Install

QGrip

GRIP ON SQL

2024-04-14

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1 Introduction

This document describes the installation of the QGrip components and finally the distribution the Grip-UI. This manual should be used during both initial installation and upgrades, described in different chapters. Prior to proceeding with installation, it is important to first make sure that you understand the architecture QGrip needs in order to work properly.

QGrip stores all its components in the QGrip database, including all executables and the Setup.exe. If you start a client executable and the version does not comply with the version in the database, you will be asked to download it from the database. The executables used by the worker processes on the QGrip Servers are automatically downloaded and installed if the version does not comply.

There is only one Setup.exe that can be used for all actions described in this document.

2 Initial Database Dump

Initial database dump:
Mail: info@griponsql.org
✓QGrip_x.y.zz-FULL.bak

We want to keep track of who is using QGrip and the initial database dump that you need to install and use QGrip cannot be downloaded from our website. Send an email with your request and we will send you a link and a password that you can use to download the initial database dump.

3 Latest version QGrip Software

Latest version:
www.griponsql.org/download
✓QGrip-PreSetup.x.y.zz.zip

The latest version of QGrip is a zip-file that can be downloaded from our website or you will receive a link to download it. Once extracted, there is an PreSetup.exe that needs to run. The PreSetup will prepare the QGrip directory for the Upgrade so that the Setup can be started.

The appendix contains a section with detailed instruction how to run the PreSetup.

4 QGrip Directory

Preferred directories

1. **D:\QGrip**
2. **E:\QGrip**
3. **D:\Apps\QGrip**
4. **E:\Apps\QGrip**

The QGrip directory is the directory on the QGrip Server where the QGrip components are installed. The directories above are only a preference. Advice is to use the same directory on all QGrip Servers.

5 Preparation and authorisation

QGrip Database Initial Installation and/or adding new QGrip Server, check completion of

- Install: Prepare Infra

The account you are using for the installation needs to be:

- Local Admin on the QGrip Server
- SYSADMIN on the Instance(s) where the QGrip database is running.

6 QGrip License Key

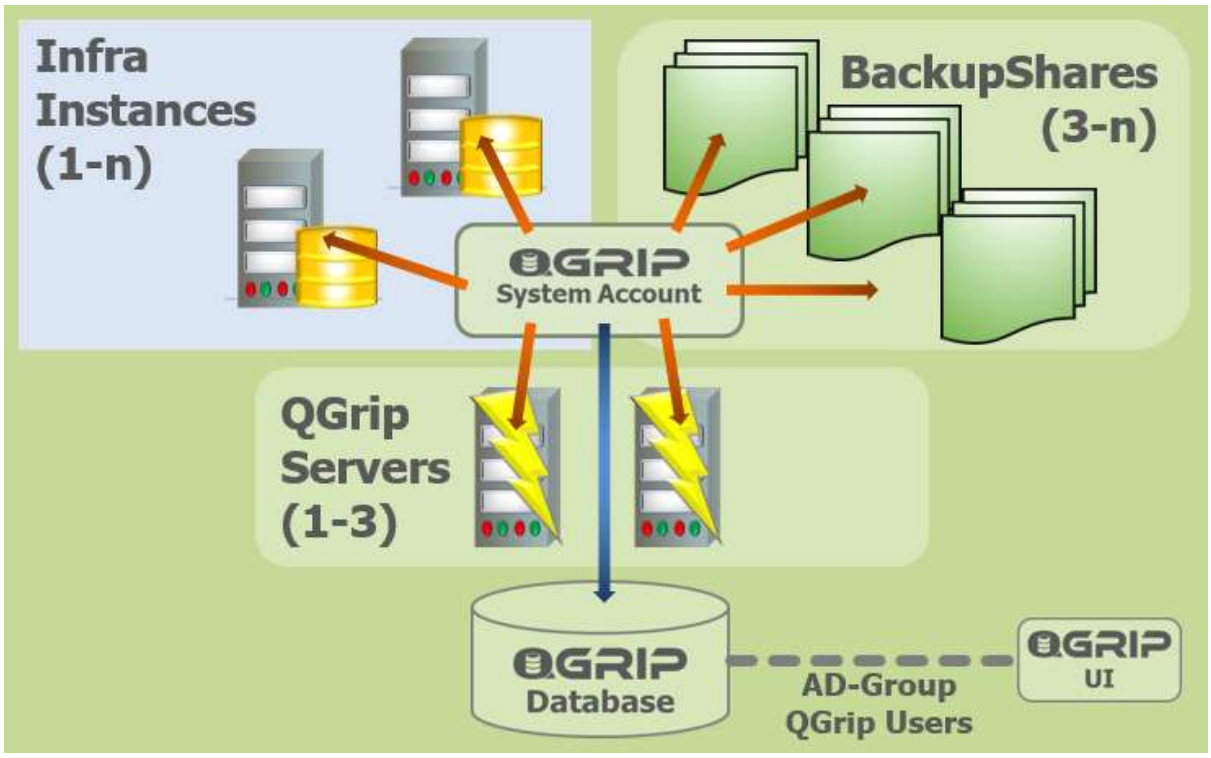
During the first installation (prepare) of the QGrip database, a Trial License Key will be generated. The Trial Key will enable you to try out QGrip and see if it is interesting for your organisation.

- Trial Key
  - ✓ Generated during first install
  - ✓ Valid for 45 days
  - ✓ Max Instances 5, Max Users 5

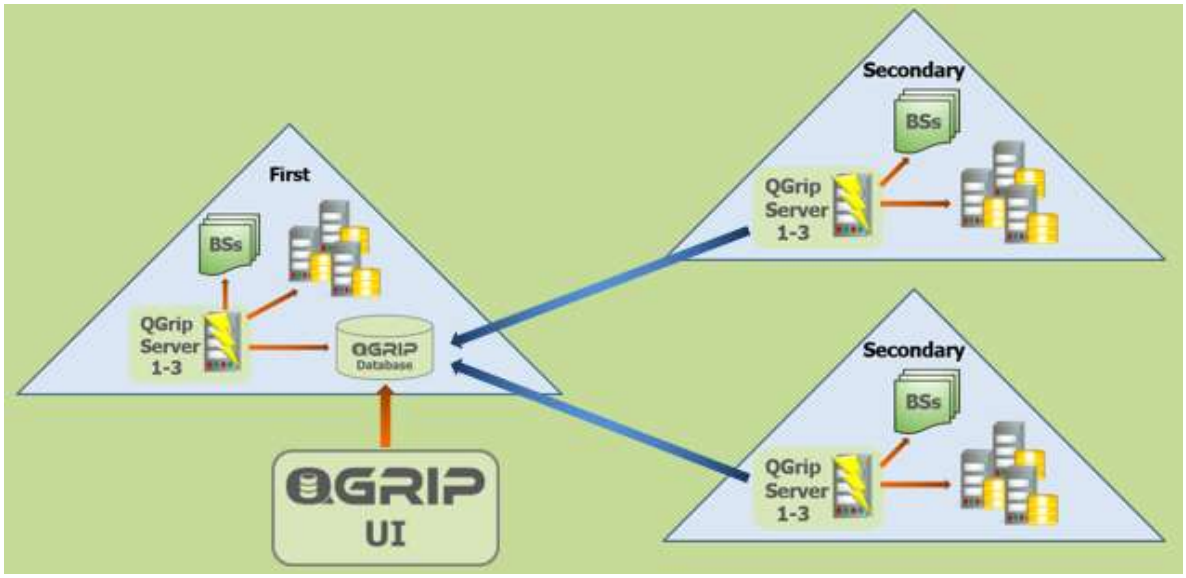
If you want to continue using QGrip after the Trial period or you are limited by Max Instances/Users, contact us to purchase a Production Key. The different Levels and prices can be found on our website.

- Production Key
  - ✓ Distributed after Payment
  - ✓ Valid for 12 months (from Expire date last key)
  - ✓ Max Instances / Max Users depend on what you purchase

7 QGrip Components



An overview of the QGrip components within one AD-Domain.



Multiple AD-Domain configuration.

The Multiple AD-Domain configuration picture above is used in the descriptions of the different type of Setups that should be run. If your configuration only covers one AD-Domain, everything will be in the First domain.

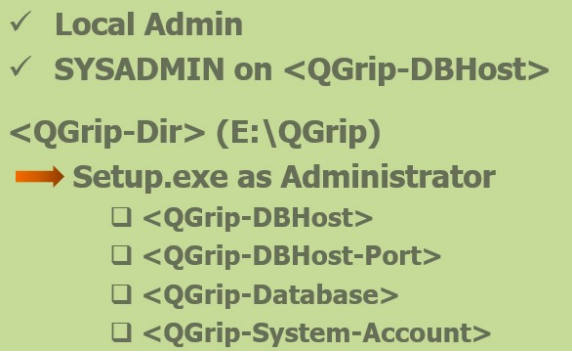
8 QGrip Setup

QGrip uses one Setup. The setup should be available in the QGrip directory on each QGrip Server. The setup should be used to Prepare and Upgrade the QGrip Database, Install and Uninstall a QGrip Server and to Update the QGrip License. The QGrip database contains all QGrip (client) executables and the Setup should be used to initially download the QGrip.exe and QGrip-SQL-Installer.exe from the database. There is also an option to add the current user as QGrip-Admin that can be used if the 'last' QGrip-Admin has accidentally been removed.

The different types of Setup are described in different chapters so they can easily be found and described, but they can be combined, as long as the buttons in the Setup are enabled.

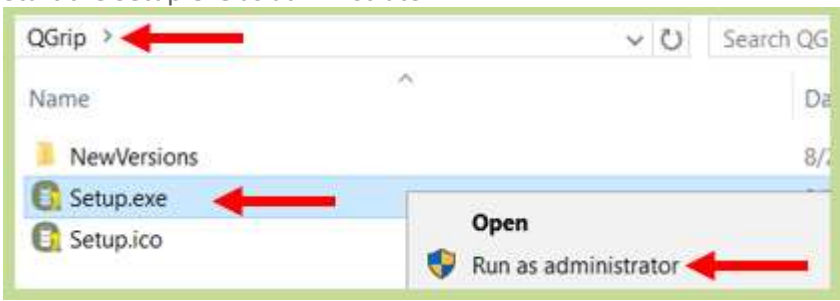
Each section describes on which QGrip Server the Setup should be started for the intended purpose and a quick overview of which buttons to push.

8.1 Run the Setup

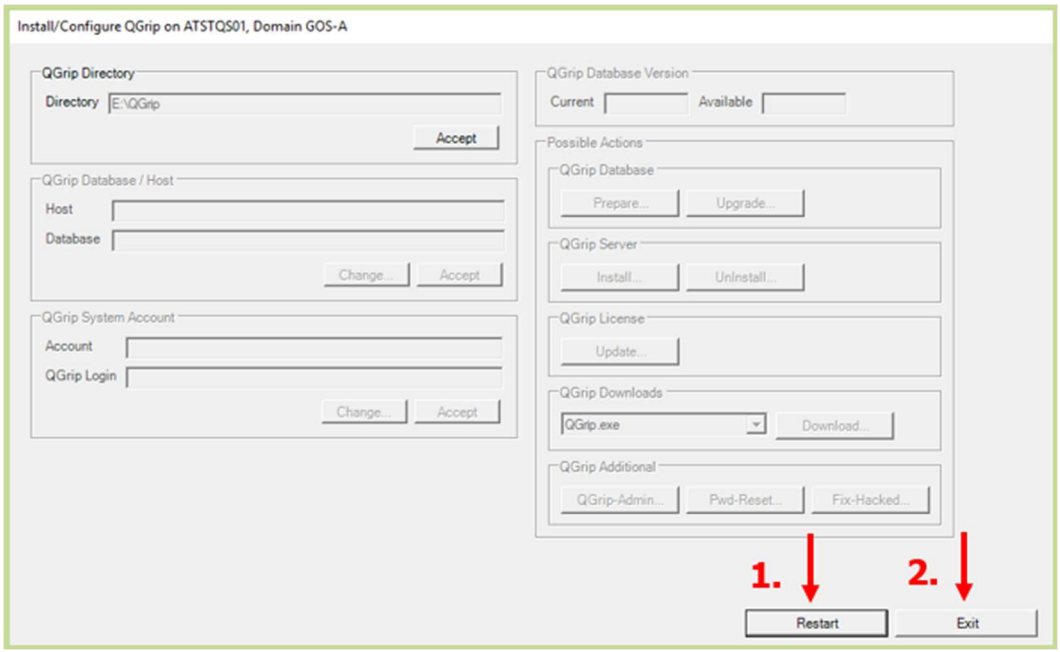


To run the Setup, login on the QGrip Server and go to the QGrip directory created and/or prepared during the PreSetup (or manually prepared in case of a secondary QGrip Server).

Start the Setup.exe as administrator.



The Install/Configure QGrip window will open.



Only valid choices will be enabled.

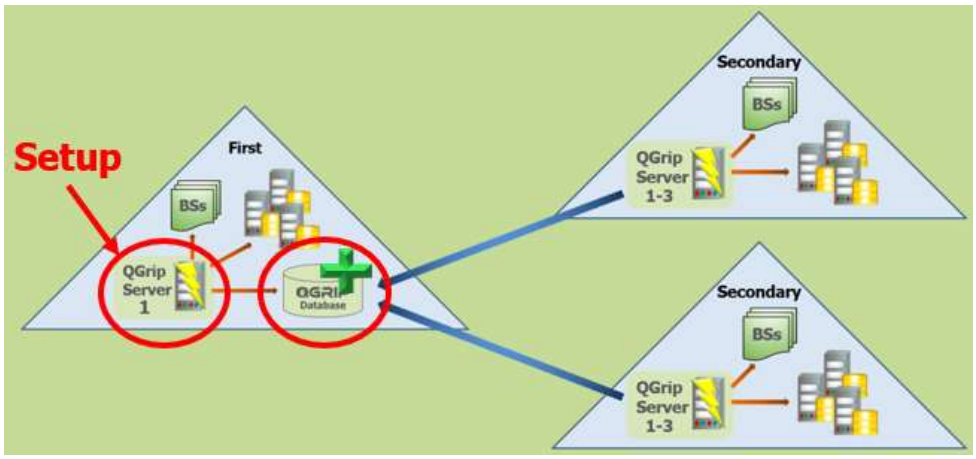
On the left, you need to Accept each configuration value.

If you try to [Change…] a value that cannot be changed, you will receive an error message with further instructions.

1. [Restart] - Resets the window.

2. [Exit] - Closes the Setup window. A popup will appear with the name and location of the Log File of all actions.

9 Setup: QGrip Database Initial



If it is the *very first* time you install QGrip, you should follow the steps in this section and complete all steps before continuing with installing/configuring other QGrip Servers. For this install, choose one QGrip Server in *the first domain*. That is the domain where the QGrip database will be running.

9.1 Get: Initial Database Dump

Initial database dump:
Mail: admin@griponsql.org
✓QGrip_x.y.zz-FULL.bak

Contact us to receive a link and a password that you can use to download the initial database dump.

9.2 Download: Latest version QGrip Software

Latest version:
www.griponsql.org/download
✓QGrip-PreSetup.x.y.zz.zip

The latest version of QGrip is a zip-file that can be downloaded from our website.

9.3 Restore: QGrip Database

Initially, you will need to Restore the downloaded backup file QGrip_x.y.zz-FULL.bak file manually on the QGrip Database server.

For a detailed description, see appendix:

- 18.1 Initial Restore: QGrip Database

9.4 Run: Pre-Setup

The Pre-Setup will prepare the QGrip directory on the QGrip Server and organise new releases. Perform the Pre-Setup with the downloaded file QGrip-PreSetup.x.y.zz.zip.

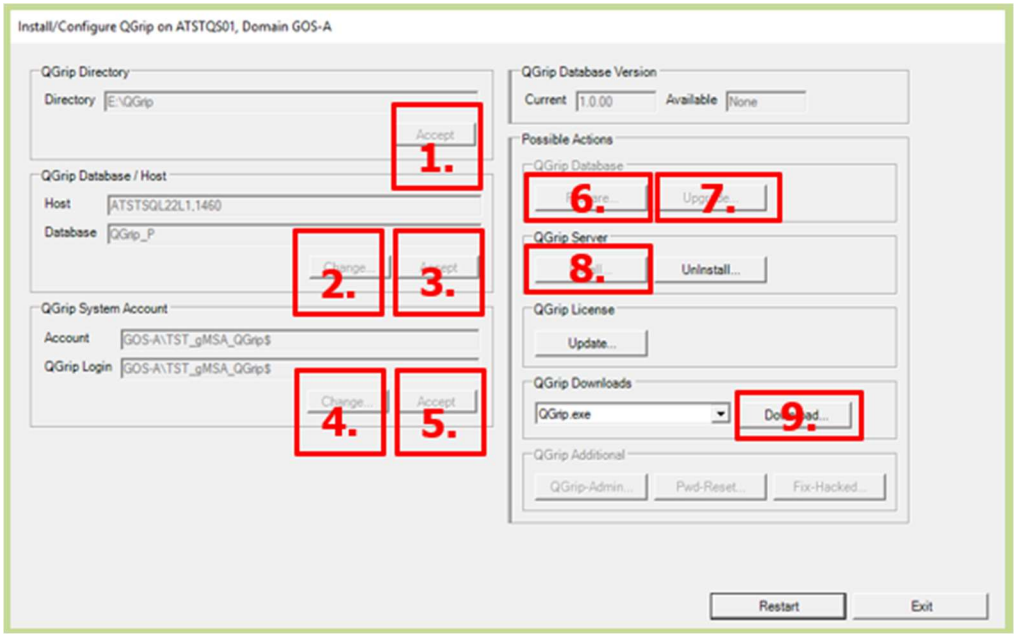
For a detailed description, see appendix:

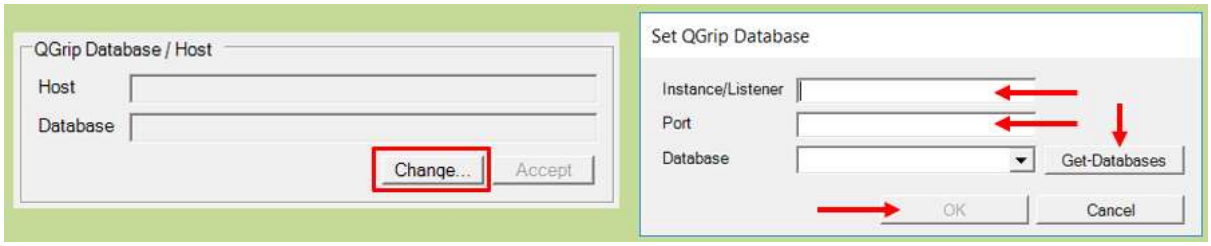
- 18.2 Pre-Setup on QGrip Server

9.5 Run: Setup

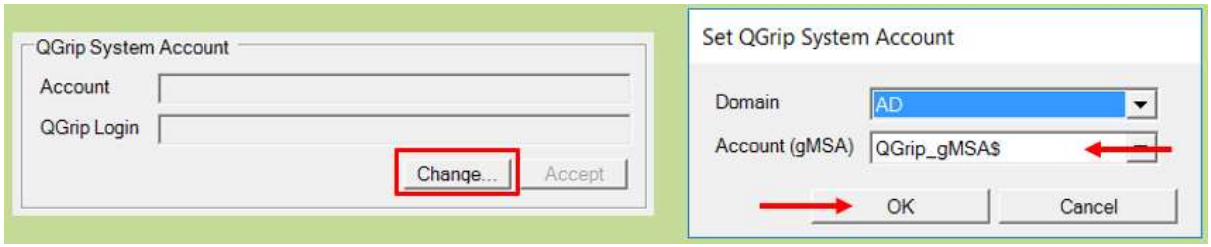
Description	Notation	Example
QGrip Directory	<QGrip-Dir>	E:\QGrip
QGrip DBHost Name	<QGrip-DBHost>	VMSQL2019\PRD
QGrip DBHost Port Number	<QGrip-DBHost-Port>	1433
QGrip Database Name	<QGrip-Database>	QGrip
QGrip System Account	<QGrip-System-Account>	gMSA_QGrip$

Information needed during setup.

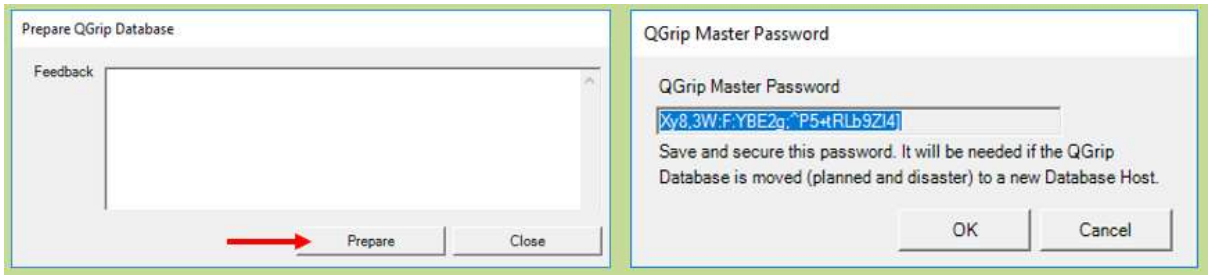




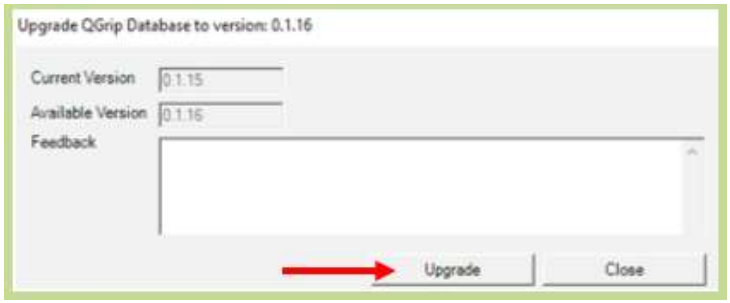
2. Select QGrip Database/Host.



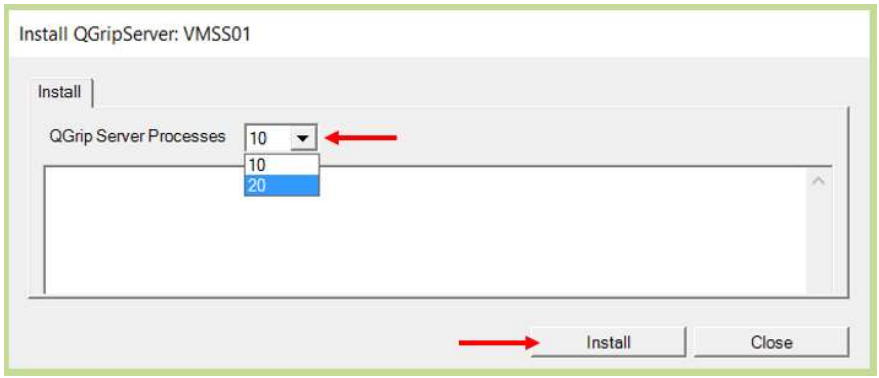
4. Select QGrip System Account



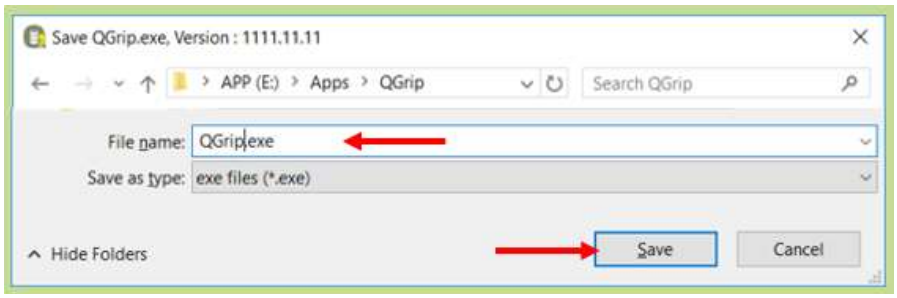
6. Press Prepare, copy and save the Master Password and confirm action. Window will be disabled until finished.



7. Press Upgrade and confirm action. Ignore backup warning. Window will be disabled until finished.



8. Choose number of Processes, press Install and follow instructions. Window will be disabled until finished.



9. Download the QGrip.exe to the QGrip Directory. Remove the version number before saving.

Pre-Configuration

During the Installation the following pre-configuration of QGrip will been done

- <QGrip-System-Account> has been added as login on the <QGrip-DBHost> with SYSADMIN privileges, in case of AlwaysOn Cluster, on all replicas.

- <QGrip-DBHost> has been added as Production Instance(s) in the QGrip configuration.
- “Your AD-Account” will be added as member of the Team “QGrip Admin” in the QGrip configuration.

The Initial configuration of QGrip should be done with the account “Your AD-Account”.

Possible problems:

2. Select QGrip Database/Host.

   If you cannot connect to the Instance/Listener, you will need to check that you have access to the DBHost and that there are no firewalls that need to be opened. Do also check that TCP is enabled for the Instance(s).

4. Select QGrip System Account

   Only group Managed Service Accounts on the Domain that have also been installed on the current machine will be presented. If the gMSA_QGrip$ account is not available in the list, it has not been created correctly. Check Install: Prepare Infra

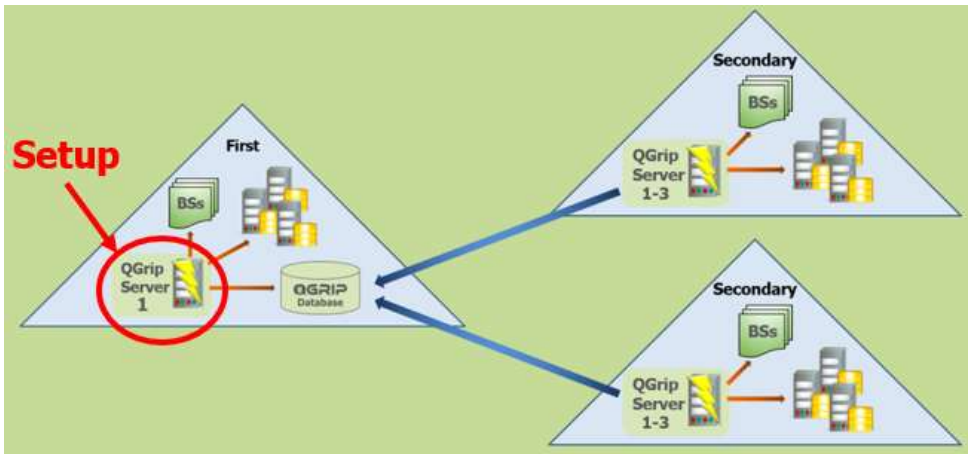
9.6 Initial Configuration

After ‘Setup: QGrip Database Initial’, QGrip needs to be initially configured. Start the QGrip.exe downloaded in the last step. The executable requires the QGrip.ini to be in the same directory.
The Initial configuration of QGrip should be done with the account used during the Setup.

To perform the initial configuration, use:

Doc-Tab	Title
Install	Initial Configuration

10 Setup: QGrip Database Upgrade



If there is a new release of QGrip that you need to install, you should follow the steps in this section. For this install, choose one QGrip Server in *the first domain*. That is the domain where the QGrip database is running.

The Upgrade will only update the QGrip database and should only be executed once.
If needed, all existing QGrip Servers will automatically update their own software from the QGrip database.

During the Upgrade, QGrip will be put in Maintenance Mode, users connected via the QGrip-UI will be logged out and a backup will be made of the QGrip database.

10.1 Download: Latest version QGrip Software

Latest version:
www.griponsql.org/download
✓QGrip-PreSetup.x.y.zz.zip

The latest version of QGrip is a zip-file that can be downloaded from our website or it will be sent to you via a download link..

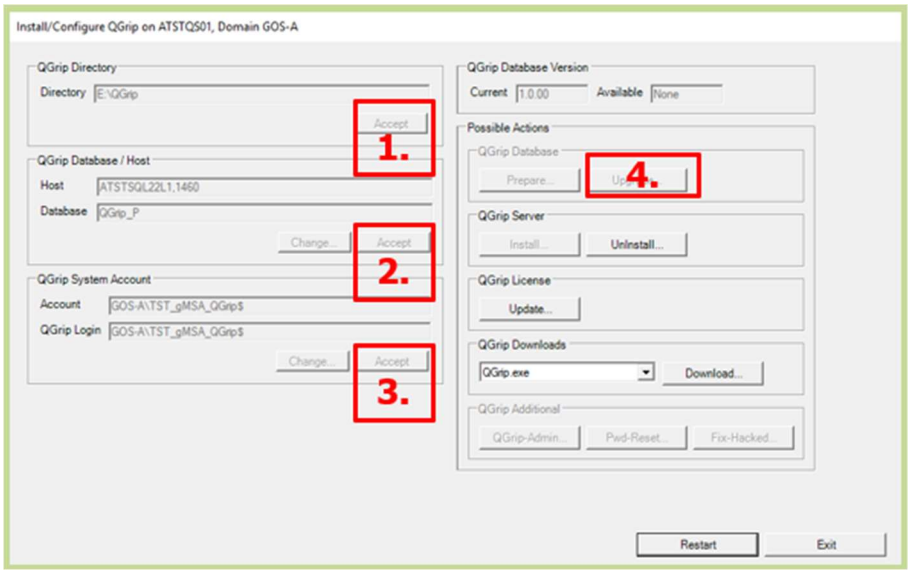
10.2 Run: Pre-Setup

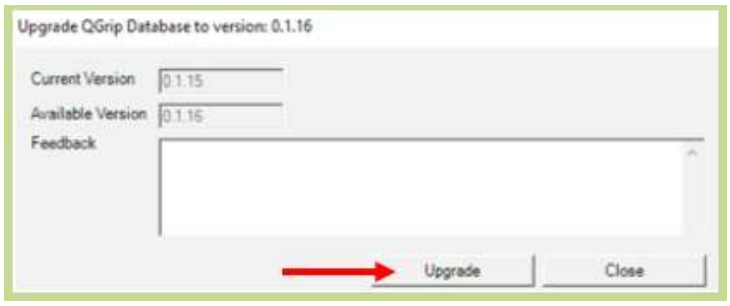
The Pre-Setup will prepare the QGrip directory on the QGrip Server and organise new releases. Perform the Pre-Setup with the downloaded file QGrip-PreSetup.x.y.zz.zip.

For a detailed description, see appendix:

- 18.2 Pre-Setup on QGrip Server

10.3 Run: Setup



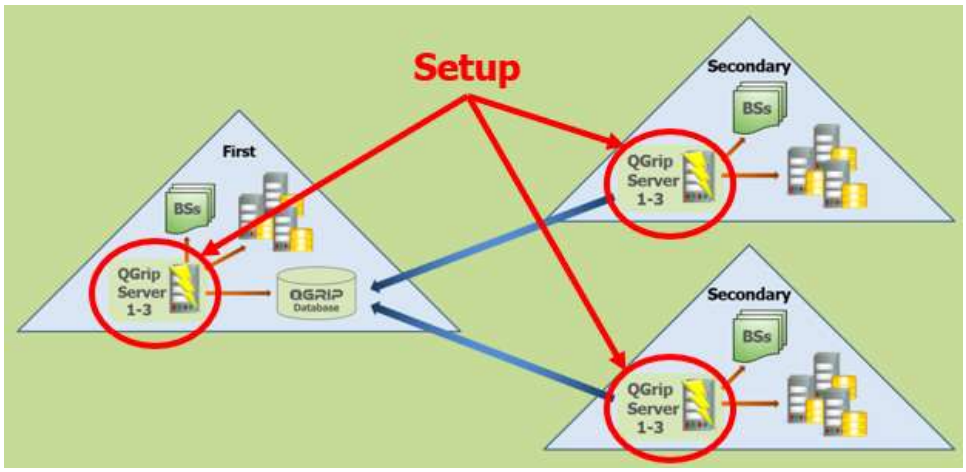


4. Press Upgrade and confirm action. Window will be disabled until finished.

If, for some reason, the Upgrade fails with an error message, you will need to revert back to the prior version, see appendix:

- 18.3 Upgrade Failed: QGrip Database

11 Setup: QGrip Server (Install/UnInstall)



Use this section to install/uninstall a QGrip Server in First and Secondary domain.

11.1 Create: QGrip Directory

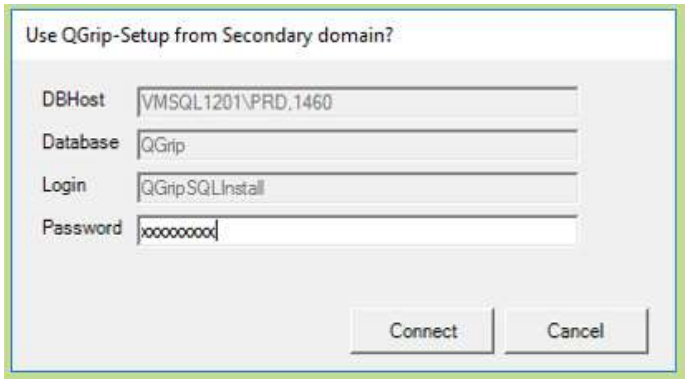
D:\QGrip

- **Setup.exe**
- **Setup.ico**
- **QGrip.ini**

If it is the first time the QGrip Server is used, do the following:

1. Create a QGrip directory on the QGrip Server.
2. Copy the following files from an existing QGrip Server to the QGrip directory:
    - Setup.exe
    - Setup.ico
    - QGrip.ini
3. Verify that the QGrip Server has been prepared as described in
    - Install: Prepare Infra

11.2 Untrusted Secondary Domain



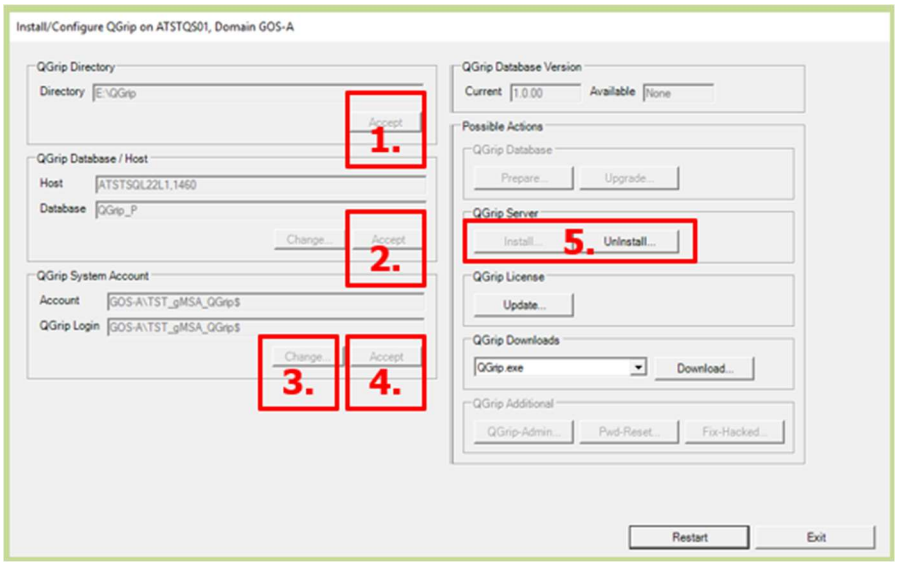
This Popup will be shown if you have started the Setup on a QGrip Server in a Secondary AD-Domain that is not trusted by the First AD-Domain (where the QGrip Database is running).

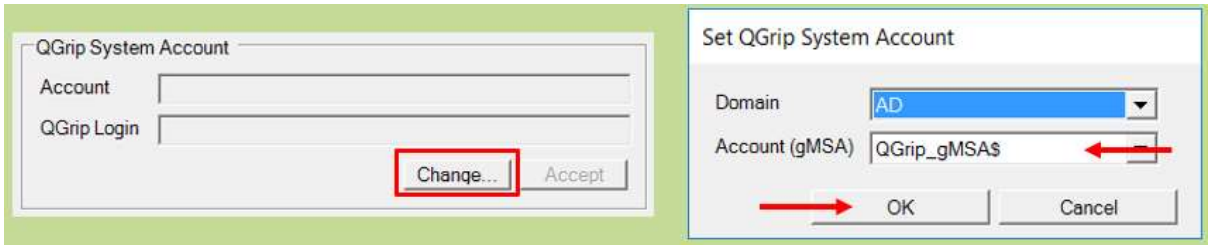
You will not be able to connect to the QGrip database using your own AD account. You will need to create and use the temporary QGripSQLInstall account, see appendix:

- 18.4 Create: QGripSQLInstall

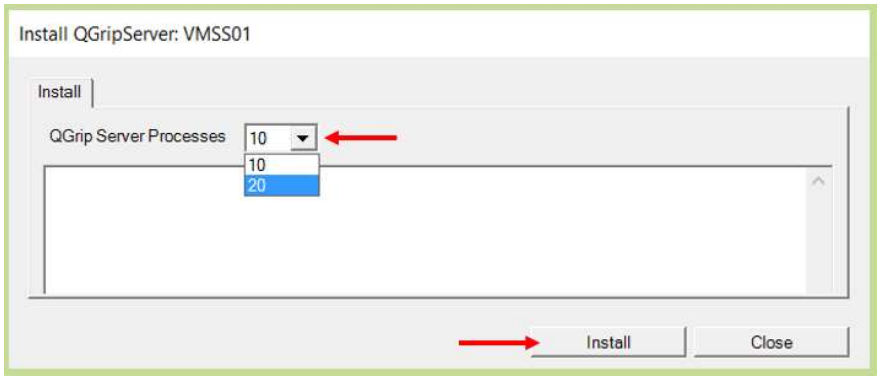
When account has been created, enter the password to continue.

11.3 Run: Setup

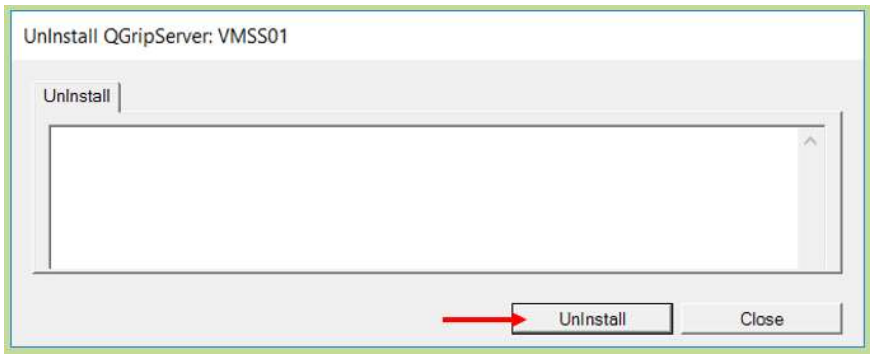




3. Select QGrip System Account. This is only needed on first QGrip Server within the Domain.



5a. Install: Choose number of Processes and press Install and follow instructions. Window will be disabled until finished.



5b. UnInstall: Press UnInstall and confirm action. Window will be disabled until finished.

Possible problems:

2. Connect to QGrip Database Fails

Only on Secondary Domain!

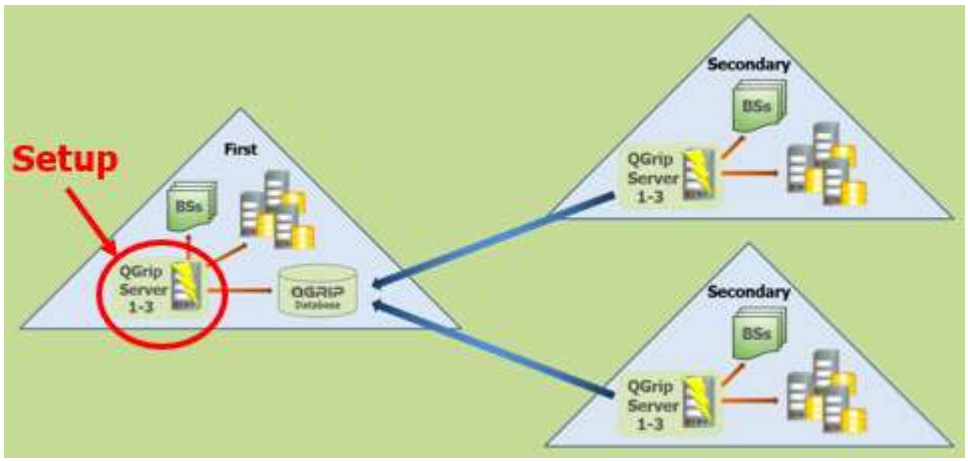
If the QGrip Database Host Name is not known on the Secondary domain, you can use the IP Address instead. This action will update the QGrip.ini.

The updated QGrip.ini containing the IP Address should be used on all QGrip Servers within that domain.

3. Select QGrip System Account

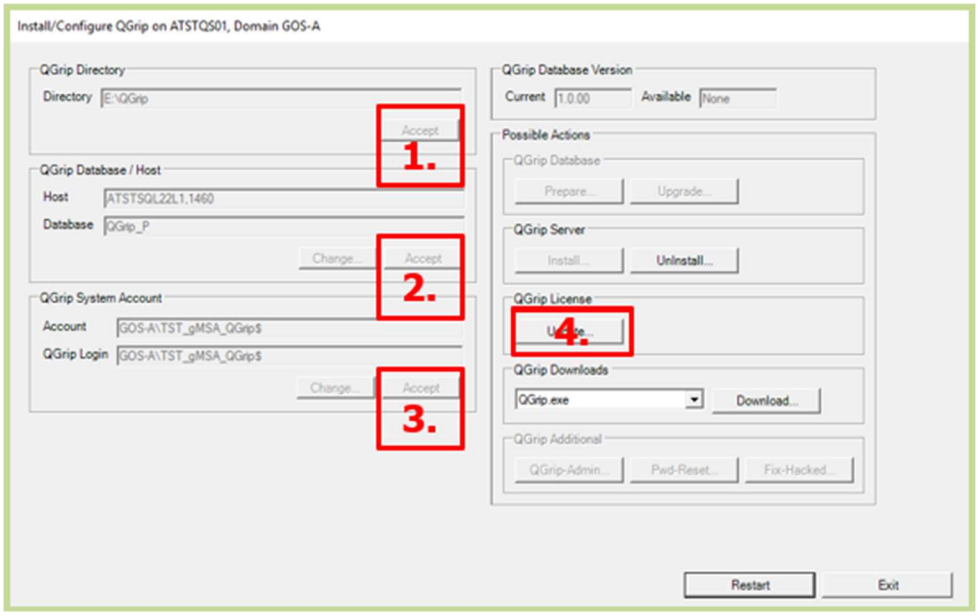
Only group Managed Service Accounts on the Domain that have also been installed on the current machine will be presented. If the gMSA_QGrip$ account is not available in the list, it has not been created correctly. Check Install: Prepare Infra

12 Setup: QGrip License



This section should only be used to enter a new License key or to lookup the current License key that is needed for License key renewal. Update License Key can only be done from the Setup.

12.1 Run: Setup

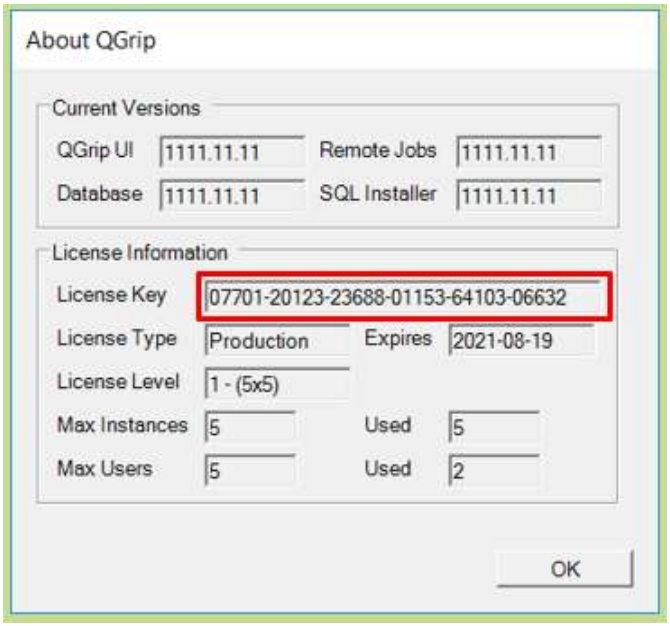


4. Update License Key

If you already have a new License key, paste it into the New Key field and press save key.

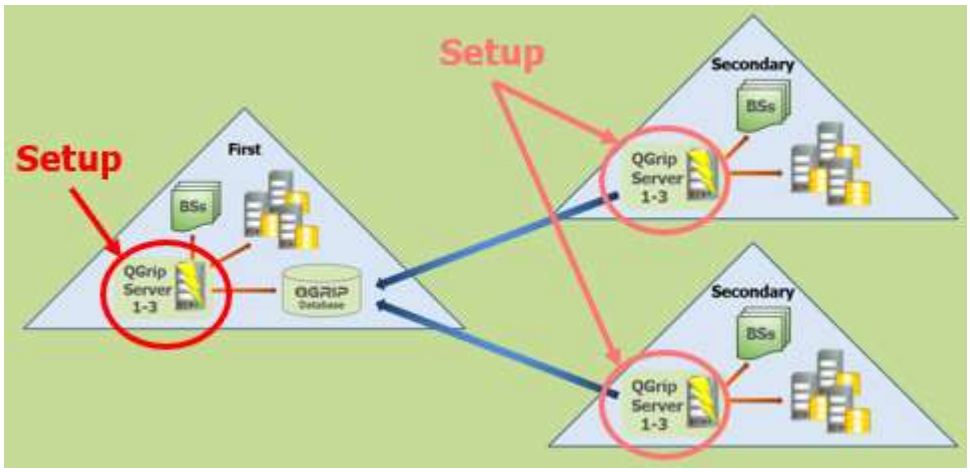
For License Key renewal, the Current Key needs to be sent to Grip on SQL BV in order to generate the new Production key. Use the Copy button to Copy it. When you have received the new Production key, go back here to enter it.

Note:



The Current License Key can also be found in the QGrip-UI, Help -> About QGrip, where It can be selected and copied.

13 Setup: Downloads



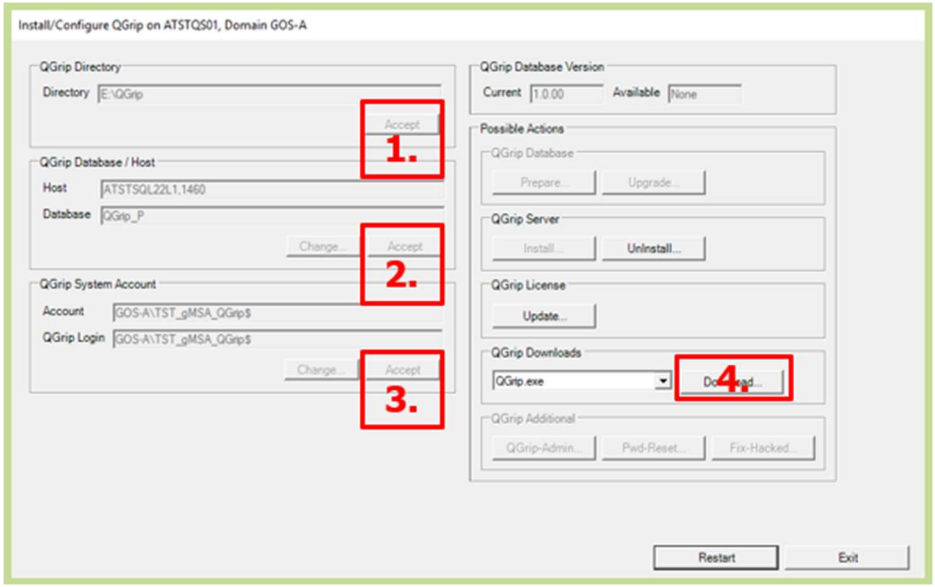
This section should only be used for download of executables or the complementary Monitor-Mail zip-file from the QGrip database:

- QGrip.exe
- QGrip-SQL-Installer.exe
- QGrip-Monitor-Mail.zip (See Plugins: External Monitoring & Mail Backup Report)

It is possible to download from a QGrip Server in a Secondary domain but you might need to create the temporary QGrip-Login [QGripSQLInstall] first.

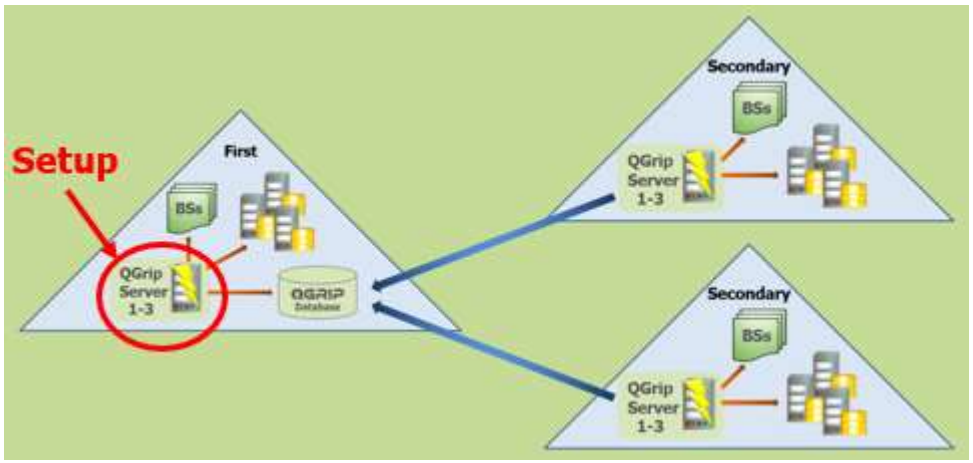
To run downloaded executables, only the QGrip.ini is needed in the same directory as the executable. The executables will detect if another version needs to be downloaded from the database which makes it really easy to manage as it can be done by the users themselves without Administrator interference.

13.1 Run: Setup



4. Choose the file you want to download and press [Download].

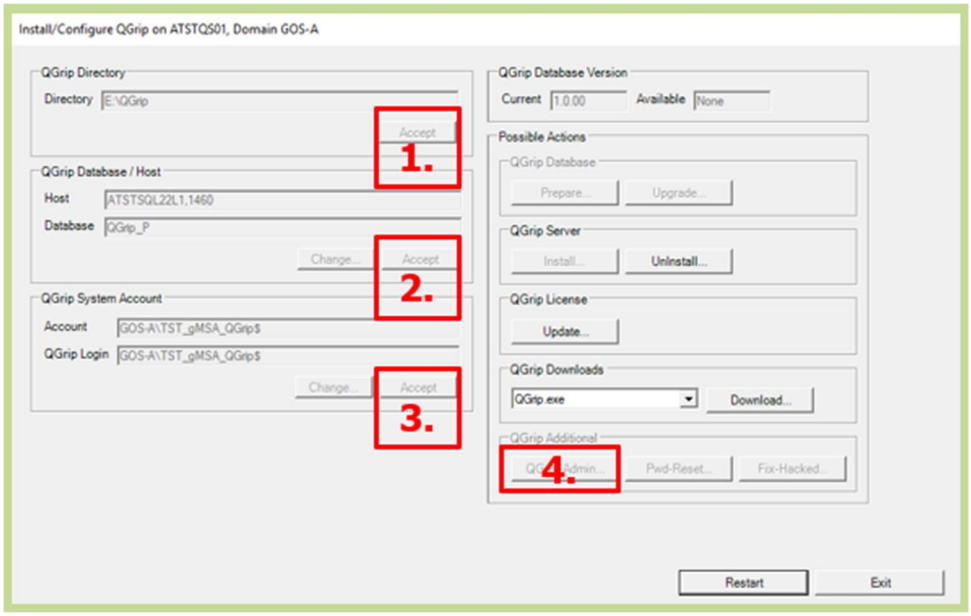
14 Setup: QGrip-Admin



This section should only be used if the 'last' QGrip-Admin has accidentally been removed. The current AD User will be added as QGrip-Admin in QGrip.

The current AD user must be SYSADMIN on the QGrip Database host.

14.1 Run: Setup

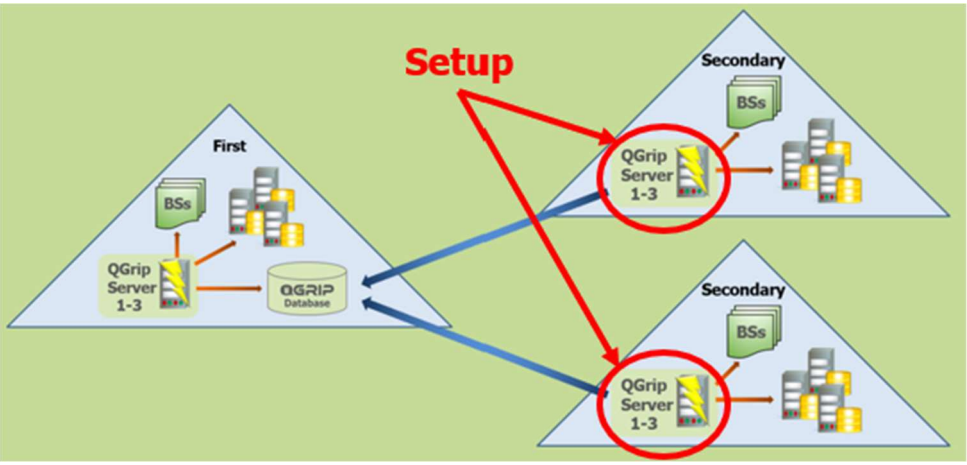


4. Press [QGrip-Admin].

Enter the Master Password generated and saved during the first install.

Note:
If the current AD user already is QGrip-Admin, the button will remain disabled.

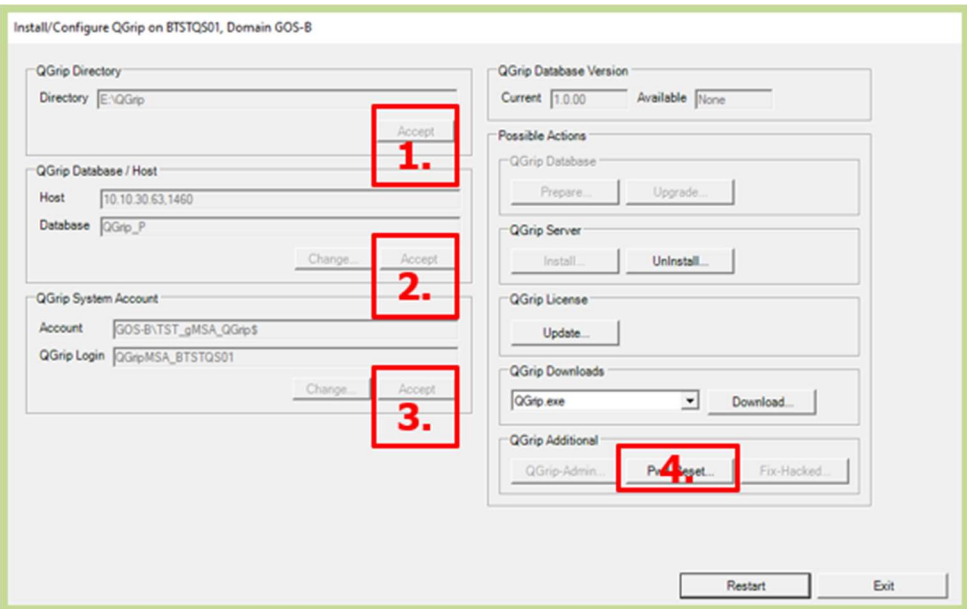
15 Setup: Password Reset



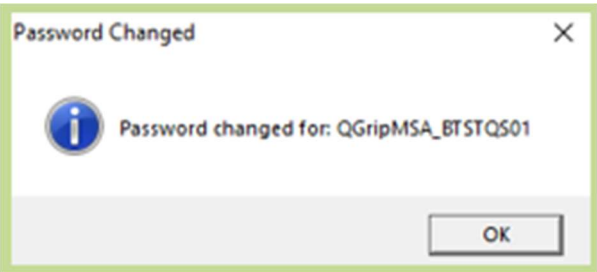
Use this section if the periodic Password change failed for some reason. This can only happen on QGrip Servers that are running in a Secondary domain and a SQL Server account is used for the communication with the database.

The current AD user must be SYSADMIN on the QGrip Database host.

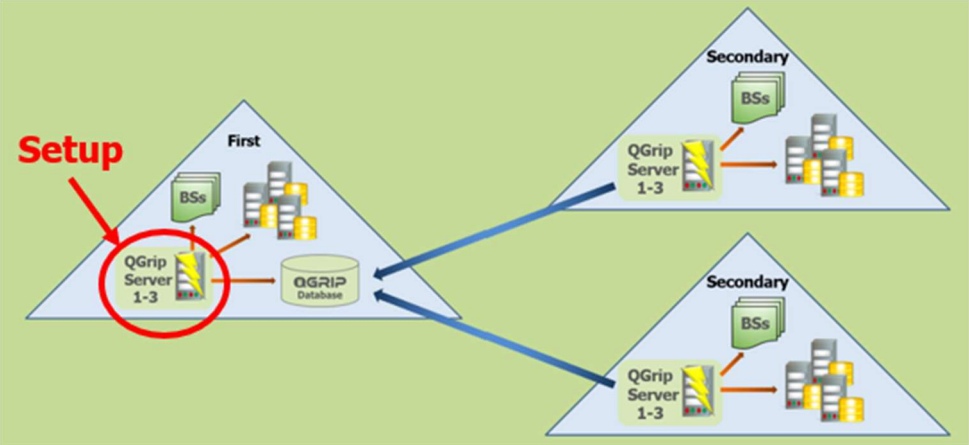
15.1 Run: Setup



4. Press [Pwd-Reset]. Button will only be Enabled if the QGrip Login is a SQL Server Account.



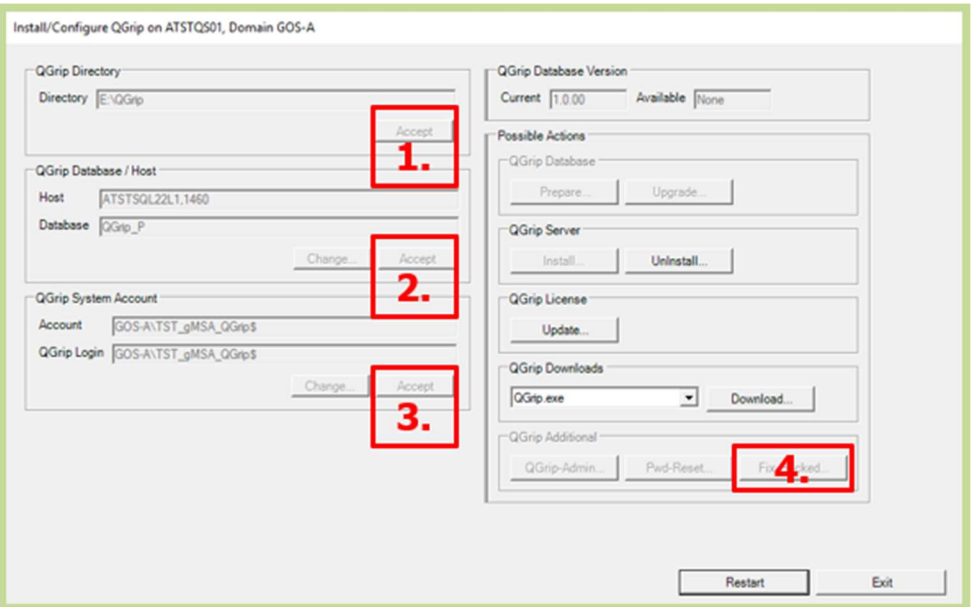
16 Setup: Fix-Hacked



QGrip is monitoring tables with content that should only be changed using the QGrip Setup/UI. If there has been a change to the content, warnings will appear that the System might have been hacked. You can try to correct the problem by using the [Fix-Hacked] button in the Setup.

The current AD user must be SYSADMIN on the QGrip Database host and QGrip-Admin in QGrip.

16.1 Run: Setup



4. Press [Fix-Hacked], the Button will only be Enabled if the system has possibly been Hacked.

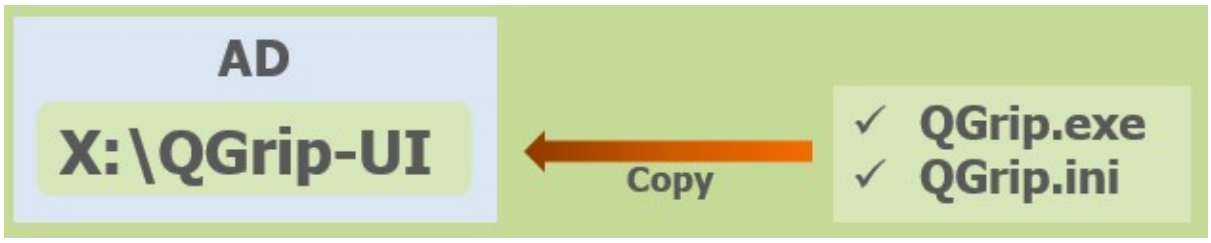
If the problem cannot be solved from the setup, you will need obtain a 'Fix-Hacked' release that will replace the content of the hacked tables.

Release (Normal)	Release (Fix-Hacked)
1.0.00	1.0.01-1.0.09
1.0.10	1.0.11-1.0.19

For each 'normal' release x.y.z0, there are 9 Fix-Hacked releases x.y.z1 – x.y.z9

17 Distribute QGrip-UI (the clients)

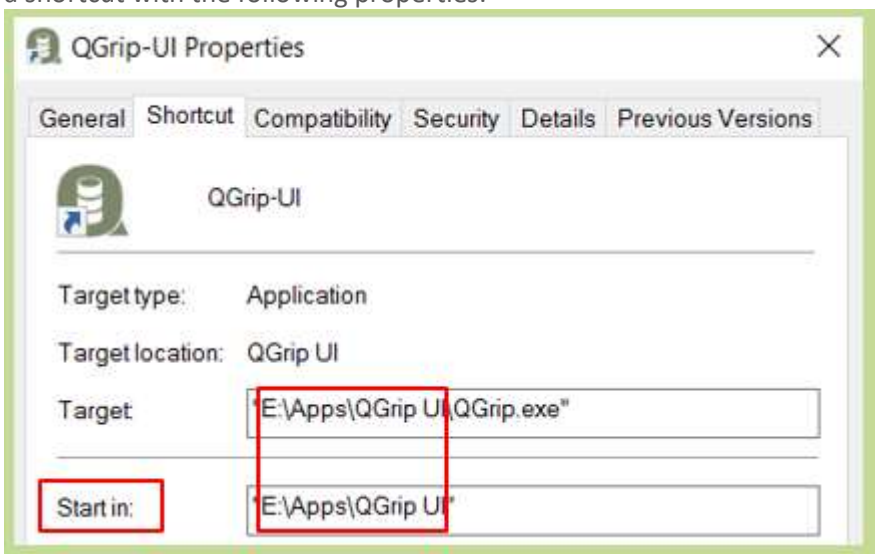
17.1 Option 1, share



The <QGrip-Users-Group> should have been added as QGrip login during the Initial Configuration.

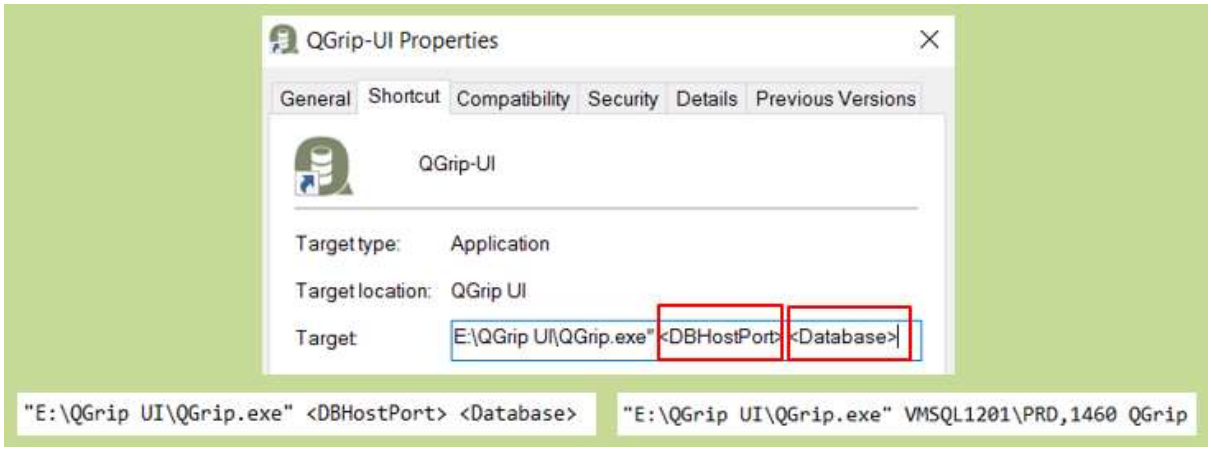
Download the QGrip.exe file using the Setup on one of the QGrip Servers. Place the QGrip.exe file together with the QGrip.ini file on the Grip-UI directory/share.

If not done during the Prepare Infra step, in the profile of the members of <QGrip-Users-Group>, add a shortcut with the following properties:



It is important that the “Start in:” property is equal to the “Target:” directory otherwise the QGrip.ini file will not be found.

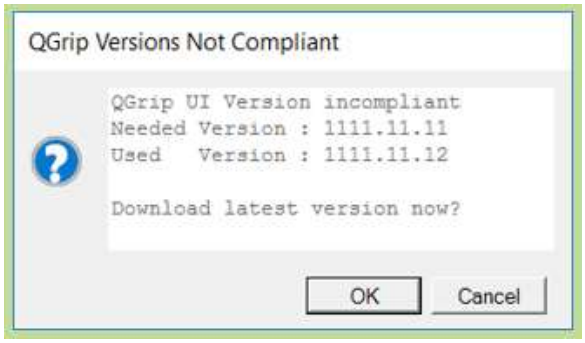
The QGrip.exe can work also without the QGrip.ini by adding arguments to the target in a shortcut.



The first argument is the DBHostPort and the second the Database, separated by spaces.
Both values can be found in the QGrip.ini

17.2 Option 2, local

Distribute the QGrip.exe together with the QGrip.ini the users and let them place the files local.



This option is almost easier as the users can download the latest version in case there is a new version of the Grip-UI after an Upgrade.

18 Appendix

18.1 Initial Restore: QGrip Database

Initially, during Setup: QGrip Database Initial, you will need to Restore the backup file 'QGrip_x.y.zz-FULL.bak' file manually on the QGrip Database server. You should avoid version number in the database name. The scripts below are suggestions and should be adjusted to comply with your own standards.

This should only be done during the 'Setup: QGrip Database Initial', otherwise you will lose existing data!

Parameter	Description	Example
{LOADPATH}	Path to directory or Share	\\VMSS01\3-Releases
{DATAPATH}	Path to Default Data Directory	F:\MSSQL2016
{LOGPATH}	Path to Default Log Directory	G:\MSSQL2016
{QGRIPVERSION}	The version of the downloaded file	0.5.01
{COMPLEVEL}	The compatibility level of your host	130

18.1.1 Restore: Stand-Alone Instance

```
EXECUTE AS Login=SUSER_NAME(1)
GO
CREATE DATABASE [QGrip]
GO
RESTORE DATABASE [QGrip]
FROM DISK = N'{LOADPATH}\QGrip_{QGRIPVERSION}-FULL.bak'
WITH FILE = 1
, MOVE N'QGrip'     TO N'{DATAPATH}\QGrip.mdf'
, MOVE N'QGrip_log' TO N'{LOGPATH}\QGrip_log.ldf'
, NORECOVERY, REPLACE, STATS = 10
GO
RESTORE DATABASE [QGrip] WITH RECOVERY
ALTER DATABASE [QGrip] SET MULTI_USER
GO
ALTER DATABASE [QGrip] SET COMPATIBILITY_LEVEL = {COMPLEVEL}
GO
```

18.1.2 Restore: AlwaysOn Cluster

Run on all Replicas

```
EXECUTE AS Login=SUSER_NAME(1)
GO
CREATE DATABASE [QGrip]
GO
RESTORE DATABASE [QGrip]
FROM DISK = N'{LOADPATH}\QGrip_{QGRIPVERSION}-FULL.bak'
WITH FILE = 1
, MOVE N'QGrip'     TO N'{DATAPATH}\QGrip.mdf'
, MOVE N'QGrip_log' TO N'{LOGPATH}\QGrip_log.ldf'
```

```
, NORECOVERY, REPLACE, STATS = 10
GO
```

Run on Primary Replica

```
EXECUTE AS Login=SUSER_NAME(1)
GO
RESTORE DATABASE [QGrip] WITH RECOVERY
ALTER DATABASE [QGrip] SET MULTI_USER
GO
ALTER DATABASE [QGrip] SET COMPATIBILITY_LEVEL = {COMPLEVEL}
GO
```

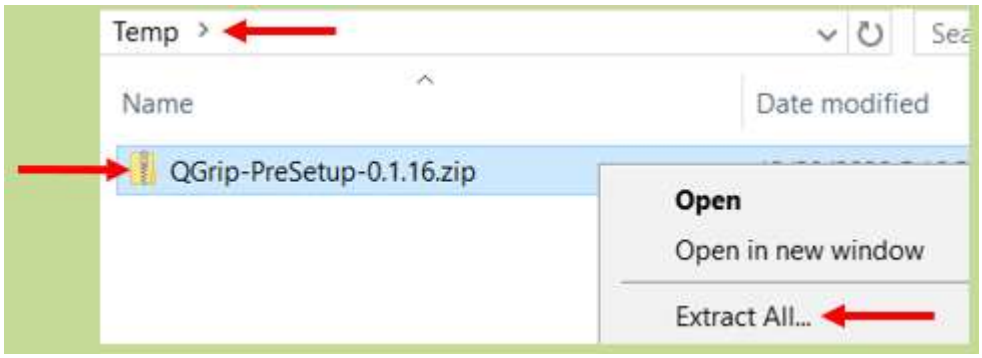
Add database to an existing Availability Group using SSMS on primary replica. At “Select your database synchronization preference” choose

- Join only

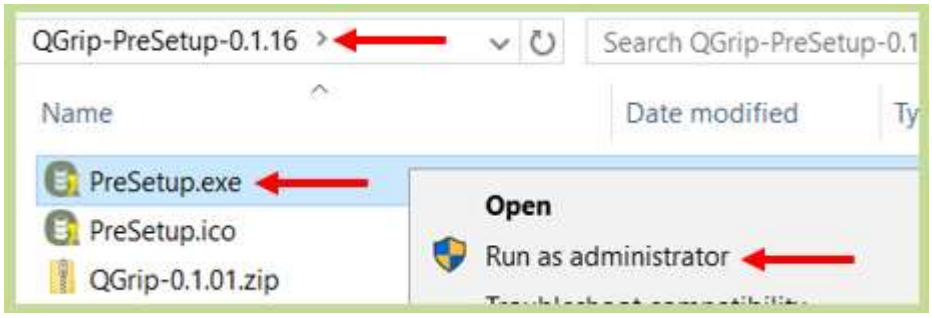
18.2 Pre-Setup on QGrip Server

QGrip-PreSetup.x.y.zz.zip
Extract → tmp directory
PreSetup.exe
→ <QGrip-Dir> (E:\QGrip)

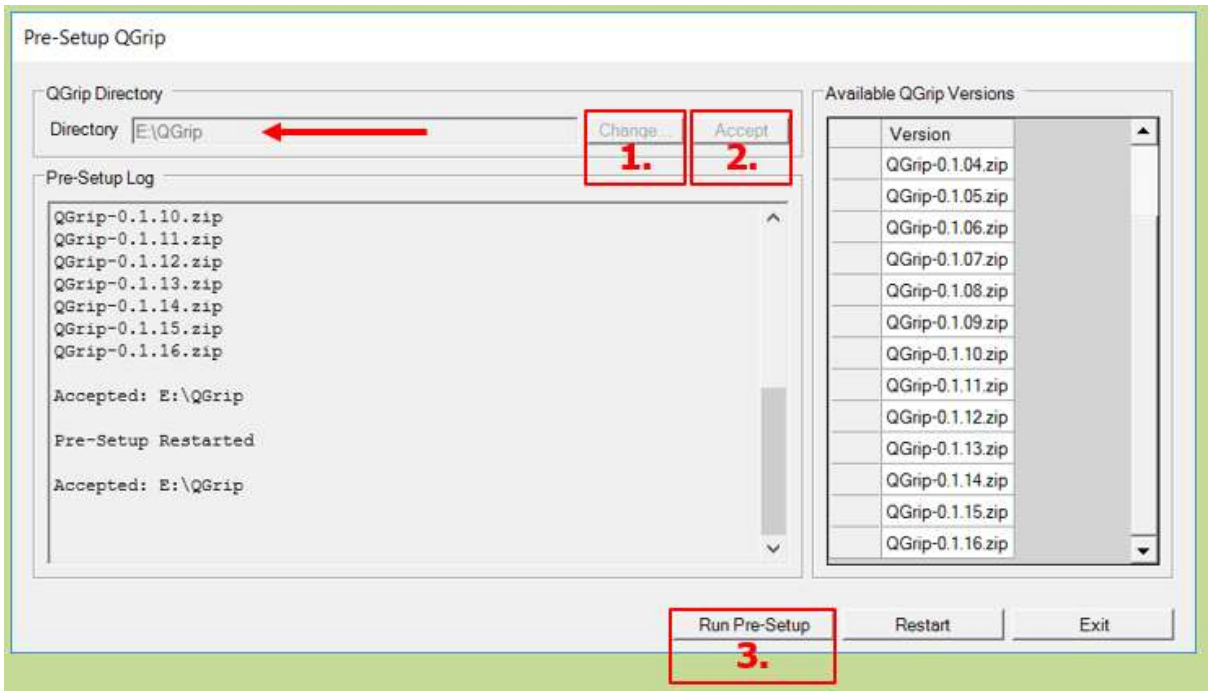
The Pre-Setup prepares the QGrip directory for Setup(installation).



Copy the QGrip-PreSetup-x.y.z.zip file to a Temporary directory on the QGrip Server and extract the zip file in the same directory.



Run the PreSetup.exe in the temporary directory as Administrator.



1. Select the QGrip directory. If QGrip is already installed, select the existing QGrip directory.

2. Accept the QGrip Directory. This will enable the [Run Pre-Setup] button.

3. Run the Pre-Setup. You will need to confirm the action before it starts.

When exiting the Pre-Setup, you will be asked if you want to save the logfile.

18.3 Upgrade Failed: QGrip Database

In the unlikely event that the Upgrade of the QGrip Database fails, you will need to restore the prior version as soon as possible to prevent continuity problems. During the Setup/Upgrade, QGrip has made a backup of its own database and prepared a script to restore this backup again. The script can be found in the following file in the LogFiles directory on the QGrip server where the setup was started:

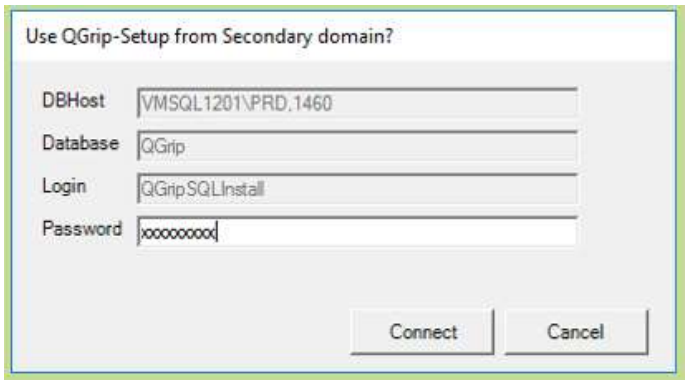
- yyyymmdd_hhmmss_Setup_<QGripServerName>.log

Make sure you select the most recent file contain the log of the Database Upgrade.

```
/*****************************************************
* Script for Uninstall - Begin
*****************************************************
USE [master]
GO
ALTER DATABASE [QGrip] SET SINGLE_USER WITH ROLLBACK IMMEDIATE
GO
EXECUTE AS Login='sa'
GO
RESTORE DATABASE [QGrip] FROM  DISK =
N'\\VMSSWS2016\Backup003\VMSQL2016$PRD\QGrip\VMSQL2016$PRD_QGrip_2
0210423_111006_FULL.bak' WITH  FILE = 1, NORECOVERY, REPLACE,
STATS = 10
GO
RESTORE DATABASE [QGrip] WITH RECOVERY
GO
ALTER DATABASE [QGrip] SET MULTI_USER
GO
USE [QGrip]
GO
EXEC [RemoteJob].[UspUpgradeBackupRestored]
       @UpgradeBackupQueueID   = 14
     , @BMJobQueueID           = 12456
     , @BMDatabaseJobHistoryID = 32514
     , @FileSizeMB             = 87
     , @MaintenanceModeID      = 36
GO
/*******************************************
* IMPORTANT!
* After the statements above have been executed,
* you must request a DBBackup (FULL)
* of the [QGrip] database in the QGrip-UI!
* IMPORTANT!
*******************************************/
*****************************************************
* Script for Uninstall - End
*****************************************************/
```

This script will not be available if it is the very first time you install QGrip. In that case no backup has been made.

18.4 Create: QGripSQLInstall



If you have started the Setup on a QGrip Server in a Secondary AD-Domain that is not trusted by the First AD-Domain (where the QGrip Database is running), you will not be able to connect to the QGrip database using your own AD account. You will need to create the temporary QGripSQLInstall account. When you have finished the install/uninstall, remove the login as soon as possible. QGrip will remind you with a Warning as long as the account has not been removed.

QGrip-UI:

Required QGrip Role	Menu
QGrip Admin	Admin -> Access to QGrip -> QGrip Logins Tab: QGripSQLInstall

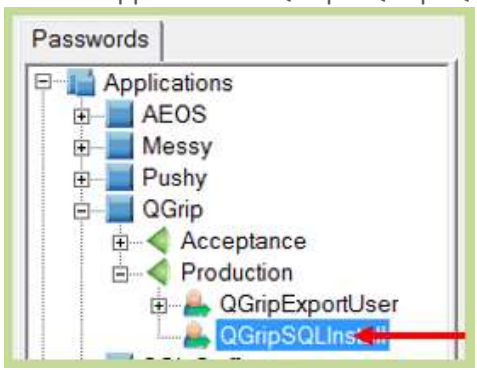
Press [New], choose Password Length and Press [Save].
Use [Refresh] button to see when account has been created.

18.4.1 Find Password: QGripSQLInstall

QGrip-UI:

Required QGrip Role	Menu
QGrip Admin	Application -> Password Safe

Locate and select the Account under
Applications->QGrip->QGripSQLInstall



Press [Edit] and then [Copy].