

QIAcuity[®] Software Suite Backup and Restore Scripts User Guide

For QIAcuity Software Suite version 3.0

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1. Introduction

The QIAcuity Software Suite Backup and Restore Scripts for Software Suite 3.0 are a standalone solution to backup all relevant user data of the QIAGEN[®] Software Suite for disaster recovery and to restore the data on a new or existing QIAGEN Software Suite installation. The scripts are designed for QIAcuity Software Suite version 3.0 only. The backup can be conducted manually or automated by using of the Windows[®] task scheduler. In detail, the following data are backed up:

- 1. User Management Database
- 2. Audit Trail Database and Tracker setting
- 3. Volume Precision Factor (VPF)
- 4. Plates
- 5. Plate Templates
- 6. Reports
- 7. Archive configurations (archive location, automatic archiving setting)
- 8. Instrument registration list

The plate archive is not part of the backup.

Note: For backup and restore of Software Suite versions lower than 3.0, please refer to the dedicated QIAcuity Software Suite Backup and Restore Scripts for versions 2.5.0.0, 2.5.0.1, and 2.5.1.0, or for version 2.0, 2.1.7, 2.1.8, and 2.2.

2. Preconditions

Windows administrator permission is needed to setup and perform an automated backup and for manual backup and restore.

Visit **www.qiagen.com** and go to the Latest Software Version section of the QIAcuity product page to download the backup and restore package for QIAcuity Software Suite version 3.0.

Unzip the downloaded package to a location of your choice. Please note that **suite_backup.exe**, **suite_backup.ps1**, and **suite_rollback.exe** must be in the same directory.

To access network folders for backup and restore, the UNC (Universal Naming Convention, **servername\path**) path format has to be used.

For example, if you have a mapped network drive on the source PC of your backup, you can identify the UNC path by using the command "net use" in a PowerShell[®] or CMD command prompt. If you do not know how to do this, please contact your local IT administrator.

Important: To ensure data integrity of the databases during backup and restore, the QIAcuity Software Suite is terminated for backup and restore. No plate runs, analyses, archiving, or any other functionality will be available during backup or restore. Please make sure that the backup and restore run only if no plate run and analysis or automatic archiving is in progress; otherwise, the data will be lost. If automatic archiving is activated, it will start at 1 AM Suite PC time and will be skipped if the QIAcuity Software Suite is still terminated for the backup or restore at that time.

Note: The time required for a backup depends on various factors such as the size of the databases, the speed of the interface of the backup device (USB, network, etc.), and the utilization of the PC where the backup or restore script was started.

You can estimate the duration of the backup by using the following equation:

Estimated Backup duration= Size of Suite Directory + Size of PostgreSQL Data Directory System performance

Suite Directory = C:Program Files (x86)QIAcuity Software Suite

$PostgreSQL \ Data \ Directory = \ C: \ ProgramData \ QIAcuity \ SuiteDbData$

As an example, assuming an overall available system performance of 70 Mbytes/s and a Suite Directory + PostgreSQL Data Directory size of 100 GByte, the backup takes approximately 24 minutes.

3. Start the Backup Manually

Open the backup and restore directory with the file explorer and run **suite_backup.exe** as administrator.

The backup script starts with opening a command shell window showing the output of the script that is also logged into the **data_backup.log** file. The standard setting for the Suite directory and backup file target drive and directory (**C:**\) are used.

If you want to change the target drive or directory, you can run the script from the command line providing the target as a parameter. For example, the target is a local drive and directory **D:\Backup**, then the command line is "suite_backup D:\Backup".



If the target is a network share, the UNC convention for the target has to be used; the command line is "suite_ backup\\backupserver_name\backupdirectory".

Note: When typing in the command lines, enter the exact text described above, including all spaces in between the command.

In each case, the backup is being stored in a subdirectory **suite_backup_%timestamp%** of your backup directory.

Important: Following the best practices for backing up data, ensure that each backup is restorable before archiving it. If you do not know how to do this, please contact your local IT department.

4. Setup an Automated Backup with Microsoft® Task Scheduler

1. Search for the windows task scheduler application and run it.

All Apps Documents Web	More 🔻	··· ×
Best match		
Pask Scheduler		
Search the web		Task Scheduler
A task scheduler - See web results	>	Арр
℅ task scheduler library	>	
P task scheduler open	>	□ ² Open
𝒫 task scheduler windows	>	C Run as administrator
𝒫 task scheduler windows 10	>	D Open file location
✓ task scheduler 0x1	>	- Pin to Start
✓ task scheduler app	>	-∽ Pin to taskbar
𝒫 task scheduler windows 11	>	
		O 🛱 💽 🧱 💼 🕿

2. Select Create Task... action from right menu (highlighted).

lask scheduler summary (cast ren		A DECEMBER OF A			
			Act	ions	
Overview of Task Scheduler		- ^	1821	Connection (Local)	
You can use Task Scher	luler to create and	^	0	Create Basic Task	
will carry out automati	cally at the times you		B	Create Task	
specify. To begin, click Action menu.		Import Task			
T 1		~		Display All Running Tasks	
Task Chatus	erc in the lack			Enable All Tasks History	
lask status		_		AT Service Account Configurat	i
Status of tasks that have st	Last 24 hours	~		View	
Summary: 0 total - 0 running,	0 succeeded, 0 stopped,		Q	Refresh	
			?	Help	
Task Name	Run Result F	ζun			
		~			
	You can use Task Sched manage common tasks specify. To begin, click Action menu. Tasks are stored in folde Task Status Status of tasks that have st Summary: 0 total - 0 running, Task Name	You can use Task Scheduler to create and manage common tasks that your computer specify. To begin, click a command in the Action menu. Task care chored in folderc in the Tack Task Status Status of tasks that have st Last 24 hours Summary: 0 total - 0 running, 0 succeeded, 0 stopped, Task Name Run Result	Vou can use Task Scheduler to create and manage common tasks that your computer specify. To begin, click a command in the Action menu. Tack are chared in folderc in the Tack Task Status Status of tasks that have st Last 24 hours Status of tasks that have st Last 24 hours Summary: 0 total - 0 running, 0 succeeded, 0 stopped, Task Name Run Result Run	Vou can use Task Scheduler to create and manage common tasks that your computer specify. To begin, click a command in the Action menu. Tasks are chored in folderc in the Task Task Status Status of tasks that have st Last 24 hours Status of tasks that have st Last 24 hours Summary: 0 total - 0 running, 0 succeeded, 0 stopped, Task Name Run Result Run	You can use Task Scheduler to create and manage common tasks that your computer will arry out automatically at the times you specify. To begin, click a command in the Action menu. Tasks are chored in folders in the Task Create Basic Task Task status Import Task Task status Import Task Status of tasks that have st Last 24 hours Summary: 0 total - 0 running, 0 succeeded, 0 stopped, Refresh Task Name Run Result

3. In the **General** tab, choose a name for the task.

Jeneral Irig	gers Actions Cond	itions Settings	
Name:	Suite backup		
Location:	V.		
Author:	win-test-013\mruse	r -	
Description:			
Security opt	ions		
When runn	ing the tack use the f	allowing user account:	
win-test-01	3\mruser	showing user account	Change User or Group
Run only	when user is logged	on	
O Run whe	ther user is logged o	n or not	
Dor	ot store password. T	ne task will only have access to local co	omputer resources.
Run with	highest privileges		
_	, <u>,</u>	7	

4. In **Security options** of the Create Task window, you will have to choose whether you want to see error messages (in case of an error) like this or not:

Task Scheduler		- 0
e Action View Help		
Administrator: C:\Windows\SYSTEM32\cmd.exe	- 0	×
Transcript started, output file is Q:\backup\suite_backup_03012023_130800\data_backup.log		A Actions
<u>⊿o la⊴</u> Start backup processing		Task Scheduler Library
		Create Basic Task
		Create Task
		Import Task
		Display All Running Tasks
		Enable All Tasks History
		Mew Folder
Old cuity Software Suite backup failed		View
		Refresh
There is not enough disk space for backup. Data size:		👔 Help
384.199791908264 MB, free disk space: 4.11328125 MB.		Selected Item
		Run
OK		End End
		Disable
		Export
	😣 Windows Pow	erShell
		Acuity Software Suite backup ed
Kun only when user is logged on	The	ere is not enough disk space for
Run whether user is logged on or not	bac	kup. Data size: 384.19979190826
Do not store password. The task will only have access to local resources	IVIB,	, nee disk space: 4.11328125 MB.

a. If you want to run the backup only when a user is logged on, to be informed of errors in that manner, pick the options as highlighted in the screenshot below.

ing	gers Actions	Conditions Set	tings		
Name:	Suite backup				
Location:	١				
Author:	win-test-013\r	nruser			
Description:					
Security on	tions				
When runn	ing the task use	the following us	er account:		
win-test-01	3\mruser			Change User o	r Group
O Run onl	y when user is lo	gged on			
Run wh	ether user is log	ed on or not			
Dor	not store passwo	rd. The task will	only have access to local	computer resources.	
-	highest privile	les			
Run wit					
Run wit					

The backup process will be performed only when you are logged in, and you will see the error messages as presented in the screenshot above. In addition, any error will be logged in the backup log file.

b. If you want to run the backup process in the background without a user logged in, pick the options as highlighted in the screenshot below. With this option, any backup errors will be logged in the backup log file only.

Suite backup		
١		
win-test-013\mrus	er	
ions		
ing the task, use the	following user account:	
3\mruser		Change User or Group
when user is logge	d on	
ther user is logged o	on or not	
ot store password.	The task will only have access to local co	omputer resources.
highest privileges		
	Suite backup win-test-013\mruse ions ng the task, use the 3\mruser when user is logged ther user is logged to to store password. To highest privileges	Suite backup vin-test-013\mruser ions ng the task, use the following user account: 3\mruser when user is logged on ther user is logged on or not ot store password. The task will only have access to local c highest privileges

5. In the **Triggers** tab, click the **New...** button.

ieneral	Triggers	Actions	Conditions	Settings			
When y	you create	a task, yo	u can specify	the conditions that will trig	ger the task.		
Trigge	er	De	tails			Status	
Ne	w	Edit	Delet	te			

The New Trigger configuration window allows to define when the backup action should be performed.

New Trigger		×
Begin the task: (Settings	On a schedule 🗸	
One time One time Daily Oweekly Monthly	Start: 19.12.2022 T 10.01:00 Synchronize across time zone Recur every: 1 days	25
Advanced setting	gs rr up to (random delay): 1 hour ∨	
Repeat task e	Every: 1 hour for a duration of: 1 day II running tasks at end of repetition duration 1	
Stop task if it	t runs longer than: 6.2024 • 10.01:00 • Synchronize across time zones	
✓ Enabled		
	OK Cano	el

6. Go to the **Actions** tab, and click the **New...** button:

create lask							
eneral Triggers	Actions C	onditions	Settings				
When you crea	te a task, you	must spec	ify the action t	that will occu	ur when you	r task starts.	
Action	Detai	ls					
							-
New	Edit	Dele	te				

7. In the New Action window, you have to provide the path to the backup script on your disc ("Program/script" text area) and your desired, existing directory to store the automatic backups ("Add arguments (optional)" text area).

If the target is a network share, the UNC convention for the argument has to be used; for example, **backupserver_** name\backupdirectory.

	Start a program	~
Setting	5	
Progra	um/script:	
C:\Bac	:kupScripts\suite_backup.bat	Browse
Add a	rguments (optional):	C:\SuiteBackups
Start i	n (optional):	

8. Configuration in the **Conditions** and **Settings** tabs is up to your needs. For the most common case, nothing needs to be adjusted from the default.

③ Create Task		×	🕒 Create Task		
General Triggers Actions Conditions Settings			General Triggers Actions Conditions Settings		
Specify the conditions that, along with the trigger, de run if any condition specified here is not true.	termine whether the task sho	uld run. The task will not	Specify the conditions that, along with the trigger, de run if any condition specified here is not true.	termine whether the task shoul	ld run. The task will not
Start the task only if the computer is idle for:	10 minutes	~	Start the task only if the computer is idle for:	10 minutes	~
Wait for idle for:	1 hour	~	Wait for idle for:	1 hour	\sim
Stop if the computer ceases to be idle			Stop if the computer ceases to be idle		
Restart if the idle state resumes			Restart if the idle state resumes		
Power			Power		
Start the task only if the computer is on AC power			Start the task only if the computer is on AC power		
Stop if the computer switches to battery power			Stop if the computer switches to battery power		
Wake the computer to run this task			Wake the computer to run this task		
Network			Network		
Start only if the following network connection is a	vailable:		Start only if the following network connection is a	vailable:	
Any connection		\sim	Any connection		
	-				
		OK Cancel			OK Cancel

9. With **Triggers** and **Actions** tab filled, click the **OK** button. In case the configuration to run the backup in the background was selected, Windows will ask you for the password of the user account running the task. Provide it, and click **OK**.

General	Triggers	Actions	Conditions	Settings		
When	you create	a task, yo	ou must spec	fy the action that will occur when your	task starts.	
Actio	Action		tails			
Start	Start a program		C:\BackupScript\suite_backup.exe C:\SuiteBackups			
<					>	
< Ne	w	Edit	Dele	e	>	

After that step, you can see your task in the Task Scheduler Library view.

- 18							
Task Scheduler (Local) Task Scheduler Library	Name	Status	Triggers	Next Run Time	Last Run Time		
>lask scheduler Library	MicrosoftEd	Ready	Multiple triggers defined	12/21/2022 12:28:39 AM	12/20/2022 12:28:		
	(B) MicrosoftEd	Ready	At 11:58 PM every day - After triggered, repeat every 1 hour for a duration of 1 day.	12/20/2022 4:58:39 PM	12/20/2022 3:58:4		
	Suite Backup	Ready	At 11:59 PM every day	12/20/2022 11:59:59 PM	11/30/1999 12:00:		
	<				>		
	General Trigger	Actio	ns Conditions Settings History (disabled)				
	Name: Su	uite Back	up		^		
	Location: \						
	Author: w	in-test-0	13\mruser				
	Description:						
	Security option	s					
	When running the task, use the following user account:						
	mruser						
	O Run only w	hen user	is logged on				
	Run wheth	er user is	logged on or not				
	Do not	store pa	ssword. The task will only have access to local resources		~		

The windows task scheduler will from now on automatically start the Suite Backup Task and create the Suite backups as configured in the task.

Inside each timestamped backup folder (**suite_backup_%timestamp%**), the backed-up files along with a backup log file and a rollback script are stored.

☐	DS View						-		×
Pin to Quick Copy Paste	Cut Copy path Paste shortcut	Move to •	X Delete •	New New	Properties	Edit History	Select	all none selection	
← → * ↑	> Sui >	و.ري ت ب	Search SuiteE	Backups		Pen	500		p
E Pictures * ^	Name	^		Date modifie	d	Туре		Size	
 BackupScripts logs QlAcuity Softwa SuiteBackups OneDrive This PC 3D Objects Desktop Documents Downloads 	suite_backup suite_backup suite_backup suite_backup suite_backup suite_backup suite_backup	p_20122022_13 p_20122022_15 p_20122022_15 p_20122022_15; p_20122022_15; p_20122022_16;	4326 1305 1753 2604 5342 2957	12/18/2022 1 12/20/2022 3 12/20/2022 3 12/20/2022 3 12/20/2022 3 12/20/2022 3 12/20/2022 4	1:45 PM 13 PM 17 PM 26 PM 53 PM 30 PM	File folder File folder File folder File folder File folder			
 Music ■ Pictures ■ Videos ■ Windows (C:) 	:								>

5. Restore a Backup

Important: In case of a disaster recovery, install the QIAcuity Software Suite first. Please make sure that the software version is identical to the version of the backup.

Important: The rollback script will restore the data of the backup to the QIAcuity Software Suite Installation directories and overwrite existing data.

To restore a backup, run suite_rollback.exe as administrator inside the desired backup folder and follow the instructions.

suite_backup_180920	024_08051 × +			- 0 ×
$\leftarrow \rightarrow \uparrow$	C 🖵 > … su	ite_backup_18092024_0805	17 >	Search suite_backup_180
🕂 New - 🏑) ÎÎ î↓ Sort ~	≡ View ~ ···	📑 Details
A Home	Name	Date mod	ified Type	Size
Callery	🚞 config	9/16/2024	1:22 PM File folde	r
	🚞 events	9/16/2024	2:01 PM File folde	r
> CneDrive	🚞 images	9/16/2024	2:01 PM File folde	r
	🚞 permissions	9/18/2024	8:05 AM File folde	r
🛄 Desktop 🛷	🚞 postgres	9/18/2024	8:05 AM File folde	r
🚽 Downloads 🖈	🚞 reports	9/16/2024	2:33 PM File folde	r
📑 Documents 🖈	🚞 security	9/16/2024	1:22 PM File folde	r
Pictures	data_backup	9/18/2024	8:05 AM Text Doct	ument 565 KB
Music 🔹	G QIAidentity	9/18/2024	8:05 AM Data Base	e File 1,852 KB
Videos	suite_rollback	9/16/2024	1:29 PM Applicati	on 258 KB
 logs This PC 				
10 items 1 item selected	1 258 KB			
Name	~	Date modified	Туре	Size
式 suite_backup.exe		9/13/2024 12:10 PM	Application	259 KB
🚃 suite_rollback.exe		9/13/2024 12:10 PM	Application	258 KB

Click **Yes** on below pop-up window.



Confirm that the backup data can be restored to the target location by entering "rollback" into the textbox. This will overwrite the data at the target location.



After the rollback has finished, the command window closes and the QIAcuity Software Suite can be opened again.

6. Troubleshooting

The backup and restore scripts are logging the progress and results in log files. For the backup script, the logged information is located in **...\suite_backup_%timestamp%\ data_backup.log**.

For the restore script, the logged information is located in C:\Program Files (x86)\QIAcuity Software Suite\backup_ rollback.log.

In case of an error, like incomplete backup, empty backup directory, or incomplete restore, please check the log files for errors.



space for backup." is present in the data_backup.log file, resulting in no files in the backup directory

Backup restore made by Windows user different than the one who installed Suite causes internal error while trying to log in to the application.

Restore the backup one more time.

6.1. Inconsistency of regional settings during restoring from backup

In case the following pop-up window appears during backup restoration, change the regional setting of the operating system to meet the regional settings that was set during installation of backed-up QIAcuity Software Suite, as stated in the warning.

🖳 Warning	-		×
The rollback of the backup cannot be executed di regional language settings!	ue to incor	mpatible	
Regional settings during backup: de_DE Current regional settings: English_United States.	1252		
The rollback script will be now terminated. Please settings to the one used for creating the backup a QlAcuity Software Suite before running the rollba	e switch tl nd reinsta ck script.	he regiona III the	al
Close			

Document Revision History

Revision

Description

October 2024

Initial release for Software Suite version 3.0.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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