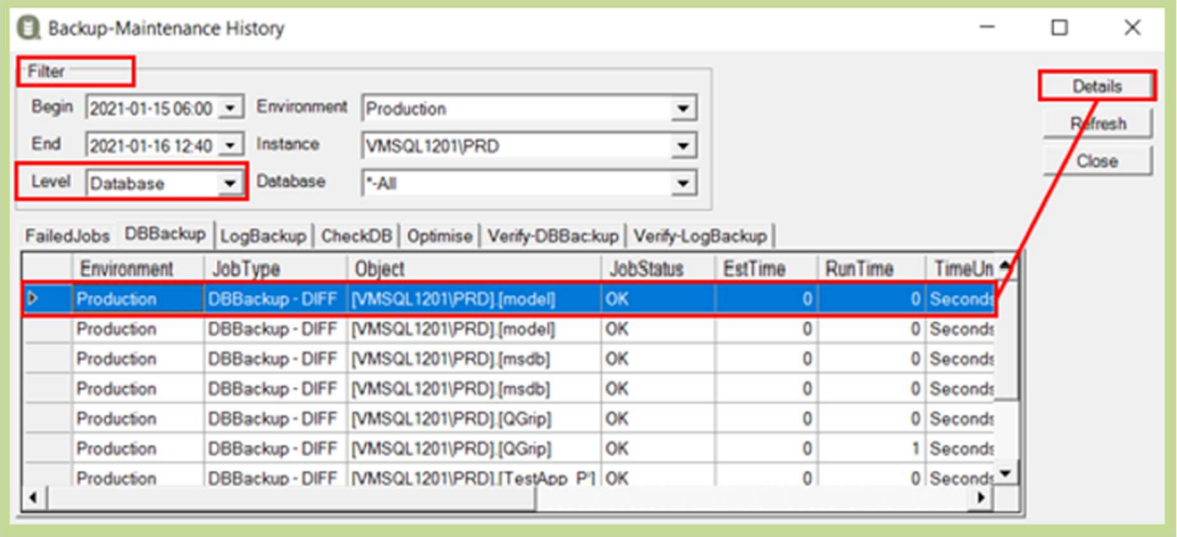
In the History of the job as you will have both Instance History and Database History.

- **Instance Job History (Optimise Job)**
  - **Database Job History**
    - **Index Job History**
    - **Index Job History**
    - **Index Job History**

An Optimise job goes even deeper and does also have Index history.

These different History Levels are used in the Backup-Maintenance History window. Use this filter to indicate at which level you want to see the history:

- Instance
- Database
- Index



There is a Begin and End period, Environment and Instance in the filter. If you choose level Database or Index, you will also be able to filter on Database.

The first Tab in the overview is shared for all Failed jobs of all JobTypes and the rest of the tabs are per JobType.

At level Index, only the tab Optimise will be filled and only for the executed Rebuild Index and Update statistics.

There is not an extended log file for each job but you can see more details by double-click on a row in the current tab or selecting the row and pressing the Details button.

6 Restore Database

Required Authorisation	Menu
Restore/Clone (To)	Jobs -> Restore-Database -> Request Jobs -> Restore-Database -> Delete Jobs -> Restore-Database -> History

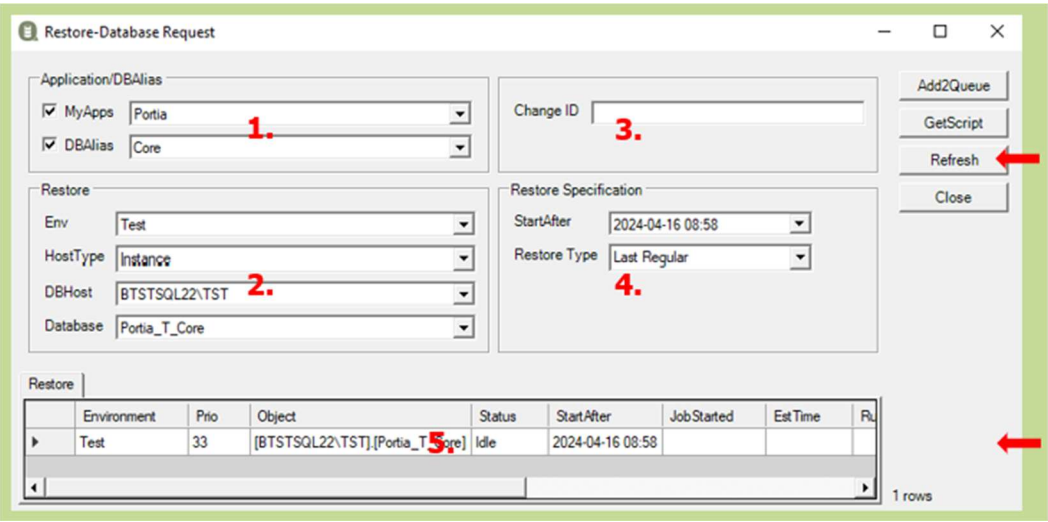
Recommended documentation

Doc-Tab	Title
Jobs	Restore-Clone-Import Database

You will only be able to request (and Delete) Restore jobs of Applications/Environments you are Authorised for. You will only be able to see the History of Application you are Authorised for.

Charges
Requested Restore jobs are registered and the application can be charged extra for these jobs depending on how your QGrip-Admin has configured the Charges, Split Costs module in QGrip.

6.1 Restore Request



The request window consists of 5 parts:

1. Application (Database Alias) selection
2. Database Selection
3. Change ID if required
4. Restore Specification
5. Restore database jobs on the queue
   The Refresh button will renew the content

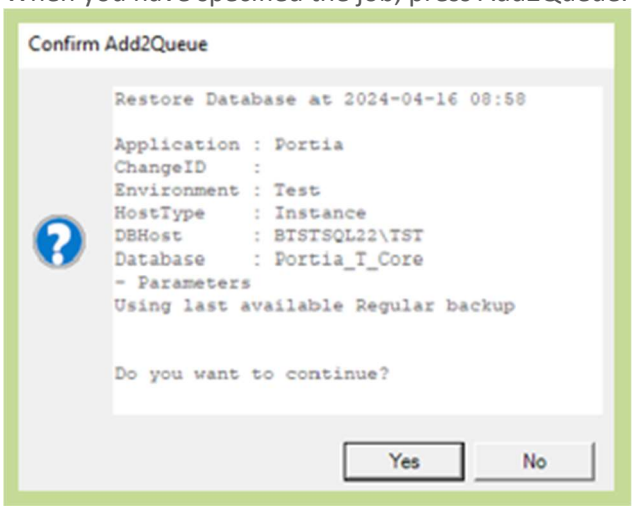
Selecting a new value will update the rest of the window with new, valid options. In the database selection, the Host Type will be Listener if the database is running on an AlwaysOn Cluster. QGrip will automatically deal with Availability group membership and restore on all replicas simultaneous.

Restore Types

Restore Type	Description

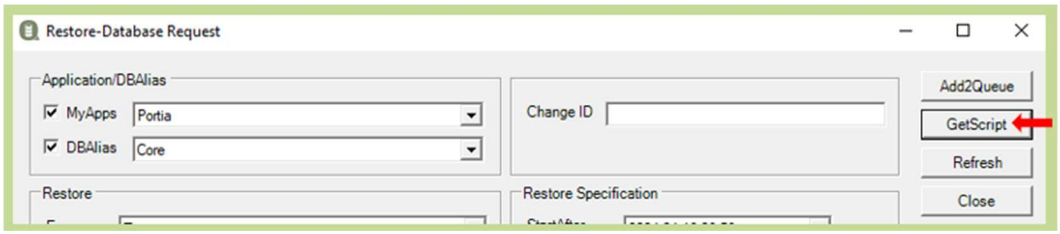
Last Regular	Restore the last available regular (FULL, DIFF, TRAN) backup file. AlwaysOn: FULL_COPYONLY, TRAN.
Point in Time	Restore database to certain Date/Time. Only possible if Database recovery model is Full or Bulk-Logged and TRAN backups are available.
Choose File	Choose the backup file you want to restore.

When you have specified the job, press Add2Queue.

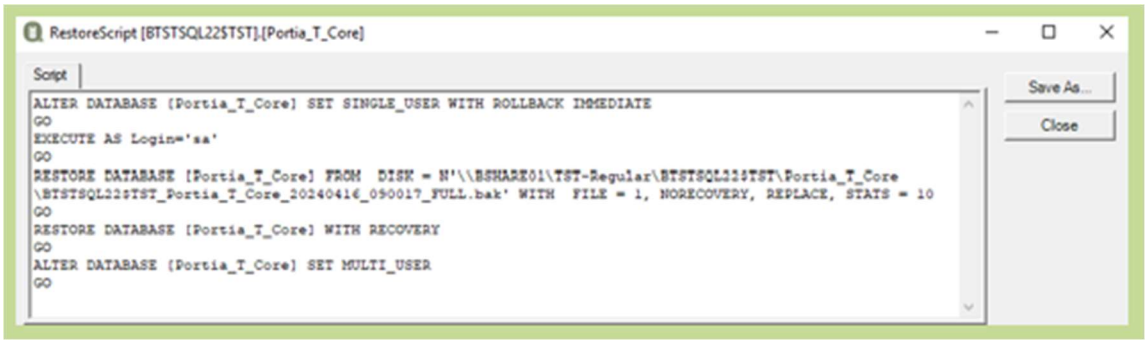


You will need to confirm the Request. After confirming the job, it will appear in the overview (5.). If you are not authorised for Auto-Approval, the job will have status Awaiting Approval. You will receive a Personal message when the job has finished or your job request has been denied.

6.1.1 Restore – Get Script



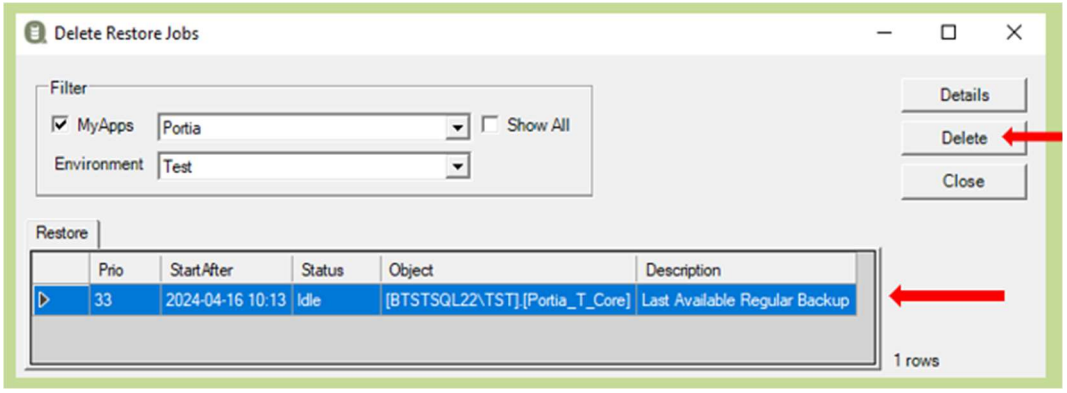
The GetScript button will open a window with a script containing the restore statements that QGrip will execute for the selected restore job.



The script will also contain comments on action that need to be done “outside” the actual script.

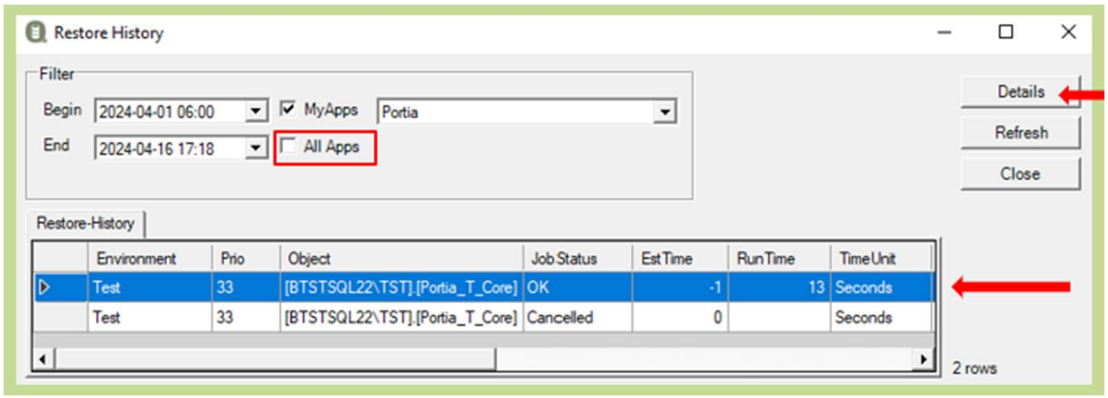
If, for instance, a secondary database in an AlwaysOn cluster needs to be rebuilt because it is no longer synchronising, you can use parts of the script generated here.

6.2 Restore Delete

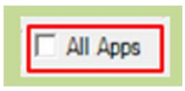


As long as a Restore job has not yet started you can delete (Cancel) it.
See Restore details by double-click on a row in the overview or selecting the row and pressing the Details button. When a Restore job has been deleted/cancelled the person who requested the Job will receive a personal message.

6.3 Restore History



Use the filters Begin and End period and Application to find the Restore history you are looking for. You will only be able to select applications you are authorised for. See details by double-click on a row in the overview or selecting the row and pressing the Details button.



Additional filter option for QGrip-Admin, show restores of all Apps for Period.

7 Clone Database

Required Authorisation	Menu
Clone To Clone From	Jobs -> Clone-Database -> Request Jobs -> Clone-Database -> Edit Jobs -> Clone-Database -> History

Recommended documentation

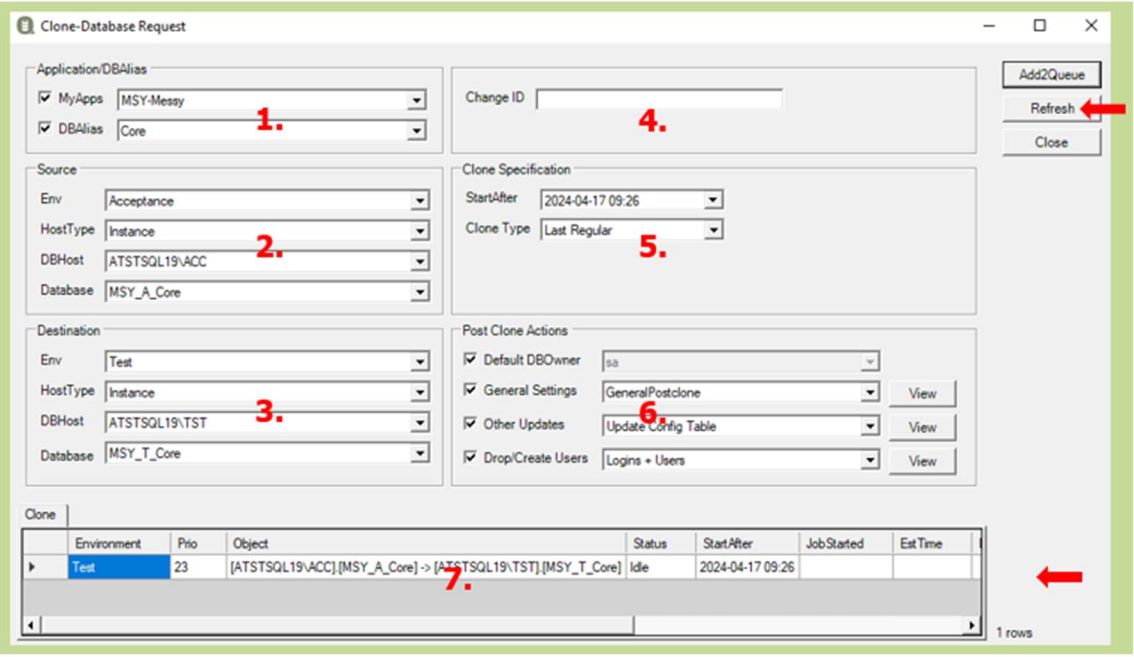
Doc-Tab	Title
Jobs	Restore-Clone-Import Database
Application	Post Clone Scripts

You will only be able to Request (and Edit) Clone jobs of Applications you are Authorised for. You will only be able to Clone To environment you are Authorised for and from Environments you are Authorised for. You will only be able to see the History of Application you are Authorised for.

Charges
Requested Clone jobs are registered and the application can be charged extra for these jobs depending on how your QGrip-Admin has configured the Charges, Split Costs module in QGrip.

PostClone script fails
If there is an error in the PostClone script the whole Clone Job will get the status failed. Check the logfile of the Clone to see where the error occurred and if it can be fixed without cloning the database again.

7.1 Clone Request



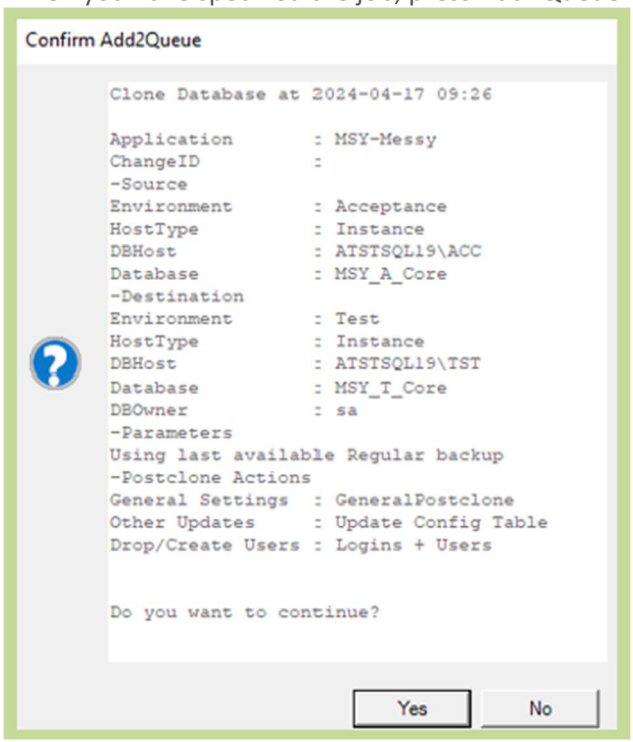
The request window consists of 7 parts:

1. Application (Database Alias) selection
2. Source Database Selection
3. Destination Database Selection

4. Change ID if required
5. Clone Specification
6. Post Clone Actions
7. Clone database jobs on the queue
   The refresh button will renew the content

Selecting a new value will update the rest of the window with new, valid options. In the Source/Destination database selection, the Host Type will be Listener if the database is running on an AlwaysOn Cluster. QGrip will automatically deal with Availability group membership and restore on all replicas simultaneous.

When you have specified the job, press Add2Queue.



You will need to confirm the Request. After confirming the job, it will appear in the overview (7.). If you are not authorised for Auto-Approval, the job will have status Awaiting Approval. You will receive a Personal message when the job has finished or your job request has been denied.

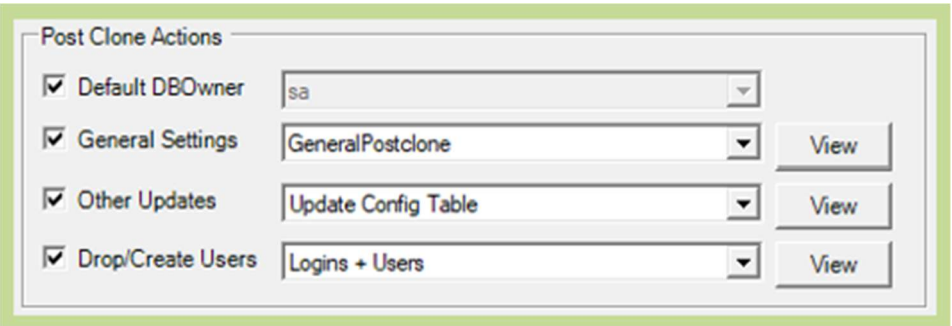
7.1.1 Clone Specification

Clone Type	Description
Last Regular	Restore the last available regular (FULL, DIFF, TRAN) backup file from Source. AlwaysOn: FULL_COPYONLY, TRAN.
Point in Time	Restore database to certain Date/Time. Only possible if Source Database recovery model is Full or Bulk-Logged and TRAN backups are available.
Choose File	Choose the backup file you want to restore from Source.
After New Backup	Make a new backup of source database and use that backup for the Clone.

Repeat Last Regular (*)	Schedule the Clone Action Daily/Weekly/Monthly using the last available regular (FULL, DIFF, TRAN) backup file from Source. AlwaysOn: FULL_COPYONLY, TRAN.
Repeat Last DIFF/FULL (*)	Schedule the Clone Action Daily/Weekly/Monthly using the last available DIFF or FULL backup file from Source. AlwaysOn: FULL_COPYONLY.
Multi-Phase (*)	Restore all available regular (FULL, DIFF, TRAN) backup file from Source. AlwaysOn: FULL_COPYONLY, TRAN. Every x minutes, restore all new TRAN backups. Last phase, take new TRAN backup of Source and restore all new TRAN backups.

(*) Can only be requested by QGrip-Admin.

7.1.2 Post Clone Actions



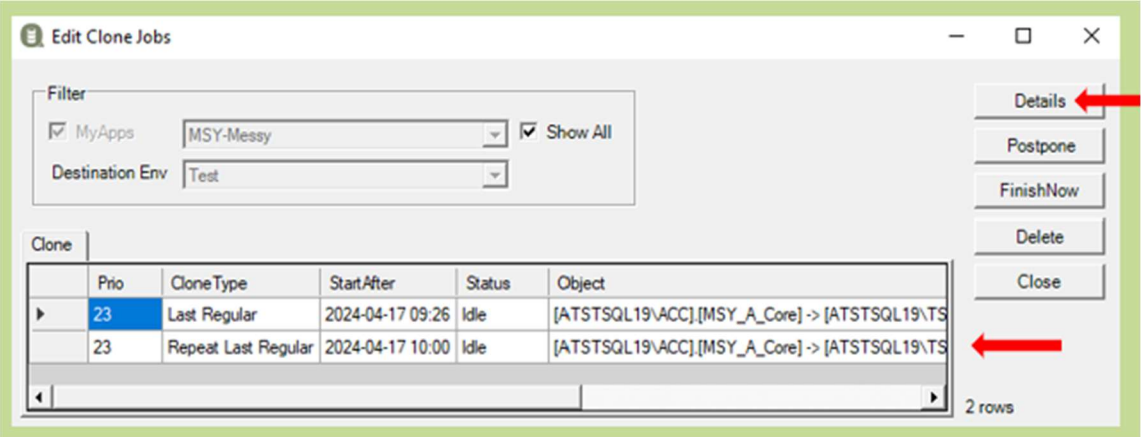
In the last phase of the Clone, when the Destination database has been restored and recovered, the PostClone actions will be executed. These actions are meant to configure the Restored database for the new environment. That should always include dropping all existing users and recreating them but also change configuration and parameter tables to fit the Destination environment.

You can only select and View the PostClone Script here. You might want to study
Basics: Substitutions & Naming Conventions
in order to be able to fully understand the scripts.

If new logins with passwords are created during the PostClone they will automatically be added to the QGrip Password Safe. If on an AlwaysOn Cluster, QGrip will automatically create them (with the same SID and password) on all Replicas. If applicable, passwords will be added to the Password Safe for all Replicas.

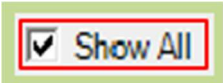
Post Clone Actions	Description
1. General Setting	This should be a global script for your whole organisation with rules that should apply to all databases and environments. For instance, always migrate the database to the current version of the SQL Server instance.
2. Other Updates	Anonymising data, update config/parameter tables, change environment dependant synonyms, etc.
3. Drop/Create Users	A Post Clone script to drop and/or create users.

7.2 Clone Edit



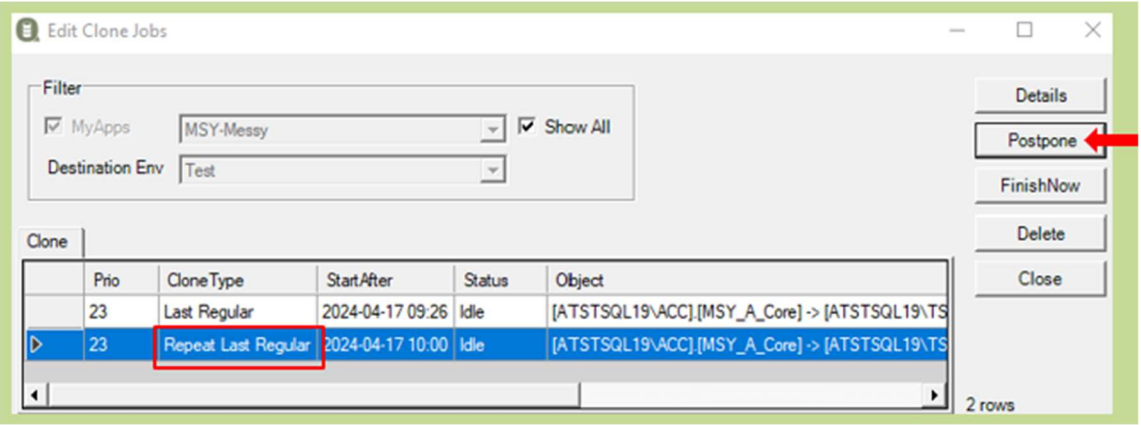
You will only be able to select applications and destination environment you are authorised for. See details by double-click on a row in the overview or selecting the row and pressing the Details button.

Select the Clone jobs you want to Postpone/FinishNow/Delete and press the appropriate button. The person who requested the Job will receive a personal message.

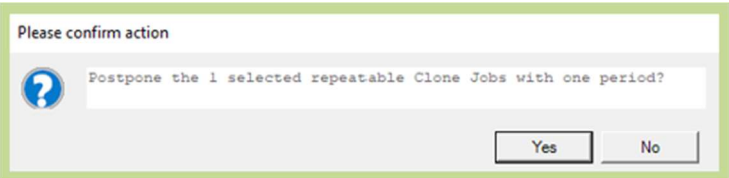


Additional filter option for QGrip-Admin, all Clone jobs that can be edited will be visible.

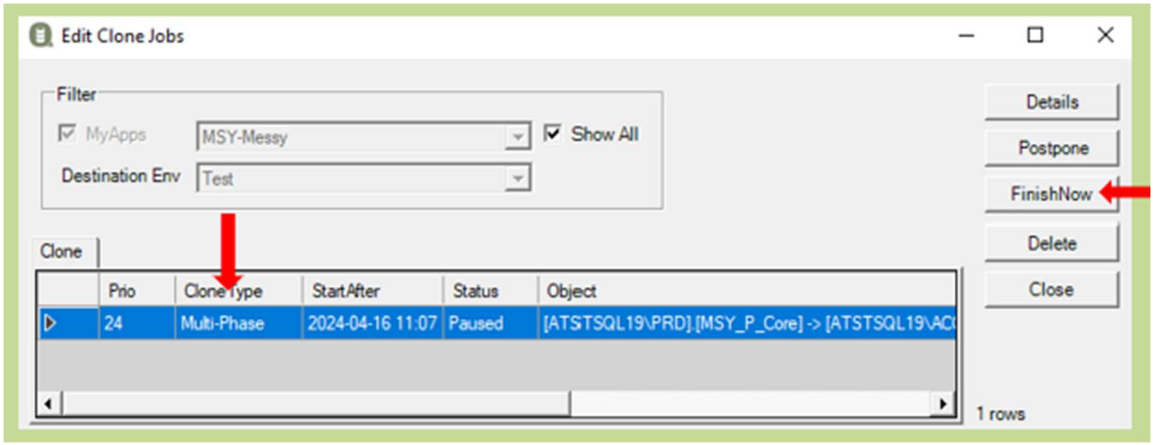
7.2.1 Clone Postpone



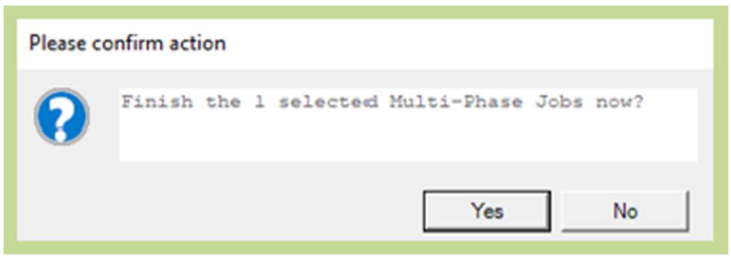
A repeatable Clone job can be postponed with one period.



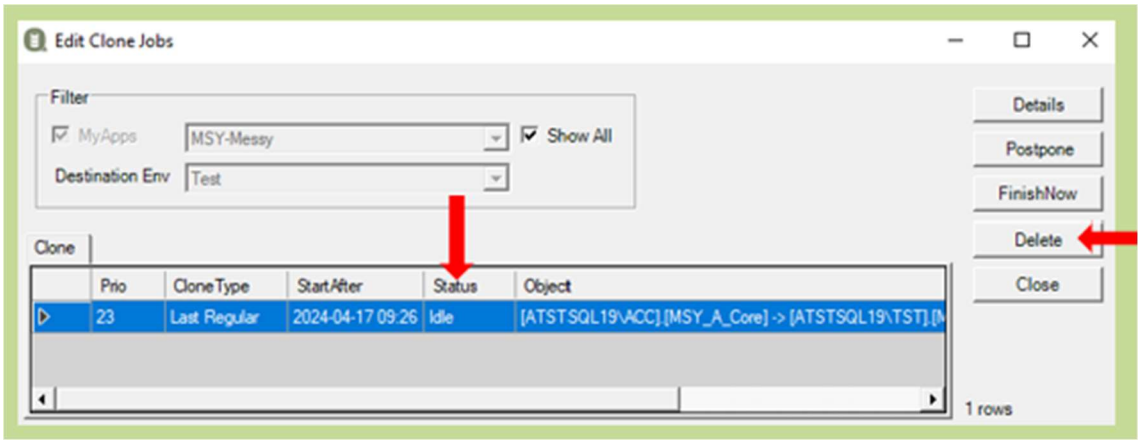
7.2.2 Clone Finish Now



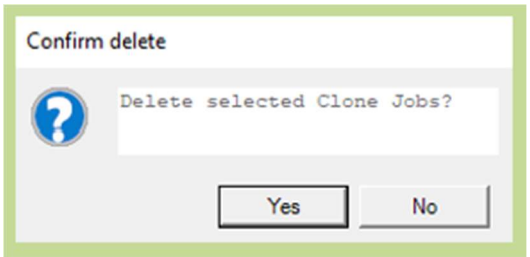
A Multi-Phase clone job can manually be triggered to finish now. The Last Phase will be initiated immediately.



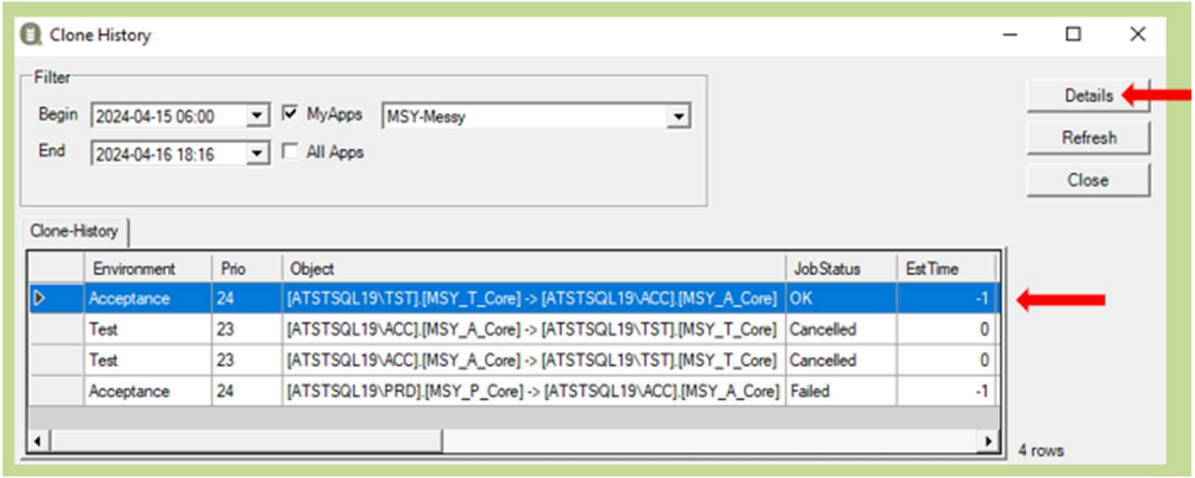
7.2.3 Clone Delete



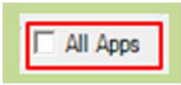
As long as a Clone job has not yet started (Status Idle) it can be deleted (Cancelled).



7.3 Clone History



Use the filters Begin and End period and Application to find the Clone history you are looking for. You will only be able to select applications you are authorised for. See details by double-click on a row in the overview or selecting the row and pressing the Details button.



Additional filter option for QGrip-Admin, show Clones of all Apps for Period.

8 Import Database

Required Authorisation	Menu
QGrip-Admin	Jobs -> Import-Database -> Request Jobs -> Import-Database -> Delete Jobs -> Import-Database -> History

Recommended documentation

Doc-Tab	Title
Jobs	Restore-Clone-Import Database
Application	Post Clone Scripts

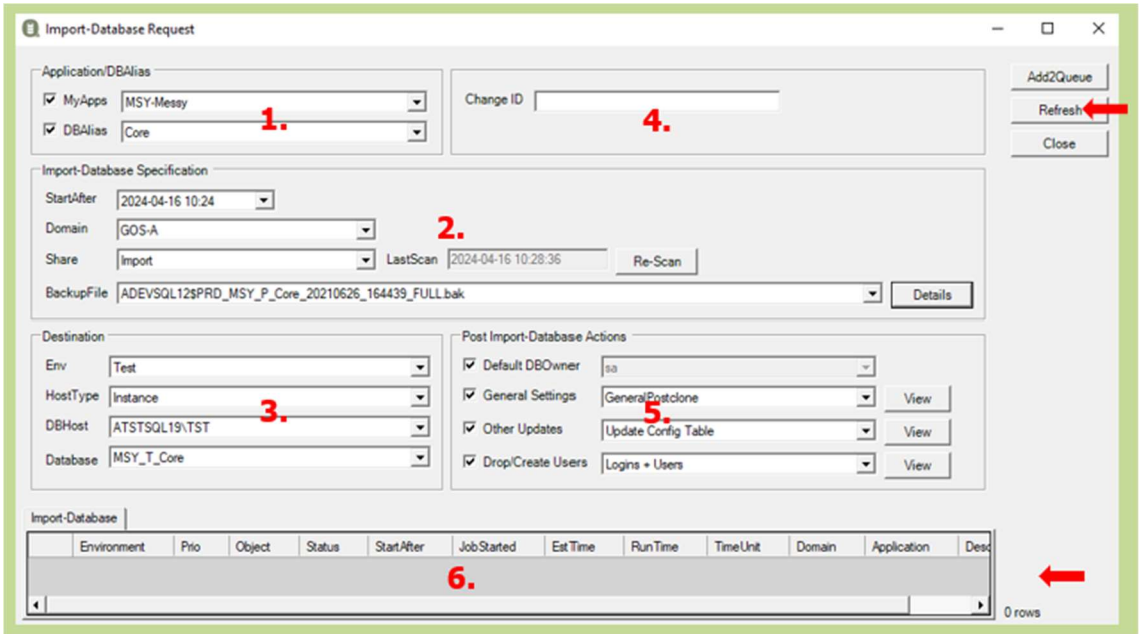
Import-Database can only be requested by QGrip-Admin.

Charges
Requested Import Database jobs are registered and the application can be charged extra for these jobs depending on how your QGrip-Admin has configured the Charges, Split Costs module in QGrip.

Port Import Database Script = Post Clone Script
A Post Import script is the same as a PostClone script.

Post Clone script fails
If there is an error in the PostClone script the whole Import Database Job will get the status failed. Check the logfile of the Import Database to see where the error occurred and if it can be fixed without importing the database again.

8.1 Import Database Request



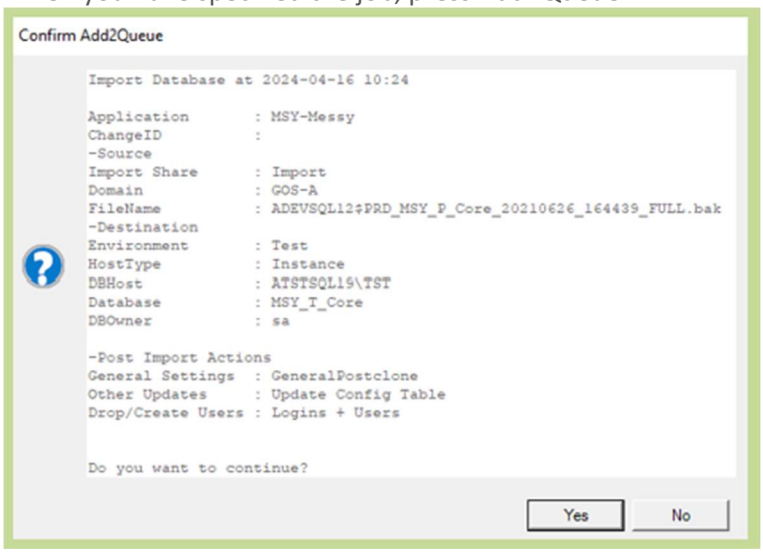
The request window consists of 6 parts:

1. Application (Database Alias) selection
2. Import-Database Specification / Source

3. Destination Database Selection
4. Change ID if required
5. Post Import-Database Actions
6. Import database jobs on the queue
   The refresh button will renew the content

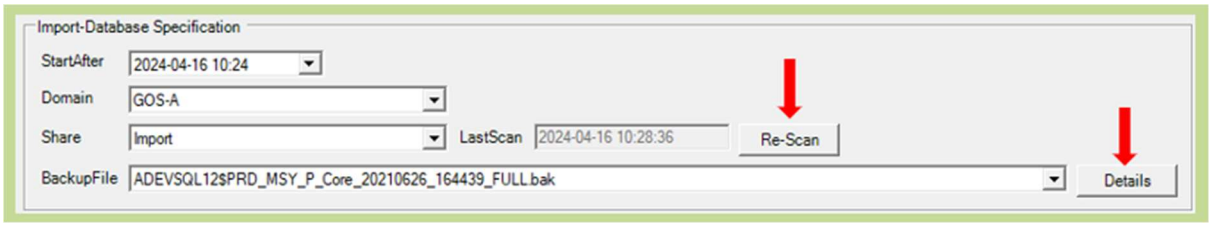
Selecting a new value will update the rest of the window with new, valid options. In the Destination database selection, the Host Type will be Listener if the database is running on an AlwaysOn Cluster. QGrip will automatically deal with Availability group membership and restore on all replicas simultaneous.

When you have specified the job, press Add2Queue.



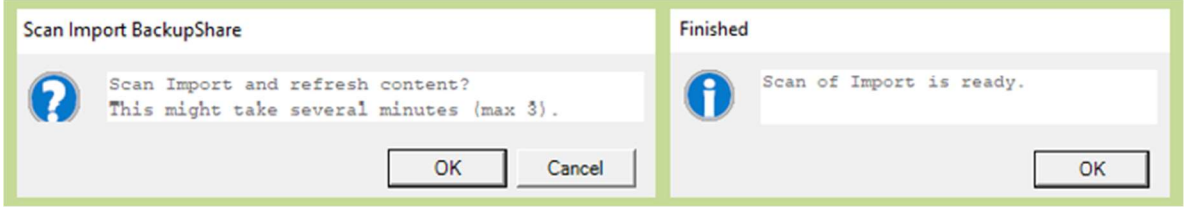
You will need to confirm the Request. After confirming the job, it will appear in the overview (6.). If you are not authorised for Auto-Approval, the job will have status Awaiting Approval. You will receive a Personal message when the job has finished or your job request has been denied.

8.1.1 Import-Database Specification (Source)



Choose Domain and the Import Share.

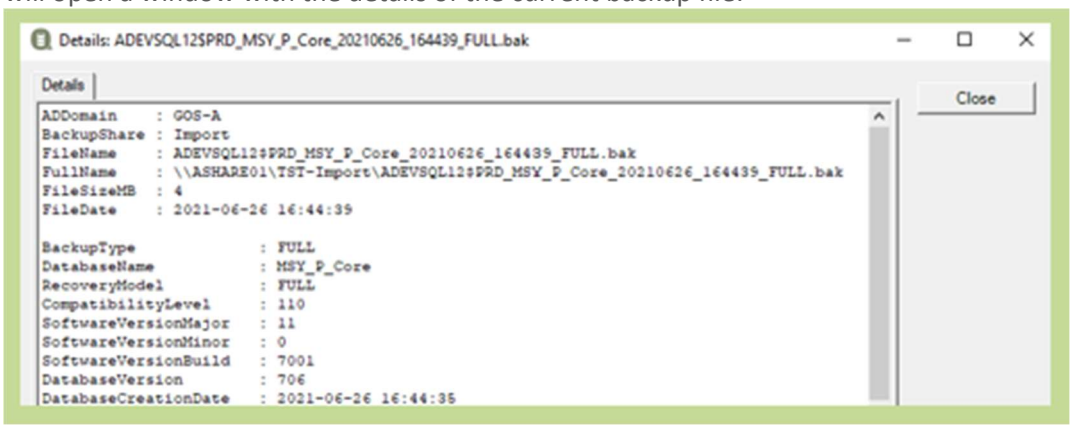
If the Backup File you want to use is new on the Import Share you will need to Re-Scan the Share:



You cannot close the window while the scan is running but you can minimise the window.

If the scan turns out to take longer, you will receive a Warning. You will receive a personal message when the scan has finished.

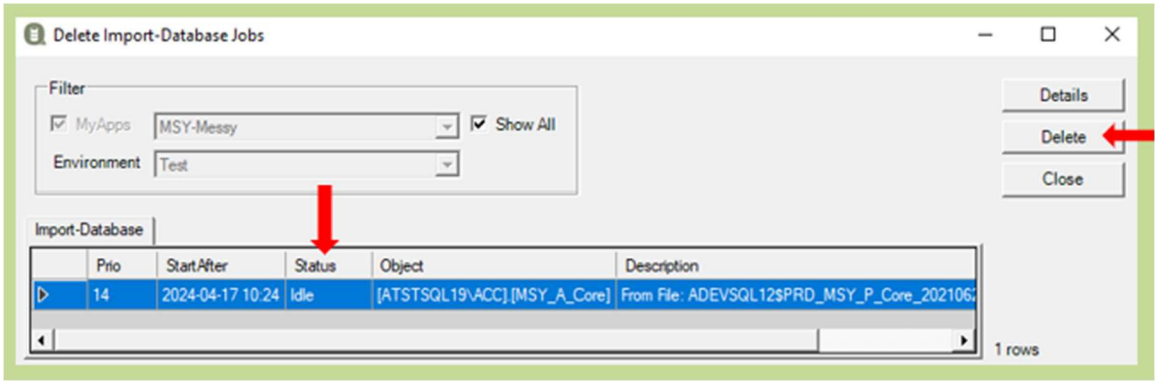
The drop down with Backup Files will only contain files containing a FULL backup. The Details button will open a window with the details of the current backup file:



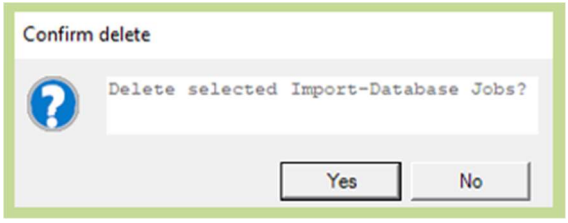
8.1.2 Post Import-Database Actions

These are exactly the same as the PostClone actions described in the last chapter.

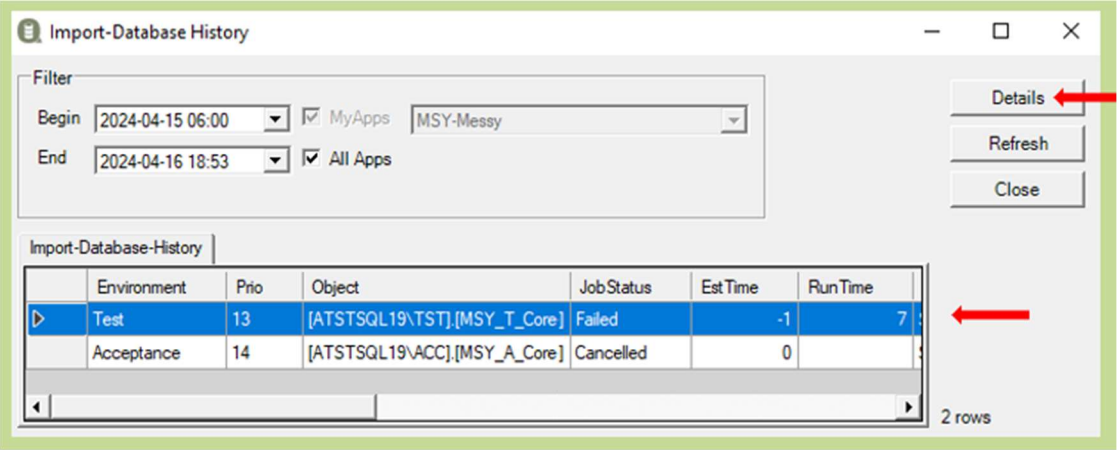
8.2 Import-Database Delete



As long as an Import-Database job has not yet started (Status Idle) it can be deleted (Cancelled).



8.3 Import-Database History



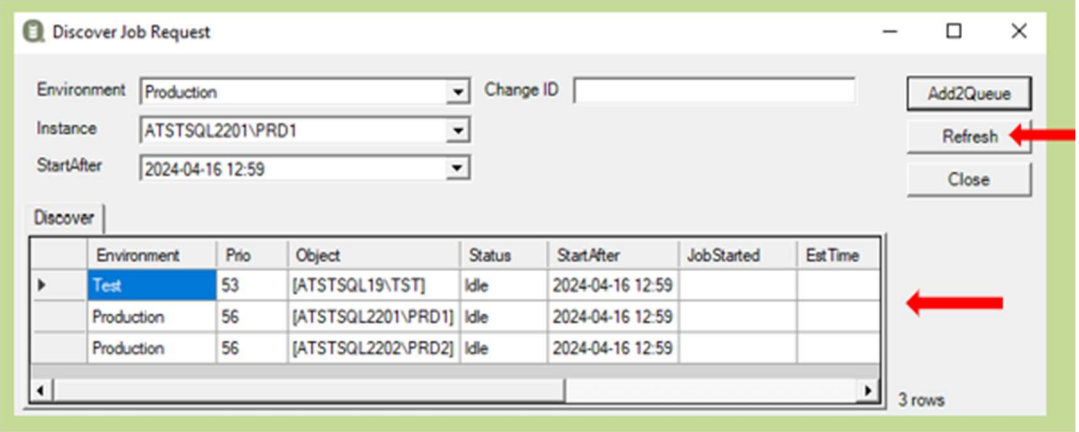
Use the filters Begin and End period and Application to find the Import-Database history you are looking for. See details by double-click on a row in the overview or selecting the row and pressing the Details button.

9 Discover

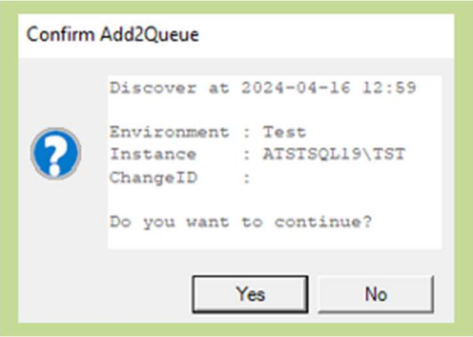
Required Authorisation	Menu
Discover	Jobs -> Discover -> Request Jobs -> Discover -> History

You will only be able to request a Discover job for the Environments you are Authorised for. If you are authorised for Discover, you will be able to see the history of all Discover jobs.

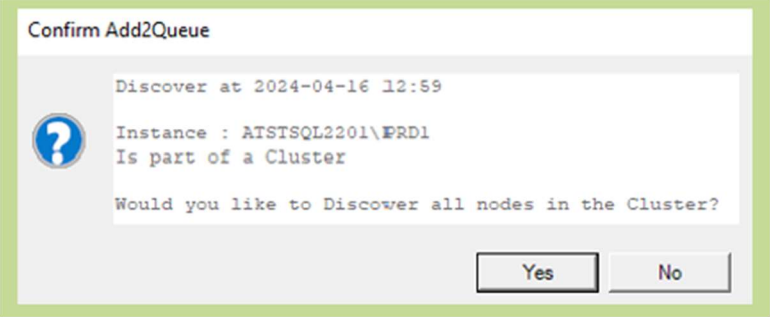
9.1 Discover Request



The Discover tab shows all Discover jobs on the Queue. The Refresh Button will renew the data in the overview. The StartAfter date is the moment when you want the job to start.
Select Instance and StartAfter datetime, enter Change ID if required and press Add2Queue.

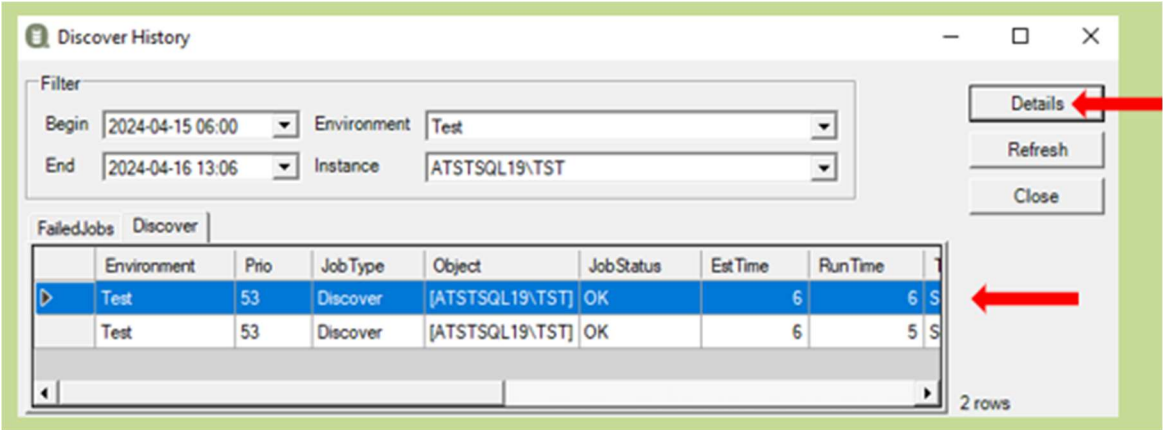


After confirming the job, it will appear in the overview. If you are not authorised for Auto-Approval, the job will have status Awaiting Approval. When the Discover job has finished or the Request was denied, you will receive a personal message.



If the Instance you requested the Discover job for is part of a Cluster, you will be asked if you want to discover the other nodes in the Cluster.

9.2 Discover History



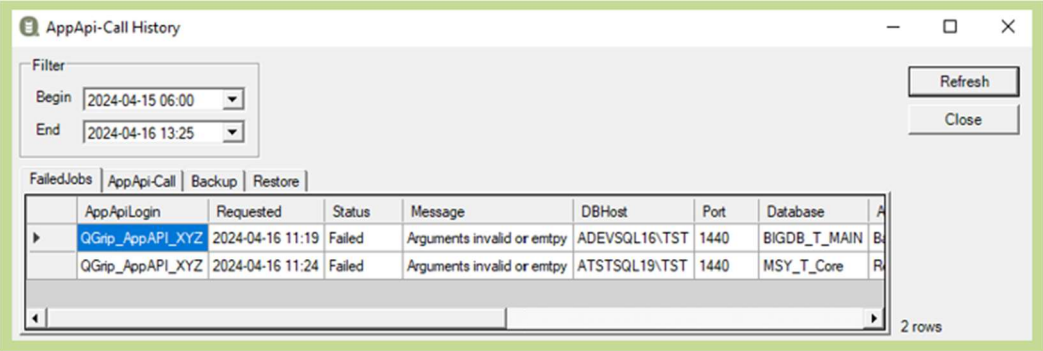
Use the filters Begin and End period, Environment and Instance to find the job(s) you are looking for. The first Tab in the overview contains the Failed Discover jobs and the Discover Tab all Jobs. Due to the fact that the Discover jobs run very regularly, there is not an extended log file for each run, but you can see more details by double-click on a row in the overview or selecting the row and pressing the Details button.

10 AppApi-Call - History

Required Authorisation	Menu
QGrip-Admin	Jobs -> AppApi-Call -> History

Recommended documentation

Doc-Tab	Title
Plugins	AppAPI Backup & Restore



In this Window, you can see all AppAPI Backup & Restore actions for a chosen period.

Tabs	Description
Failed Jobs	All failed jobs
AppApi-Call	All call attempt, both successful and failed
Backup	Successful Backups
Restore	Successful Restores

11 Clean-up

Required Authorisation	Menu
Run Clean-up Jobs	Jobs -> Cleanup -> Request Jobs -> Cleanup -> History

Recommended documentation

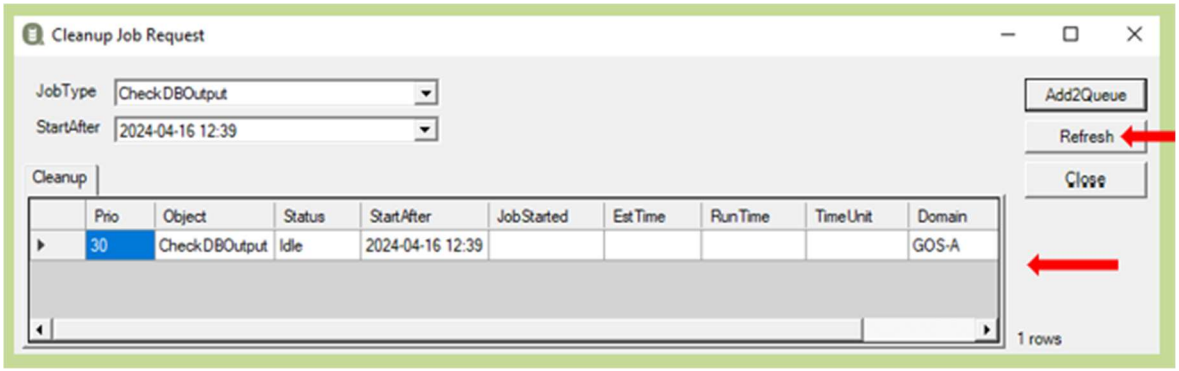
Doc-Tab	Title
Jobs	Clean-up Jobs

JobType

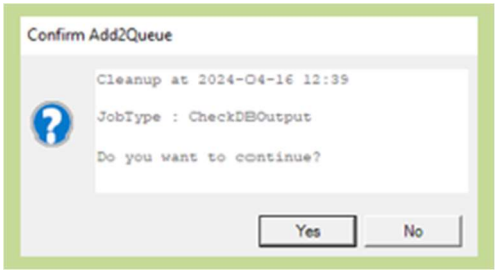
JobType	Description
CheckDB Output	Removes the Binary log files in the QGrip database.
History Tables	Deletes records in the History tables in the QGrip database.

The parameters used by the different jobs are set from the Clean-up Definition.

11.1 Request

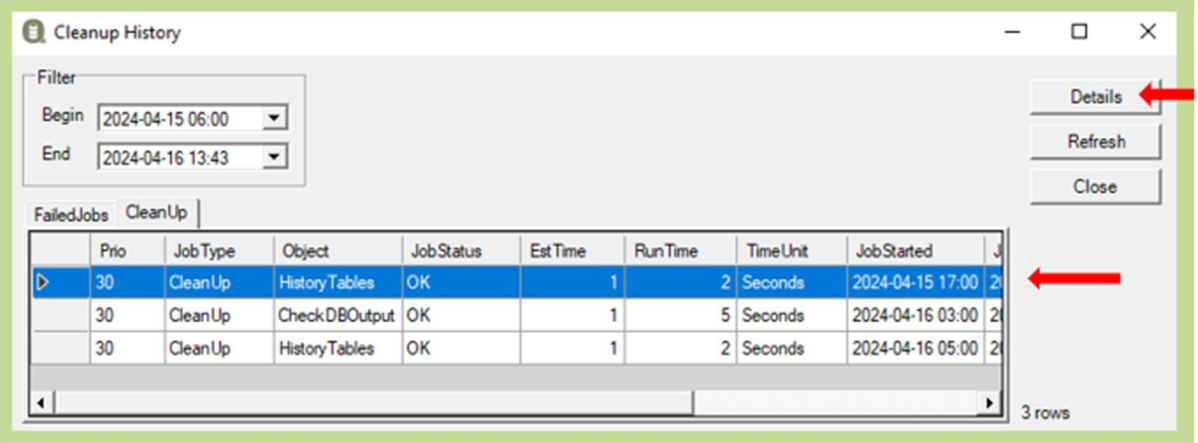


The overview shows all Cleanup jobs on the Queue. The Refresh Button will renew the data in the overview. The StartAfter date is the moment when you want the job to start.
Select JobType and StartAfter datetime and press Add2Queue.



After confirming the job, it will appear in the overview. When the Cleanup job has finished you will receive a personal message.

11.2 History



Use the filters Begin and End period to find the job(s) you are looking for.
The first Tab in the overview contains the Failed jobs and the CleanUp Tab all Jobs.
To see more details, double-click on a row in the overview or select the row and press the Details button.

12 DomainJob

Required Authorisation	Menu
Run Domain Jobs	Jobs -> DomainJob -> Request Jobs -> DomainJob -> History

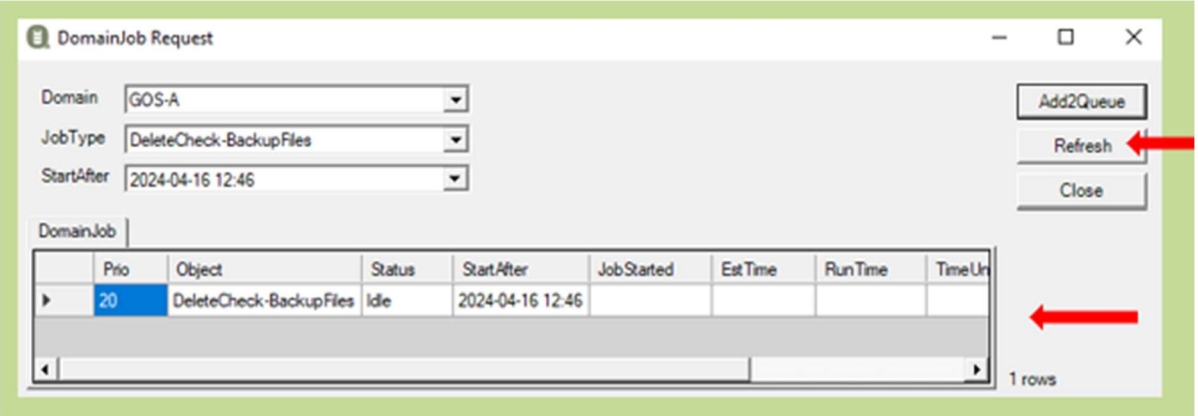
Recommended documentation

Doc-Tab	Title
Jobs	Domain Jobs

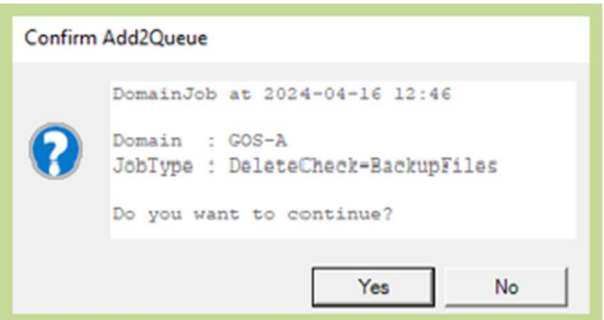
JobType

JobType	Description
Get-ADGroupMembers	Finds all members of all AD-groups that are used as login on Instances in QGrip.
DeleteCheck-BackupFiles	Deletes backup files on the backup shares using the clean-up definition. It also checks that the files that are registered in the QGrip databases really exists on the backup shares.
Check-BackupShares	Checks that the files on the backup shares also are registered in the QGrip database.

12.1 Request

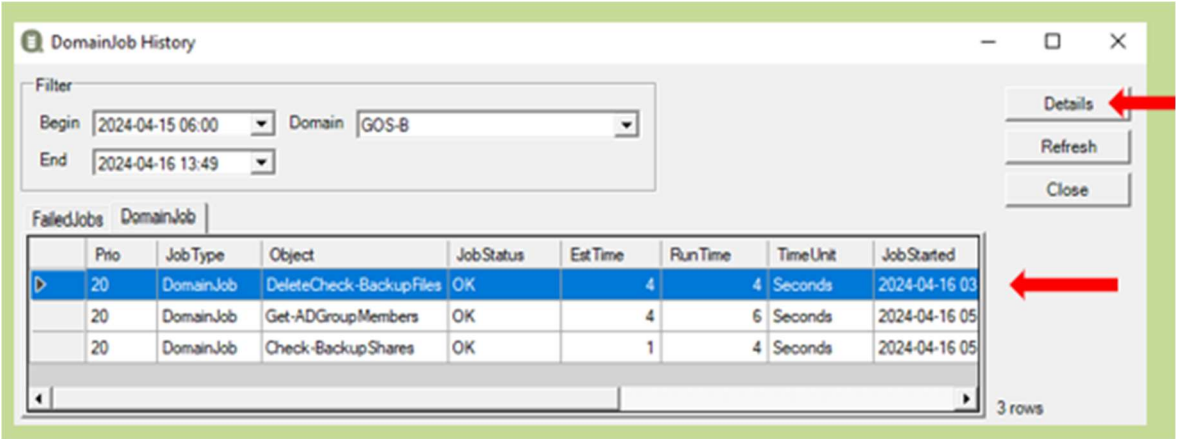


The overview shows all Domain Jobs in the Queue. The Refresh Button will renew the data in the overview. The StartAfter date is the moment when you want the job to start.
Select Domain, JobType and StartAfter datetime and press Add2Queue.



After confirming the job, it will appear in the overview. When the Domain job has finished you will receive a personal message.

12.2 History



Use the filters Begin and End period and Domain to find the job(s) you are looking for.
The first Tab in the overview contains the Failed jobs and the DomainJob Tab all Jobs.
To see more details, double-click on a row in the overview or select the row and press the Details button.