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Rotor-Gene AssayManager® Database Backup Tool User Manual



Version 1

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Introduction

Thank you for choosing Rotor-Gene AssayManager Database Backup Tool software. We are confident it will become an integral part of your laboratory.

The user-friendly Rotor-Gene AssayManager (RGAM) Database Backup Tool software has been specifically developed for use with the Rotor-Gene AssayManager software.

RGAM Database Backup Tool is a software for routine testing in combination with Rotor-Gene AssayManager software and Rotor-Gene® Q instruments.

RGAM Database Backup Tool is a software for automatic backup creation of the Rotor-Gene AssayManager database (Microsoft® SQL Server® Express) by using the Windows® Task Scheduler. The RGAM Database Backup Tool exhibits the functionality to restore previously created backup files automatically.

Secure clinical data storage is crucial for laboratories. It prevents any loss of electronic data and supports country-specific requirements.

Before using RGAM Database Backup Tool software, it is essential that you carefully read this user manual, paying particular attention to the “Safety Information” section. The instructions and safety information must be followed to ensure safe operation of the Rotor-Gene AssayManager database and to maintain the database in a safe condition.

About this user manual

This user manual provides information about RGAM Database Backup Tool software, version 1.0.x (where x is greater than or equal to 0).

Note: The screenshots show examples of how to use the RGAM Database Backup Tool software. Some of the names used in this manual are examples and may look different depending on user application. This particularly applies to the names of backup storage locations.

General information

Policy statement

It is the policy of QIAGEN to improve products as new techniques and components become available. QIAGEN reserves the right to change specifications at any time.

In an effort to produce useful and appropriate documentation, we appreciate your comments on this user manual. Therefore, contact the QIAGEN Technical Services.

Version management

This document is the *Rotor-Gene AssayManager Database Backup Tool User Manual*, version 1, which provides information about Rotor-Gene AssayManager Database Backup Tool, version 1.0.

Safety Information

The *Rotor-Gene AssayManager Database Backup Tool User Manual* does not provide detailed information about Rotor-Gene AssayManager software and Rotor-Gene Q MDx instrument hardware and maintenance. The user manual only describes the functionality of the RGAM Database Backup Tool software in combination with Rotor-Gene AssayManager software version 1.0 or Rotor-Gene AssayManager software version 2.1.

Note: The terms “Rotor-Gene Q” and “Rotor-Gene Q instrument”, used in this manual, apply to all Rotor-Gene Q or Rotor-Gene Q MDx instruments (not available in all countries) unless otherwise specified.

General Description of the Software

Product configuration

RGAM Database Backup Tool is a software for routine backup creation and backup restore functionality in combination with Rotor-Gene AssayManager software and Rotor-Gene Q real-time PCR instruments. It consists of separate applications including a tool containing a graphical user interface (GUI) for automatic backup configuration.

The RGAM Database Backup Tool software is compatible with both Rotor-Gene AssayManager version 1.0 and Rotor-Gene AssayManager version 2.1.

Product functions

RGAM Database Backup Tool software includes these 2 main functionalities:

- **Backup:** The RGAM Database Backup Tool software automatically creates backups of the Rotor-Gene AssayManager Microsoft SQL Server Database or a custom database. A backup comprises user management, created and imported work lists, executed runs and approved experiments.
Note that the backup files do not contain exported data of the file system, e.g., reports created as .pdf files.
- **Restore:** The RGAM Database Backup Tool software exhibits the functionality to restore previously created backups automatically, for example, in cases of a defect of the database or when there is a computer exchange.

Backup file content

Files created in a backup by the RGAM Database Backup Tool contain:

- All run data of the **Approval** environment
- All run data of the **Archive** environment
- User management
- Cyclor management*
- All imported **Assay Profiles**
- All configuration settings*
- The audit trail*
- Generated work lists and imported work lists (if applicable)

***Note:** Computer-specific contents must be redefined if the backup file is restored on another computer.

Note: **Report Profiles** are not part of the backup file and have to be saved manually before the restore process. After a successful database restore, **Report Profiles** must be imported again. Refer to section “Reimporting Report Profiles”, page 37, for further information.

Note: After a Rotor-Gene AssayManager database restore, the LIMS output folder path is no longer available. The LIMS output folder path has to be redefined if the functionality **Export results to LIMS** has been used. Refer to section “Resetting the LIMS output folder path and local settings”, page 37, for further information.

Note: If a Rotor-Gene AssayManager database restore was performed on a different computer from the original backup, the **Audit trail** settings might not be available anymore. The computer configuration for the **Audit trail** filter setting must be updated. Refer to section “Audit trail settings”, page 38, for further information.

Note: If a Rotor-Gene AssayManager database restore was performed on a different computer from the original backup, some local settings might not be available anymore. The computer configuration for the local settings must be updated. Refer to section “Resetting the LIMS output folder path and local settings”, page 37, for further information.

Requirements for RGAM Database Backup Tool software users

The following table covers the general level of competence and training necessary for delivery, installation, routine use, maintenance and servicing of the RGAM Database Backup Tool software.

Task	Personnel	Training and experience
Delivery	No special requirements	No special requirements
Installation	Laboratory technicians or equivalent, IT personnel	Basic IT knowledge of installing software and Windows administrator privileges
Routine use	Laboratory technicians or equivalent	Professional users with Windows and Rotor-Gene AssayManager administrator privileges
Maintenance	Laboratory technicians or equivalent, IT personnel	Professional users with Windows and Rotor-Gene AssayManager administrator privileges
Servicing	QIAGEN Technical or Field Service Specialists only	Regularly trained personnel, certified and authorized by QIAGEN

Training for RGAM Database Backup Tool software users

No additional special training is required to use the RGAM Database Backup Tool software.

The user must read the accompanying documentation before using the RGAM Database Backup Tool software. The user must hold administrator privileges for the Rotor-Gene AssayManager software as well as for Windows installed on the computer using RGAM Database Backup Tool software.

Getting Started

This section of the user manual describes the system requirements for the RGAM Database Backup Tool, and installation and initial configuration of the RGAM Database Backup Tool before the software can be used.

Computer requirements

The table below lists the minimum computer requirements for RGAM Database Backup Tool.

Description	Requirement
Display	1024 x 768 pixel resolution or higher
Supported operating systems with required services packs	Microsoft Windows XP Professional (32-bit) – Service Pack 3 Microsoft Windows 7 Professional (32-bit) Microsoft Windows 7 Professional (64-bit) – Service Pack 1 Microsoft Windows Server 2008 R2 Standard (64-bit) Microsoft Windows Server 2012 R2 Standard (64-bit) Microsoft Windows 10 Pro (32-bit) – Version 1607* Microsoft Windows 10 Pro (64-bit) – Version 1607* <small>* Earlier versions of Windows 10 have encountered problems with the Windows installation feature.</small>
Hard disk space	Minimum 250 GB HDD
Main memory	Minimum 4 GB RAM
Processor	Intel® Core™ i3-380M; 1.66 GHz or better
Pointing device	Touchpad or mouse or equivalent is required
Bluetooth®	Must be switched off
Power options	Never turn off hard disks, hibernate or go to standby

Note: The installation of RGAM Database Backup Tool can only be performed by an operator with administrator privileges.

Note: RGAM Database Backup Tool software is only verified and validated with the operating systems listed in the requirements table above.

Internationalization

The standard language on a notebook delivered by QIAGEN is set to English (American). The language of the software itself is English. RGAM Database Backup Tool uses the computer

language settings to display dates and decimal separators in the corresponding format. To change the language settings of the computer, select **Control Panel** or **Settings** from the Windows **Start** menu and select the settings for **Region and Language**.

Installing the RGAM Database Backup Tool software

RGAM Database Backup Tool software is available on the QIAGEN webpage only. The data file provides installation, repair and uninstall processes for RGAM Database Backup Tool software.

For computer system requirements, refer to the section “Computer requirements”, page 10.

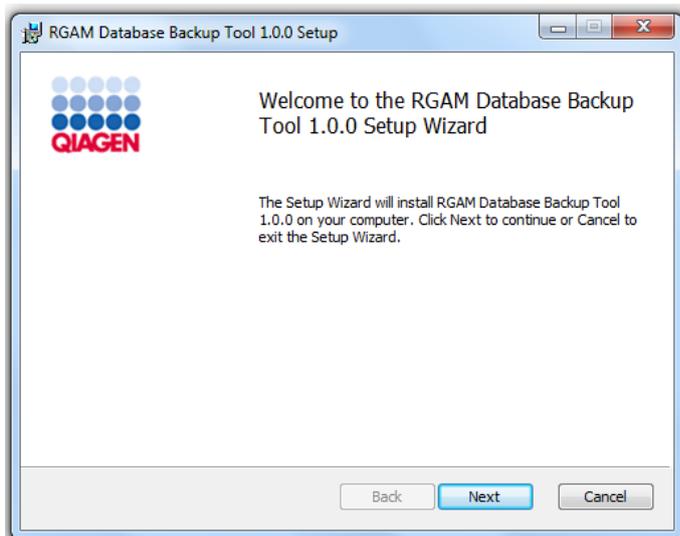
Note: The system must be free from viruses and spyware before installation of the RGAM Database Backup Tool software.

1. Download the software from the QIAGEN website.

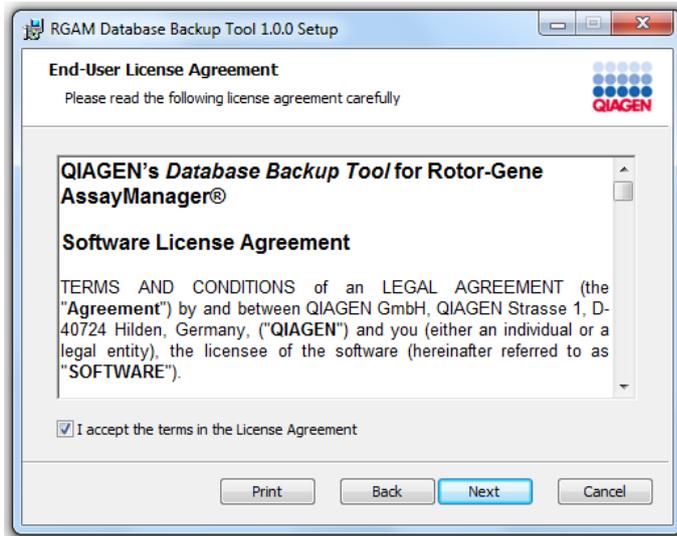
For detailed information on confirmation of software integrity during download and file transfer, please download and read the document *QIAGEN software integrity verification process* provided together with the software package on the QIAGEN webpage.

Note: Request the software checksum verification before starting installation of the downloaded RGAM Database Backup Tool software. Software checksum verification secures software integrity after web download is successfully completed and before subsequent handling of the software.

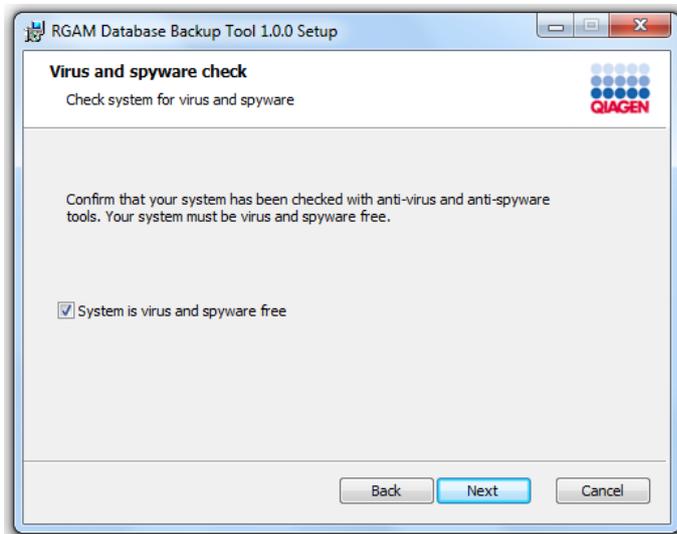
2. Locate and double-click **RGAM_Database_Backup_Tool.Installation.V1_0_0.msi** to start the RGAM Database Backup Tool setup wizard.



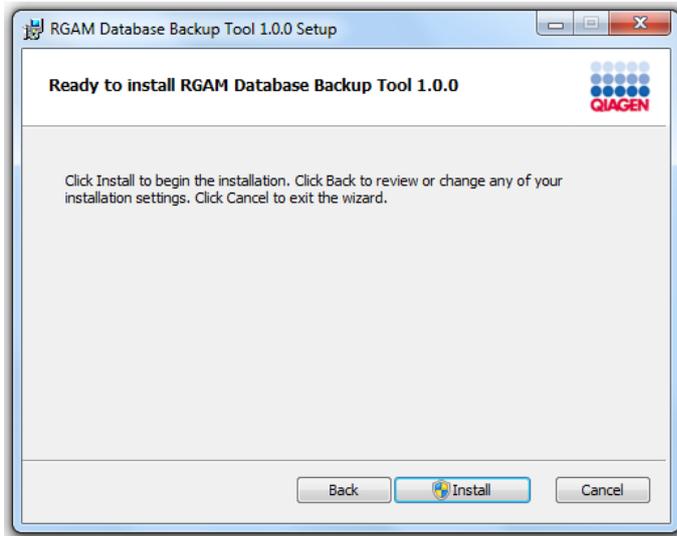
3. Click **Next** to proceed.



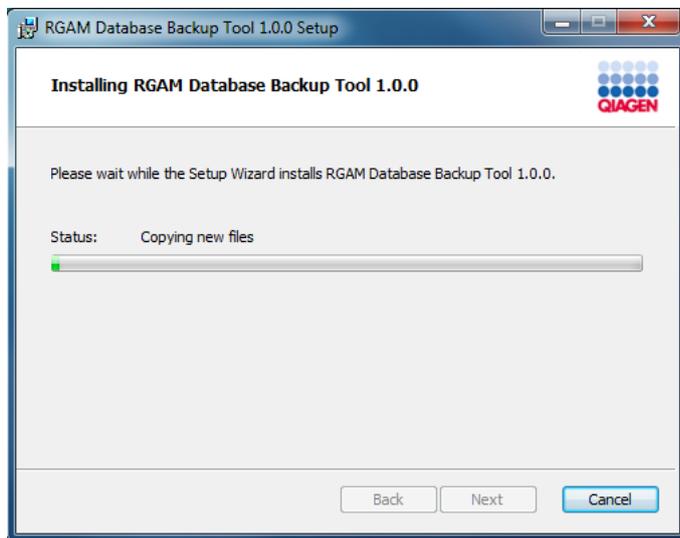
4. Read and accept the license agreement by clicking the checkbox and click **Next**.



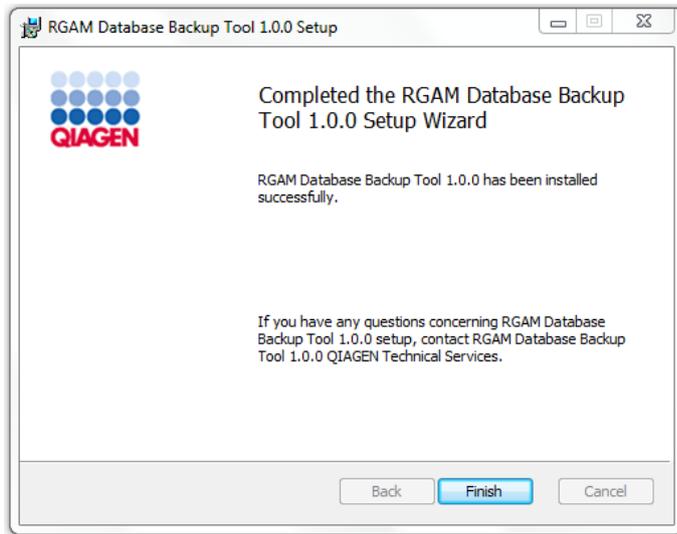
5. Confirm that your system is virus and spyware free by checking the corresponding check box and click **Next**.



6. Click **Install** to start the installation of the RGAM Database Backup Tool software.



7. Wait until the installation process has finished



8. After the installation is completed, click **Finish** to close the window.

After the installation, RGAM Database Backup Tool can be started either from the Windows **Start** menu under **QIAGEN/RGAM Database Backup Tool** or by using the desktop icon.



Additional software on connected computers

RGAM Database Backup Tool software manages database-critical processes additional to the Rotor-Gene AssayManager software. For this reason, it is important to ensure that no other processes use significant system resources and thus slow down the RGAM Database Backup Tool software at the time a backup process is configured. It is particularly important to pay attention to the points listed below.

System administrators are advised to consider any impact that a modification to the system may have on the resources before implementing it.

Configuration for Windows security

The laptop computers that are provided by QIAGEN for use with your Rotor-Gene Q instrument have Microsoft Windows 7 pre-installed and are configured with an Administrator account. This

allows system administrators to install the RGAM Database Backup Tool software and to configure the system for secure use.

The RGAM Database Backup Tool is designed to run with administrator user accounts only. System administrators should set up an additional standard Windows user account to prevent access of unauthorized persons to critical system areas, such as **Program Files**, performance relevant settings like power saving, or the **Windows** directory (e.g., access to installation or uninstallation functionality, including applications, operating system components, date/time settings, Windows updates, firewall, user rights and roles, anti-virus software activation).

Step-by-step descriptions for setting up additional standard Windows user accounts for Windows 10, Windows 7 and Windows XP may be found in the "Appendix: Generating Standard User Accounts for Windows", page 42.

Anti-virus scanners

QIAGEN is aware of the threat of computer viruses to any computer that exchanges data with other computers. RGAM Database Backup Tool software is expected to be primarily installed in environments where local policies are in place to minimize this threat. These policies usually require use of a particular anti-virus tool. Due to the sheer number of anti-virus tools available, it is not possible for QIAGEN to predict the possible impact on the RGAM Database Backup Tool software if such a tool is active. The selection of an appropriate virus scanning tool is the customer's responsibility.

For consistent results, system administrators should ensure the following:

- File access is not intercepted by a virus scanner when Rotor-Gene AssayManager or RGAM Database Backup Tool is in use.
- Updates to the virus database are not performed when Rotor-Gene AssayManager or RGAM Database Backup Tool is in use.
- File scans are not performed when Rotor-Gene AssayManager or RGAM Database Backup Tool is in use.

Firewall and networks

The RGAM Database Backup Tool is intended to run in environments where exposure to the Internet is minimized. The firewall on the laptop provided by QIAGEN is configured to block all incoming connections to programs that are not on the list of allowed programs.

Outgoing connections are allowed as this may be required for retrieving anti-virus software updates or when the RGAM Backup Tool stores backup files on a remote folder. For security and reliability reasons in such cases, we recommend using cable-based local area networks rather than wireless network connections.

System tools

Many system tools may use significant system resources even without any user interaction. Typical examples of such tools are:

- File indexing, which is performed as a background task by many contemporary office applications
- Disk defragmentation, which often also employs a background task
- Any software that checks for updates on the Internet
- Remote monitoring and management tools

Note: Due to the dynamic nature of information technology products and systems, this list may be incomplete. Tools may be released that are not known at the time of writing. It is important that system administrators take care that such tools are not active on the PC while RGAM Database Backup Tool performing backups or restores.

Operating system updates

QIAGEN strongly recommends disabling any automatic update processes of the operating system on the computer that is used for data acquisition from the Rotor-Gene Q.

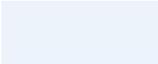
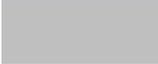
General Software Usage

The following sections describe the general software usage concept of RGAM Database Backup Tool.

Use of color

For optimal interaction with the user, RGAM Database Backup Tool uses specific colors to present information and aid intuitive navigation.

The following table provides an overview of the colors used in the software and their dedicated meanings:

Color	Description
Light blue	 The field is interactive and clickable.
Dark blue	 The field is selected or focused.
Gray	 The field is read-only and can neither be selected nor activated.
Yellow	 The field requires input.

Displaying errors and warnings

Errors and warnings are essential information since these messages identify a problem or an erroneous situation. RGAM Database Backup Tool differentiates among 4 different problem levels:

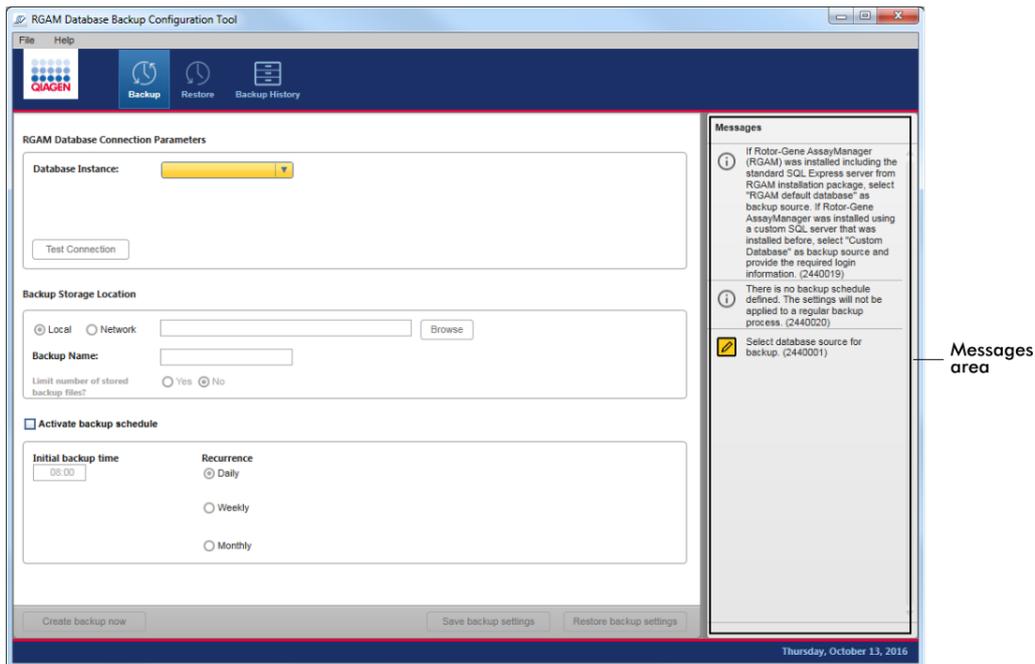
Priority	Name	Icon	Description	Action by user
1	System error		A combination of not acceptable incidents.	User interaction required.
2	Validation error		An error that occurs due to a missing or invalid user input.	User interaction required.
3	Warning		Situation could be optimized by further input.	User interaction possible, but not mandatory.
4	Information		A message containing additional information about the current situation.	User interaction not possible.

All existing errors and warnings are displayed with the corresponding icon either in a separate **Messages** area or as a pop-up window. If applicable, the **Messages** area lists all currently existing errors and warnings sorted with descending priority.

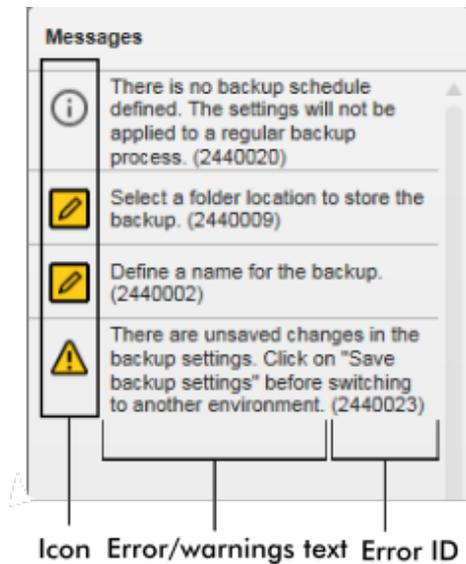
Errors displayed in the **Messages** area

The following screenshot shows possible errors and warnings during backup configuration. The messages are displayed with the corresponding icon, the error text and the error ID in brackets. For more information on error IDs, see the section “Error codes and error messages”, page 39.

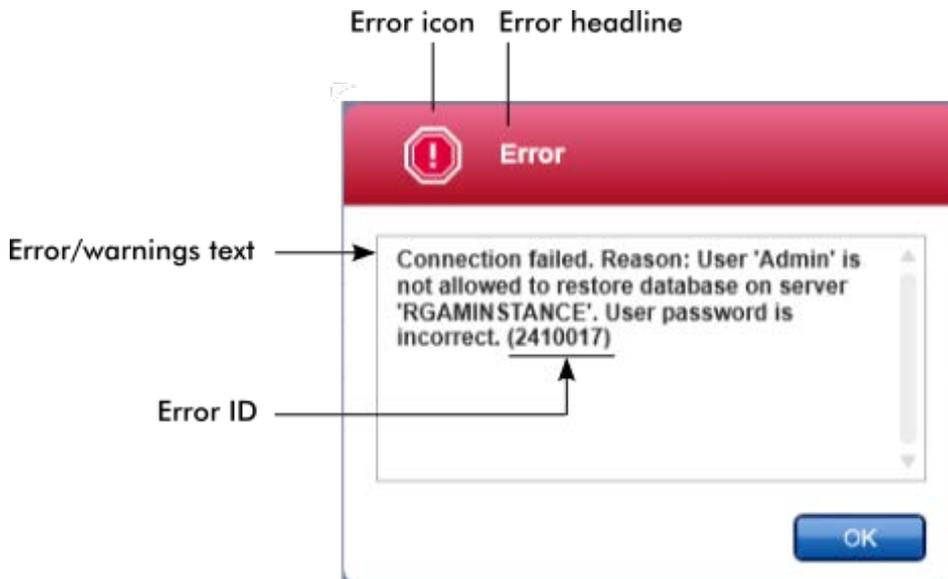
Note: The screenshots shown are examples and may appear differently depending on the user and the context.



Detailed view of the Messages area



Error message pop-up window



Each error ID is unique. Have the error ID ready if QIAGEN Technical Services are contacted for troubleshooting. Additional screenshots of the error-containing GUI can be useful. For more information, see the section "Troubleshooting", page 39.

Entering data

Shortcuts

The following hot keys are available in RGAM Database Backup Tool:

- Copy and paste operations (**CTRL + C** and **CTRL + V**)
- Navigation (tab key, cursor keys)

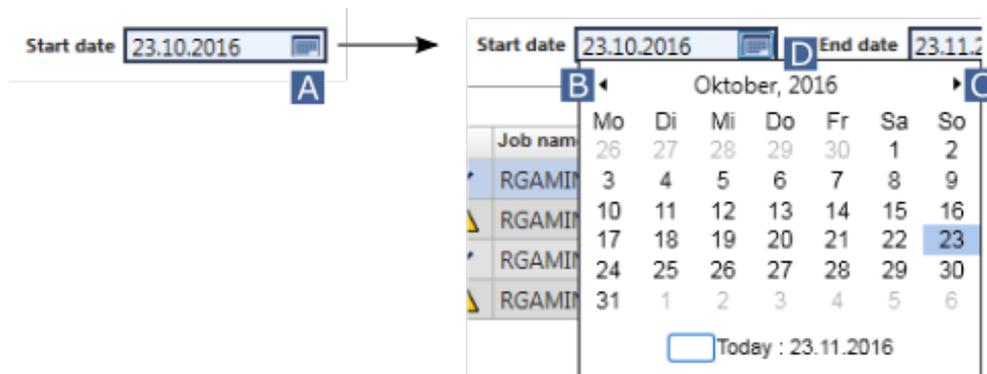
The following keyboard shortcuts can be used when entering data:

- **F2** to start editing
- **Escape** to cancel the input
- **Return** to commit an input

Using the date picker

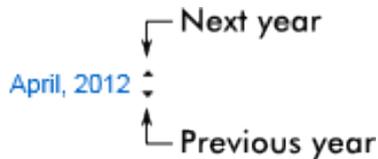
Dates can be entered manually into date fields using the keyboard or by using an interactive date picker in the form of a pop-up calendar. A calendar icon () is positioned at the right side of every date field.

Click the calendar icon **A** to open the pop-up calendar.



Change to the previous/next month by clicking the arrow icons **B** and **C**.

Hover over the year label (**D**) to display additional control arrows. These are used to quickly jump to the next year (up arrow) or previous year (down arrow):



Entering a date with the date picker

1. Click the calendar icon ( **A**) next to the date field to open the calendar pop-up.
2. Continue using the following scheme:

To	Do this
Change the year	Hover the mouse over the year (D). The date is displayed in blue. Additional control arrows are shown. Click the "up" arrow to change to the next year. Click the "down" arrow to change to the previous year.
Change the month/day	Click the "left" arrow (B) to change to the previous month. Change the "right" arrow (C) to change to the next month. Click the date of the desired day.

RGAM Database Backup Tool workspace

RGAM Database Backup Tool is divided into 3 environments. Switch between the environments by selecting the appropriate icon in the main toolbar. The following environments are available:

- **Backup** environment
- **Restore** environment
- **Backup History** environment

The icon of the currently active environment is highlighted with white font and a lighter blue background color.

Environment

Description



Used to adjust the settings for creating manual or automatically scheduled backups.



Used to restore a previously generated backup.

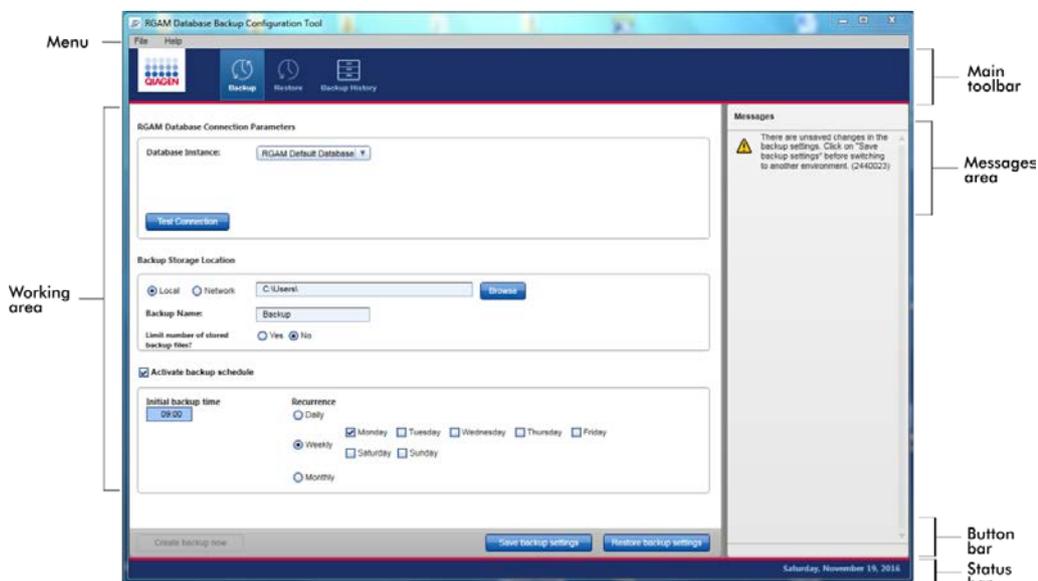


Shows a history of previous backup and restore tasks.

General elements

The workspace of an environment consists of an environment-specific working area and the following general elements:

- Menu
- Main toolbar
- Messages area
- Button bar
- Status bar



Menu

File menu



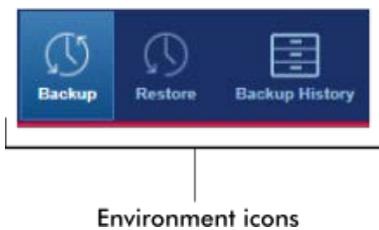
Click **Exit** to close the RGAM Database Backup Tool. If there are unsaved data, a warning will appear.

Help menu

Click **Help** and the **About RGAM Database Backup Tool Configuration Tool** dialog box appears and displays information about the RGAM Database Backup Tool.

Main toolbar

The main toolbar contains the environment icons area.

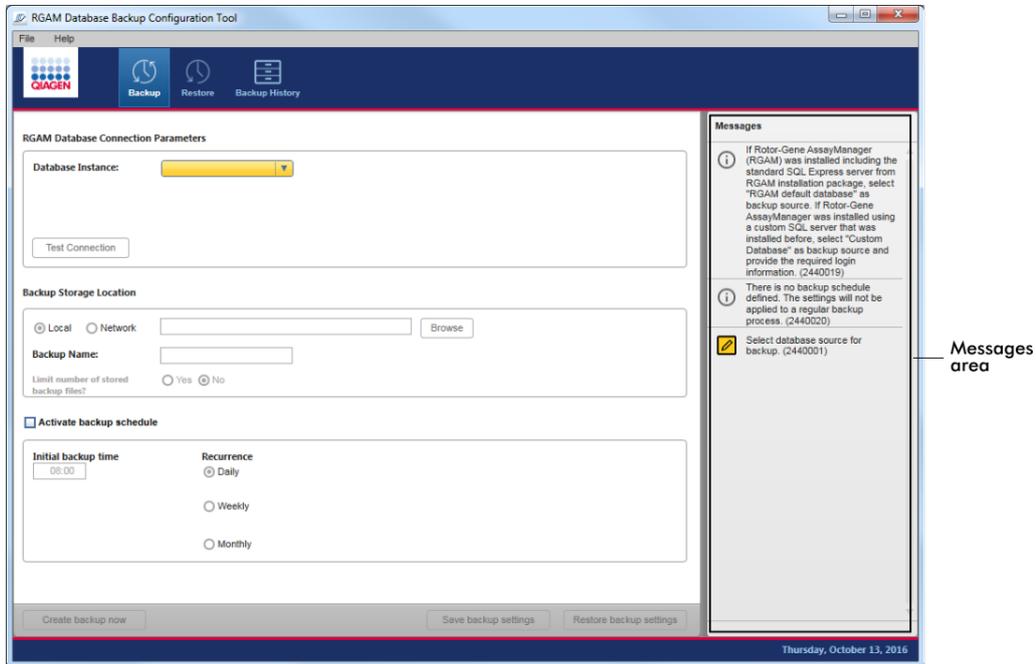


The environment icons are used to change to the corresponding environment. The currently active environment is highlighted.

Messages area

Depending on the selected environment and the corresponding dialog within the environment, there is a **Messages** area containing all warnings, errors and information related to the current operation.

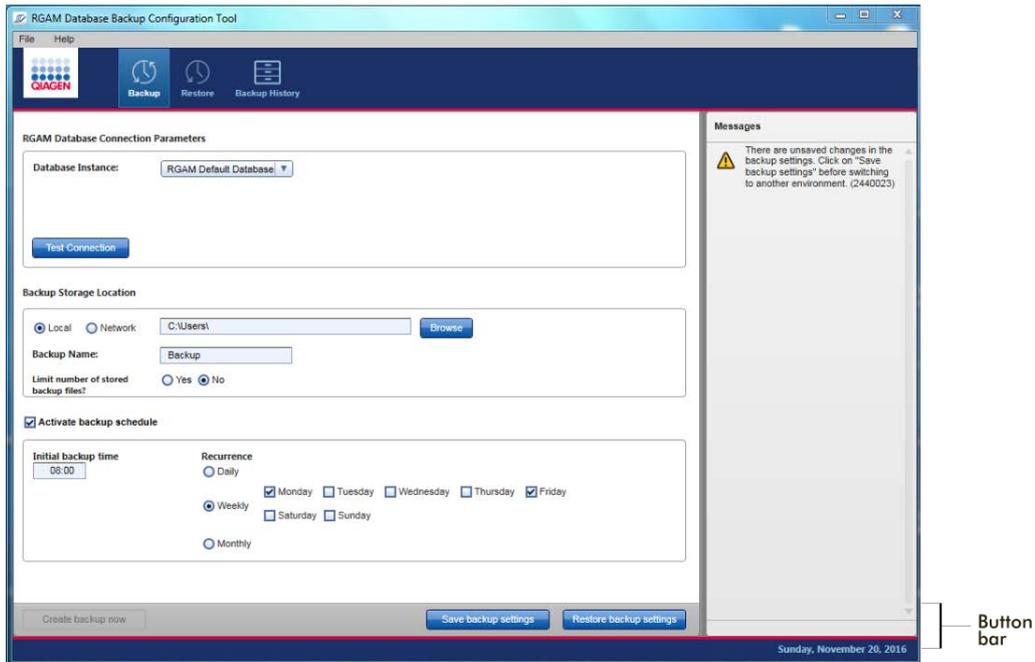
Example of the **Messages** area in the **Backup** environment:



For more information, see section "Errors displayed in the **Messages** area", page 19.

Button bar

The button bar is placed at the bottom of the screen. It contains buttons specific for the selected environment.



Status bar

The status bar appears on the screen below the button bar and displays the day and date.

Backup Environment: Creating Backup Files

The following 3 steps are required to create a backup file:

- The connection to the Rotor-Gene AssayManager database must be set up.
- The backup file storage location needs to be defined.
- Creation of the file can be initiated manually or by defining an automatic backup schedule.

Connecting to the Rotor-Gene AssayManager database

Default database

1. Open the **Backup** environment in the main toolbar.



2. If you are using the default Rotor-Gene AssayManager database (Microsoft SQL Server Express), select the **RGAM Default Database** (A) from the drop-down menu in the **RGAM Database Connection Parameters** working area.
3. Click **Test Connection** (B) to test if the Rotor-Gene AssayManager default database connection is successful.
An information message will appear if the connection is successful.

Custom database

1. Open the **Backup** environment in the main toolbar.



2. If you are using a custom Rotor-Gene AssayManager database, select **Custom Database** (A) from the drop-down menu in the **RGAM Database Connection Parameters** working area. Additional fields for required custom database information open automatically.
3. Enter the database instance name (B), the database user name (C) and the database password (D), if applicable, into the corresponding fields.
4. Click **Test Connection** (E) to test if the Rotor-Gene AssayManager custom database connection is successful.

An information message will appear if the connection is successful.

Note: In many laboratories, a periodic password change is mandatory for regulatory reasons. Always make sure that the current password for the custom database source is entered into the RGAM Database Backup Tool, otherwise the software will not be able to create backup files successfully.

Defining the storage location

After a connection is successfully established to the Rotor-Gene AssayManager database (default or custom), the backup storage location needs to be defined.

Note: QIAGEN recommends that backup files should be stored in a second location in addition to the computer where the Rotor-Gene AssayManager software and the Database Backup Tool software are installed.

Local storage location

1. In the **Backup** environment, click on the appropriate radio button if the backup files will be stored locally (**A**).

The screenshot shows the 'Backup Storage Location' dialog box. At the top left, there are two radio buttons: 'Local' (labeled A) and 'Network'. The 'Local' radio button is selected. To the right of the radio buttons is a text input field (labeled B) and a 'Browse' button (labeled C). Below this is a 'Backup Name:' label followed by another text input field (labeled D). At the bottom left, there is a question 'Limit number of stored backup files?' followed by two radio buttons: 'Yes' and 'No' (labeled E). The 'No' radio button is selected.

2. Enter a storage path manually (**B**) or use the **Browse** button (**C**) to navigate to the desired storage location.
3. Enter a name for the backup file in the field (**D**).

Note: Every backup file automatically receives a time stamp addition.

Note: QIAGEN recommends using allocatable names for the backup files. If you are using more than one computer with Rotor-Gene AssayManager software with default database instances installed, make sure that the backup file name is ascribable to the respective computer.

4. Indicate if a limited number of stored backup files is desired (**E**).
If a limit is desired, activate the **Yes** radio button. Enter the maximum number of stored backup files in the additional field that appears.
If no limit is desired, select the **No** radio button.

Network storage location

1. In the **Backup** environment, click on the appropriate radio button if the backup files will be stored on a network location (**A**).

Additional fields requiring the network information will open automatically.

The screenshot shows the 'Backup Storage Location' dialog box. At the top left, there are two radio buttons: 'Local' and 'Network' (labeled A). The 'Network' radio button is selected. To the right of the radio buttons is a text input field (labeled B). To the right of this field are three more text input fields: 'Domain Name:' (labeled C), 'User Account:' (labeled D), and 'Password:' (labeled E). Below the 'Domain Name' field is a 'Test' button (labeled F). Below the 'User Account' field is another text input field (labeled G). At the bottom left, there is a question 'Limit number of stored backup files?' followed by two radio buttons: 'Yes' and 'No' (labeled H). The 'No' radio button is selected.

2. Enter a storage path manually (**B**).
3. Enter the network domain name (**C**), the user account (**D**) and the password, if applicable, (**E**) into the corresponding fields that are required to connect to the network storage location.

4. Click the **Test** button (F) to test the connection to the network folder.

An information message will appear if the connection is successful.

5. Enter a name for the backup file (G).

Note: Every backup file automatically receives a time stamp addition.

Note: If you are using the network as storage location, continuous access to the network domain is required for a successful backup process; credentials must be up to date.

Note: QIAGEN recommends using allocatable names for the backup files. If you are using more than one computer with Rotor-Gene AssayManager software with default database instances installed, make sure that the backup file name is ascribable to the respective computer.

6. Indicate if a limited number of stored backup files is desired (H).

If a limit is desired, activate the **Yes** radio button. Enter the maximum number of stored backup files in the additional field that appears.

If no limit is desired, select the **No** radio button.

Note: If a network location is used for backup file storage, network access must always be guaranteed otherwise a backup job may fail.

Note: In many laboratories, a periodic password change is mandatory for regulatory reasons. Always make sure that the current password for the network storage location is entered into the RGAM Database Backup Tool, otherwise the software will not be able to create backup files successfully.

Initiating a backup

Note: Always make sure that there are no tasks in progress in Rotor-Gene AssayManager software before initiating a backup.

Initiating a backup manually

1. Enter the settings for the Rotor-Gene AssayManager database connection and the backup storage location.
2. Click **Save backup settings** then press the **Create backup now** button to start creation of the backup file.



Defining an automatic backup schedule

1. Click the **Activate backup schedule** check box (A).

A

Activate backup schedule

Initial backup time: 08:00 (B)

Recurrence: (C) Daily, (D) Weekly, (E) Monthly

2. Enter the **Initial backup time** in the field (B).
3. Click the appropriate radio button to define the interval of the backup schedule: daily (C), weekly (D) or monthly (E).

For **Weekly**, select the desired weekday from the additional fields that appear.

A

Activate backup schedule

Initial backup time: 08:00 (B)

Recurrence: (C) Daily, (D) Weekly, (E) Monthly

Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

For **Monthly**, select a day of the month from the additional fields that appear.

Note: Do not use days 29 to 31, since these days are not valid for all months. Select **Last** if backup file creation is scheduled for the end of the month.

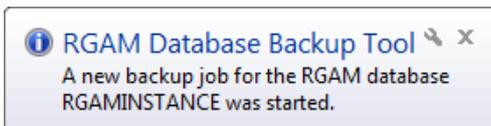
4. Save the settings with the **Save backup settings** button of the button bar.

Create backup now Save backup settings Restore backup settings

To restore the settings as they were before changing, press **Restore backup settings**.

Notifications of the backup process

When creation of a backup file is initiated (manual or scheduled), the RGAM Database Backup Tool reports the start of the backup job process with the following message:



Status of the backup job is also reported. For example, the following message is displayed after a successful backup:



Restore Environment: Restoring a Database

To restore a Rotor-Gene AssayManager software database, the following 3 steps are required before the restore can be started:

- The connection to the Rotor-Gene AssayManager database must be set up.
- The super user or administrator password of Rotor-Gene AssayManager is entered.
- Select the file to be restored.

Note: Make sure that the correct version of Rotor-Gene AssayManager software corresponding to the database is installed before restoring a backup to a computer or custom database.

Note: Always make sure that Rotor-Gene AssayManager is not started on any computer connected to the target database before initiating a restore process.

Note: Existing Report Profiles are not included in a backup file. Save Report Profiles locally and import them after a successful restore process. For further details, refer to the appropriate *Rotor-Gene AssayManager Core Application User Manual*.

Restore: Connecting to the Rotor-Gene AssayManager database

Default database (Microsoft SQL Server Express)

1. Open the **Restore** environment in the main toolbar.



RGAM Database Connection Parameters

Database Instance: A

RGAM Admin User Name: B

RGAM Admin Password: C

Test Connection D

2. In the **RGAM Database Connection Parameters** working area, select **RGAM Default Database** from the drop-down list in the **Database Instance** field (A)

For security, enter the Rotor-Gene AssayManager super user or administrator user name (B) and corresponding password (C) in the appropriate fields.

Note: User name and password must be the ones from the database that will be replaced by the backup. The user logins of the restore file are available only after the backup has been restored successfully.

3. Click **Test Connection** (D) to test the connection to the Rotor-Gene AssayManager default database.

An information message will appear if the connection is successful.

Custom database

1. Open the **Restore** environment in the main toolbar.

RGAM Database Connection Parameters

Database Instance:	Custom Database A	DB Instance Name:	<input type="text"/> D
RGAM Admin User Name:	<input type="text"/> B	DB User Name:	<input type="text"/> E
RGAM Admin Password:	<input type="password"/> C	DB Password:	<input type="password"/> F
<input type="button" value="Test Connection"/> G			

2. In the **RGAM Database Connection Parameters** working area, select **Custom Database** from the drop-down list in the **Database Instance** field (**A**). Additional fields for the custom database information will open.

For security, enter the Rotor-Gene AssayManager super user or administrator user name (**B**) and corresponding password (**C**) in the appropriate fields.

Note: User name and password must be the ones from the database that will be replaced by the backup. The user logins of the restore file are available only after the backup has been restored successfully.

3. Enter the database instance name (**D**) the database user name (**E**) and the database password (**F**) if applicable, into the corresponding fields.

Note: Database super user privilege is required.

4. Click **Test Connection** (**G**) to test the connection to the Rotor-Gene AssayManager custom database.

An information message will appear if the connection is successful.

Passwords

If the Rotor-Gene AssayManager super user or administrator password is no longer available, contact QIAGEN Technical Services to reset the password. The password reset requires an on-site visit by a QIAGEN service engineer.

Selecting the backup file

The desired backup file to be restored is selected after a successful connection is established to the Rotor-Gene AssayManager software database (default or customized).

Note: The action fields in the **Select file to be restored** area are activated only after a database connection is established.

1. Enter a storage path manually (A) or use the **Browse** button (B) to navigate to the storage location of the desired backup file.

Select file to be restored:



The screenshot shows a form titled "Select file to be restored:". It contains a text input field labeled "Path:" with a yellow highlight. To the right of the input field is a "Browse" button. Below the input field is a callout box labeled "A", and below the "Browse" button is a callout box labeled "B".

2. Select the backup file to use for the restore and confirm the choice by clicking **Open**.

Note: A backup file from a network location cannot be used in a restore operation. The file must be copied to the local hard disk.

Note: To prevent data loss, always use the latest available backup file to restore a Rotor-Gene AssayManager database.

Note: Every backup file receives a time stamp addition automatically.

3. When the backup file is selected and confirmed, initiate the restore process by clicking the active **Restore Backup** button.



The screenshot shows a single button labeled "Restore Backup" in a blue box.

Important: After a restore process is initiated, the data in the backup file used for the restore process overwrites the current Rotor-Gene AssayManager database. Any non-secured data is irrevocably lost.

Backup History Environment

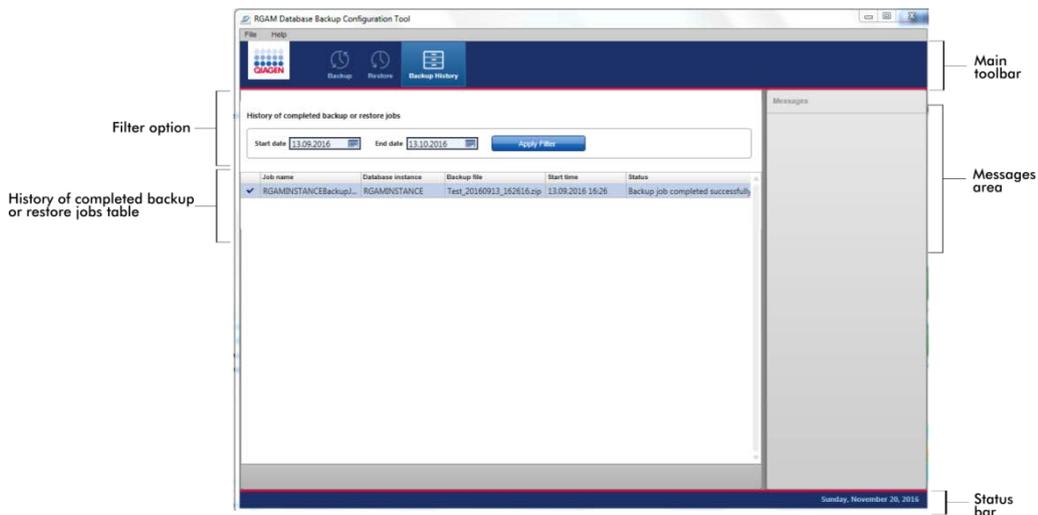
The **Backup History** environment consists of a filter option and a table listing the history of completed backup or restore jobs.

Filter option panel

The filter option panel allows a user to search for completed backup or restore jobs within a specific time frame. Dates can be entered manually into the **Start date** and **End date** fields using the keyboard. Dates can also be entered with the interactive date picker.

For detailed information, see sections “Entering data”, page 21, and “Entering a date with the date picker”, page 22.

Press **Apply Filter** to generate a list in the **History of completed backup or restore jobs** table of all backup and restore jobs matching the filter criteria.



The table contains 5 columns with the information:

- Job name
- Database instance
- Backup file
- Start time
- Status

Resetting Rotor-Gene AssayManager After a Database Restore

After a successful restore of the Rotor-Gene AssayManager software database, some Rotor-Gene AssayManager settings and files have to be checked, imported and/or reset. These are:

- Local settings, e.g., LIMS output folder path
- Report Profiles
- Audit trail

Resetting the LIMS output folder path and local settings

If the functionality **Export results to LIMS** was used before a Rotor-Gene AssayManager database restore, then the LIMS output folder path is no longer available after the database restore. The LIMS output folder path, and other local settings, must be redefined.

1. Open Rotor-Gene AssayManager and log in with administrator privileges.
2. Click on the **Configuration** environment.
3. Select the **Settings** tab.
4. Scroll down to the **Local Settings** area and enter the LIMS output folder path manually or via the **Browse** button function.
5. Check and redefine all other local settings.
6. Press **Save**.

Reimporting Report Profiles

Previously imported Report Profiles are no longer available following a Rotor-Gene AssayManager database restore. Follow these steps to reimport Report Profiles.

1. Open Rotor-Gene AssayManager and log-in with administrator privileges.
2. Click on the **Configuration** environment.
3. Select the **Report Profiles** tab.
4. Click on **Import** and import the previously saved Report Profiles to Rotor-Gene AssayManager.

Audit trail settings

If a Rotor-Gene AssayManager database restore was performed on a different computer, the **Audit trail** settings for **This computer** are not available. The computer configuration for the **Audit trail** filter setting has to be updated.

For further details, refer to the appropriate *Rotor-Gene AssayManager Core Application User Manual*.

Troubleshooting

This section provides information about what action to take if an error occurs when using RGAM Database Backup Tool.

Resolving error messages and warnings

Error messages and warnings are displayed when a problem occurs during the operation of RGAM Database Backup Tool software. All messages have an error ID that is displayed at the end of the error message. It is possible for several errors to be combined in one message.

Refer to the error IDs listed in the following section if an error message or warning appears. If error messages or warnings appear that are not listed here, or if the error cannot be resolved, note the error ID, the error text and the steps leading to the error before contacting QIAGEN Technical Services.

Note: If QIAGEN Technical Services are consulted for troubleshooting of an error, note the steps leading to the error and the information from any dialog box that appeared (or at least the error IDs). This will help the QIAGEN Technical Service Specialist to resolve the error.

If there are problems with a specific experiment, create a support package and send it to QIAGEN Technical Services.

Error codes and error messages

The following table shows error messages that might occur during operation of RGAM Database Backup Tool software. If QIAGEN Technical Services is contacted, provide the service specialist with the following information:

- Actions performed before the error message occurred
- The error ID

The error ID is unique and assists QIAGEN Technical Services to clearly identify the error message.

Error ID	Error text
2410006	The defined local path does not exist. Select a different path.
2410008	The defined network storage location does not exist or cannot be accessed. Select a different path.
2410017	Connection failed. Reason: {0}.
2410020	Restore job failed. Reason: {0}.
2410022	The execution of the backup job failed.
2410023	Backup failed. Reason: {0}.
2410024	Connection to database cannot be established.
2410025	Storage location was not found.
2410026	A connection to the RGAM default database server could not be established. Please check that the SQL Express server is running and accessible.
2410027	You do not have write permissions to the specified backup storage location. Select a different path.
2410028	Error occurred while configuring windows scheduler task.
2410032	The restoration of the backup job failed.
2410033	Restore failed. Reason: {0}.
2410035	A connection to the RGAM default database server could not be established. Please check the given connection properties and also that the SQL Express server is running and accessible.
2440029	A connection to the configured database instance could not be established. Please check the given connection properties.
2440041	A connection to the configured network path could not be established. Please check the given connection properties for network path.
2470000	Access to the target directory '{0}' is denied. The backup could not be stored at the defined location.
2470001	The target directory '{0}' could not be found. The backup could not be stored at the defined location.
2470002	The path to the target directory '{0}' is invalid. The backup could not be stored at the defined location.
2470003	The given mode '{0}' is invalid. Please choose either 'Backup' or 'Restore'.
2470004	Restore zip file '{0}' has invalid contents.
2470005	Access to the target file '{0}' is denied. The restore zip file could not be accessed from the defined location.
2470006	The path to the restore zip file '{0}' is invalid.
2470007	The restore zip file '{0}' could not be found.
2470008	Parameter '{0}' is missing. Please specify a value for it.
2470009	The connection to the database server '{0}' could not be established.
2470010	An error occurred while creating a database backup for task id '{0}'.
2470011	An error occurred while connecting to database '{0}' on server '{1}'.

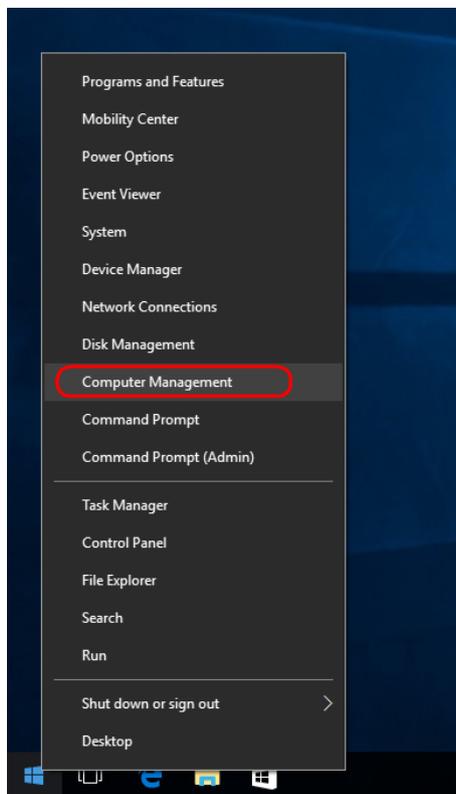
Error ID	Error text
2470012	Database '{0}' is not found on server '{1}'.
2470013	An incompatible SQL Server version was detected. The RGAM Database Backup Tool requires an SQL Server version 2008 or later.
2470014	The given database backup was created by a server with a different, incompatible version and cannot be restored.
2470015	An error occurred while checking if the database server '{0}' is installed on the local machine.
2470016	An error occurred while restoring databases for task id '{0}'.
2470017	This database instance is not a Rotor-Gene AssayManager database.
2470018	The database server '{0}' is not installed on your local machine. The RGAM database backup tool only supports backups of locally installed databases. Please check that the server name is spelled correctly and use the application on the machine hosting the database server.
2470019	The database server '{0}' is not installed on your local machine. The RGAM database backup tool only supports backup restoration on locally installed servers. Please check that the server name is spelled correctly and use the application on the machine hosting the database server.
2470020	An error occurred while determining the SQL server version.
2470021	It was not possible to determine if the provided RGAM user is allowed to overwrite existing data in the target database instance '{0}'.
2470022	The configuration file '{0}' could not be found.
2470023	The given configuration file is not in a valid format.
2470030	Failed to detect user role on database instance '{0}'. User check returned more than one user with user name '{1}'.
2470031	User '{0}' is not allowed to overwrite existing data by a restore operation on server '{1}'.
2470032	User '{0}' is not allowed to overwrite existing data by a restore operation on server '{1}'. The given password is incorrect.
2470033	There are open connections to the defined database instance. Check that all RGAM client connections are closed before starting the restore operation.
2470034	Login failed for user '{0}'. Check that username and password are correct and that the user exists on server '{1}'.
2470035	Access to backup file with current server login settings is denied.
2470049	There is not enough free space on your hard disk to create the backup.
2470050	There is not enough free space on your hard disk to restore the backup.

Appendix: Generating Standard User Accounts for Windows

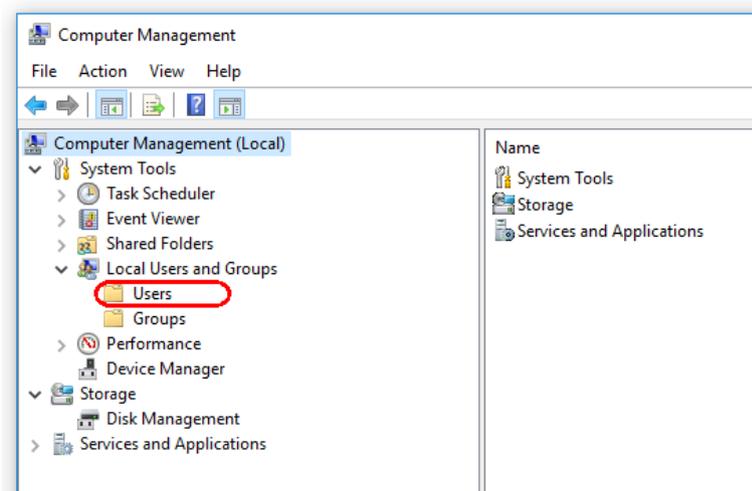
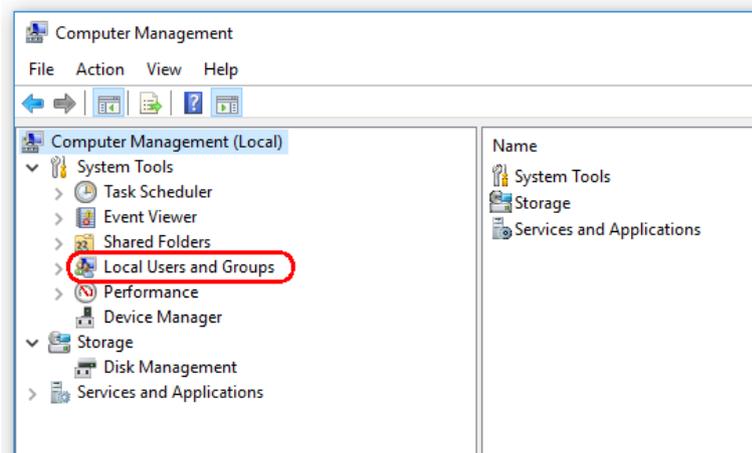
Windows 10

To create a standard user account in Windows 10, please follow these steps:

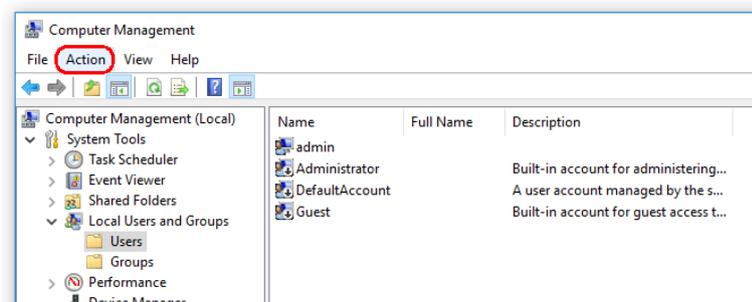
1. Right-click on the Windows icon in the lower-left corner of the screen.
Select **Computer Management**.



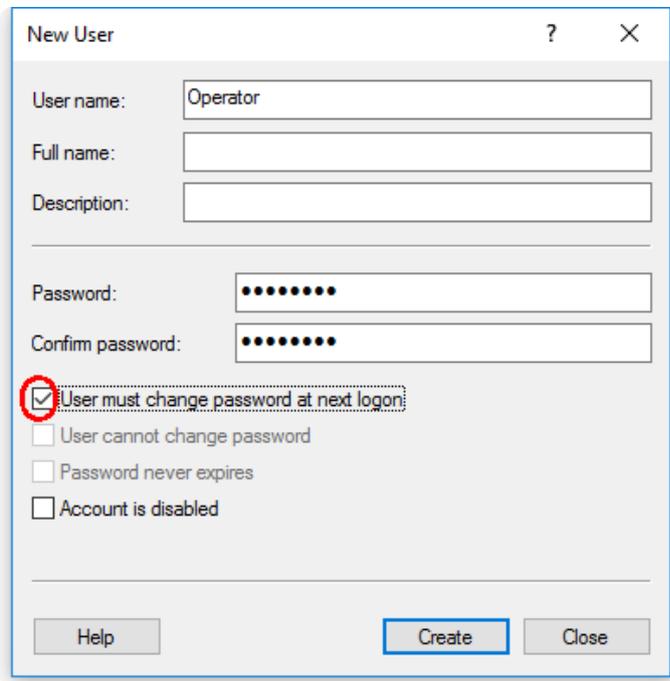
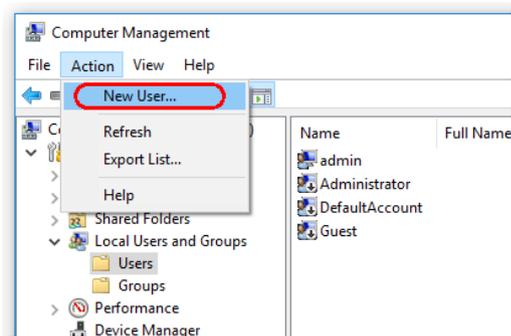
2. Expand **Local Users and Groups**.



3. Select **Users**. With **Users** highlighted, click **Action**.



4. Select **New User...**



5. Enter the user name "Operator" and set a password that is compliant with your security rules.
6. Uncheck **User must change password at next logon** to allow more options.

The screenshot shows a 'New User' dialog box with the following fields and options:

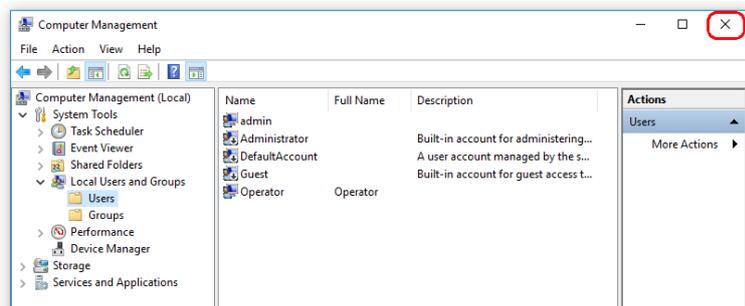
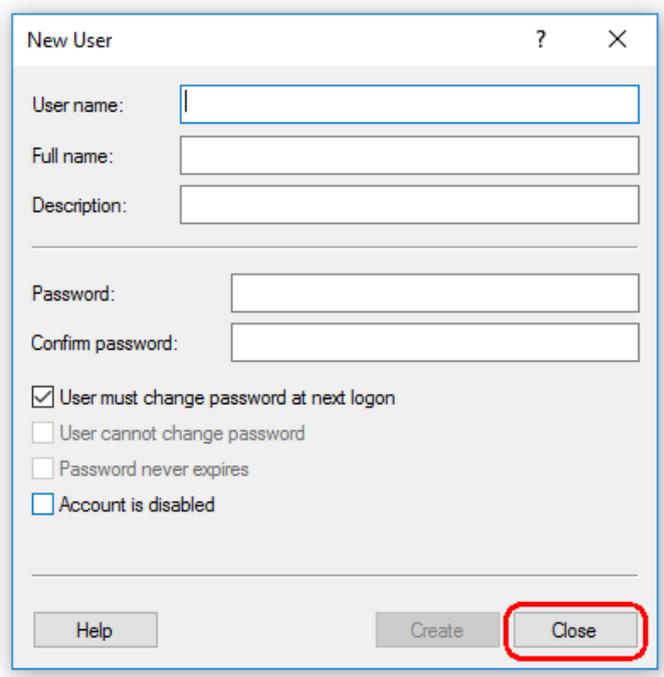
- User name: Operator
- Full name: (empty)
- Description: (empty)
- Password: (masked with 8 dots)
- Confirm password: (masked with 8 dots)
- User must change password at next logon
- User cannot change password
- Password never expires
- Account is disabled

Buttons at the bottom: Help, Create, Close. The 'Create' button is highlighted in blue. A red rectangle highlights the password and confirm password fields and the three checkboxes below them.

7. Click **Create** to finish.

This screenshot is identical to the one above, but the 'Create' button is highlighted with a red rectangle, indicating the final step in the process.

8. Add another user or click **Close**. All existing local users are shown in the **Users** list.



9. Close **Computer Management**.

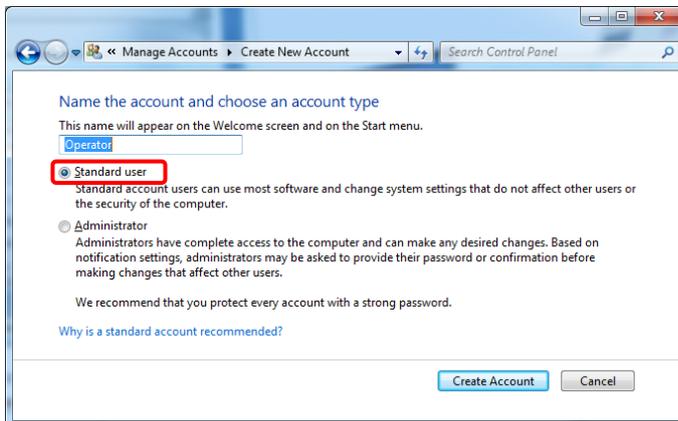
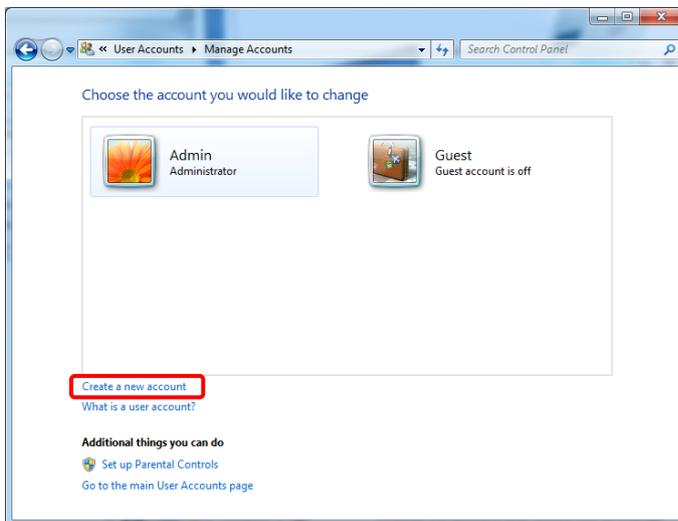
Change the password of the currently logged-in user by pressing the key combination **CTRL + ALT + DELETE** and selecting **Change a password** from the available options.

Windows 7

To create a standard user account in Windows 7, please follow these steps:

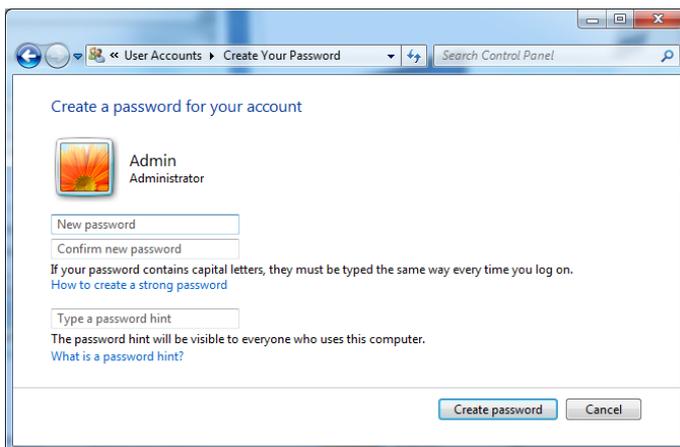
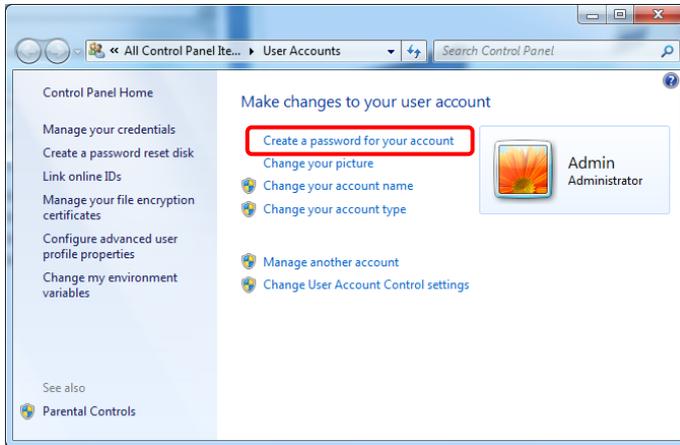
1. Open the **Windows Control Panel** via the **Start** menu and select **User Accounts/Manage accounts**. Choose **Create a new account**.

If you are using the Windows display option **View by: Category**, click on **Add or remove user accounts**.



2. Name the account "Operator" and select **Standard user** as the account type. Click **Create Account**.

3. Go back to **User Accounts** and create a password for the Administrator account.



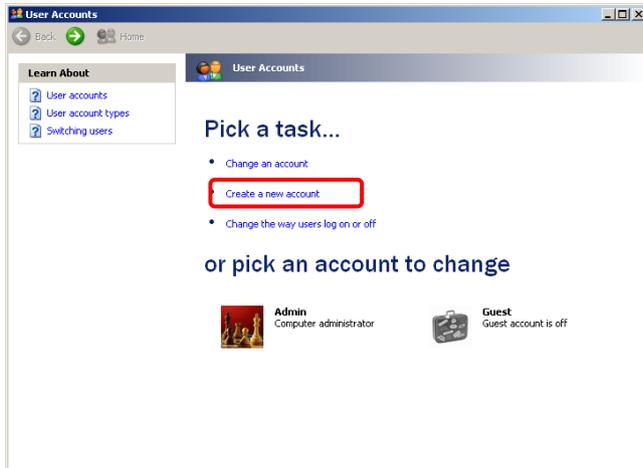
4. Enter the password and confirm it then click **Create password**.

Note: This password will be needed for installing future updates of Rotor-Gene AssayManager or for backup and restore purposes. Please make sure that it is not lost.

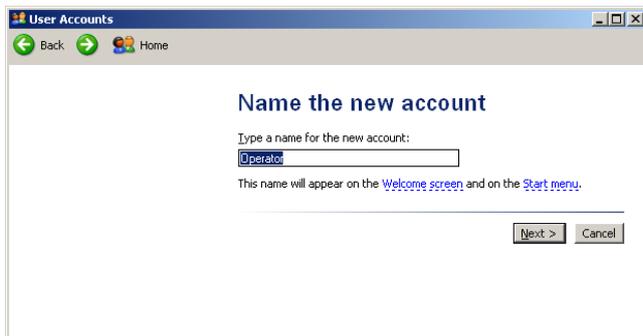
Windows XP

Non-administrative accounts are called limited users in Windows XP. Please follow these steps to create a limited user account:

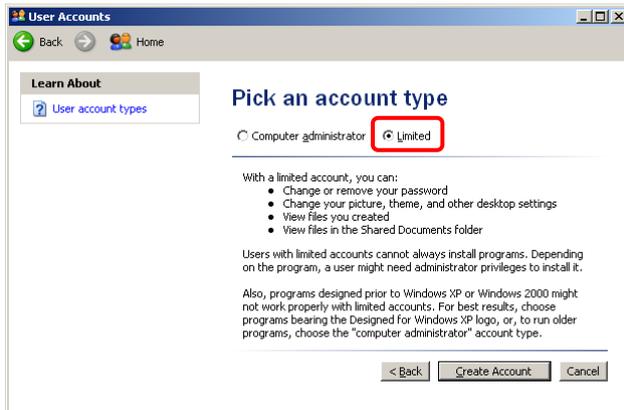
1. Open the **Windows Control Panel** via the **Start** menu and select **User Accounts**.



2. Choose **Create a new account**.



3. Name the account "Operator" and click **Next**.



4. Select **Limited** for the account type and then click **Create Account**.
5. Go back to **User Accounts**.



6. Select the Admin account and then select **Create a password**.



7. Enter the password and confirm it then click **Create Password**.

Note: This password will be needed for installing future updates of the Rotor-Gene AssayManager or for backup and restore purposes. Please make sure that it is not lost.

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The following section lists the license texts displayed during installation. These texts are also available in the RGAM Database Backup Tool software.

QIAGEN's RGAM Database Backup Tool software

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- delay,
- compensation due to defect,
- compensation for wasted expenses.

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