

QIAcuity[®] Software Suite Backup and Restore Scripts version 2

For QIAcuity Software Suite version 2.5.0.0, 2.5.0.1, and 2.5.1.0

Sample to Insight

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Introduction

The QIAcuity Software Suite Backup and Restore Scripts version 2 for Suite 2.5.0.0, 2.5.0.1 and 2.5.1.0 are a standalone solution to backup all relevant user data of the QIAGEN[®] Software Suite for disaster recovery and restore the data on a new or existing QIAGEN Software Suite installation. The scripts are designed for QIAcuity Software Suite version 2.5.0.0, 2.5.0.1, and 2.5.1.0. 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 2.5.0.0, please refer to the QIAcuity Software Suite Backup and Restore Scripts for version 2.0, 2.1.7, 2.1.8, and 2.2.

Preconditions

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

Visit **www.qiagen.com** and go to the Software section of the QIAcuity product page to download the backup and restore package version 2 for QIAcuity Software Suite version 2.5.0.0, 2.5.0.1, and 2.5.1.0.

Unzip the downloaded package to a location of your choice. Please note that **suite_ backup.bat**, **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 Suiteis 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 runs 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

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

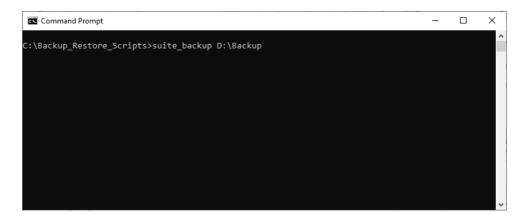
As an example, assuming an overall available system performance of 70 Mbytes/s and a Suite Directory + PostgreSQL Data Directory size of 100 GByte, the backup takes approximately 24 minutes.

Start the Backup Manually

Open the backup and restore directory with the file explorer and run suite_backup.bat 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".

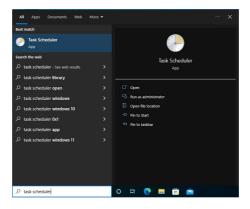
Note: When typing in the command lines, please enter the exact text described above, including all spaces in between the command.

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

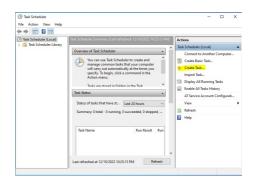
Important: Following the best practices for backing up data, ensure that each backup is restorable before archiving it. If you do not know how to do this, please contact your local IT department.

Setup an Automated Backup with Microsoft[®] Task Scheduler

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



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



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

	gers Actions Conc	litions Settings	
Name:	Suite backup		
Location:	X		
Author:	win-test-013\mruse	r	
Description:			
Security opt	L		
		ollowing user account:	
win-test-01	3\mruser		Change User or Group
Run onl	y when user is logged	on	
O Run whe	ether user is logged o	n or not	
Dor	not store password. T	he task will only have access to loca	al computer resources.
D Pur util	h highest privileges		
Man wid	r nignest privileges		
			r™ 2008

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:

Administrator: C\Windows\SYSTEM32\cmd.exe				• ×	1	
TeskS Transcript started, output file is Q:\ba	ckup\suite_backup_03012023_130000\data_backup	log			tctions	
3 Tastart backup processing					Task Scheduler Library	
					Create Basic Task	
					👝 Create Task	
					Import Task	
					Display All Running Tasks	
					Enable All Tasks History	
					New Folder	
	QIAcuity Software Suite backup failed	×			View	
	Carcoly Stering Stering Into	<u> </u>			Refresh	
	There is not encouch disk source for backup.	ata sirer			7 Help	
	There is not enough disk space for backup. 364.199791908264 M8, free disk space 4.113.	8125 MB.			selected item	
					Run	
		OK			End End	
					Disable	
					Export.	
			😮 Windo	ws PowerShell		
					Software Suite backup	
 Kun only when user is logge 			<u> </u>	failed		
Run whether user is logged					not enough disk space for Data size: 384.1997919082	
	The task will only have access to local resources				disk space: 4.11328125 ME	

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.

	gers Actions Cond	litions Settings			
Name:	Suite backup				
Location:	X				
Author	win-test-013\mruse	a.			
Description:					
Security opt	ionr				
win-test-01	ing the task, use the t 3\mruser	onowing user acco	unc	Change	Jser or Group.
O Run onl	when user is logged	lon		change	
-	ther user is logged o				
-	iot store password. T		re access to local c	computer resources	
		inc took will only fid-	re occess to local e	comparer resources.	
	n highest privileges				
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.

Create Task		
General Trig	gers Actions Conditions Settings	
Name:	Suite backup	
Location:	X (
Author	win-test-013\mruser	
Description:		
Security opt	lions	
	ing the task, use the following user account:	
win-test-01		Change User or Group
O Run onl	y when user is logged on	
	ether user is logged on or not	
Run wheel	not store password. The task will only have access to local compu	
		ter resources.
🗆 Do r	h highest privileges	ter resources.
Do r	h highest privileges	ter resources.
🗆 Do r		ter resources.

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

Oreate	Task							
General	Triggers	Actions	Conditions	Settings				
When	you create	a task, yo	u can specify	the conditions that w	vill trigger the ta	isk.		
Trigge	Br	De	ails				Status	
Ne	w	Edit	Dele	te				
						OK	Ca	ncel

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

	On a schedule		~	
Settings One time Daily <u>Weekly</u> <u>Monthly</u>	Start: 19.12.2022 Regur every: 1	■▼ 10:01:00 days	Synchroniz	e across time zones
Advanced settii	ngs for up to (random delay):	1 hour		
Repeat task	every: 1 hour		for a duration of: 1	day 🗸
Stop	all running tasks at end o	f repetition dur	ation	
Stop task if	it runs longer than:	3 days		
Expire: 23	06.2024 🔲 👻 10.01:00		Synchroniz <u>e</u> acr	oss time zones
Enabled				

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

General T	riggers	Actions	Conditions	Settings	
				y the action that will occur when yo	our task starts.
Action		Det	ails		
					_
					*
		Edit	Dele		
New.					

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**.

		form.	
Action:	Start a program		~
Setting	5		
-	am/script:		
C:\Bad	ckupScripts\suite_backup.bat	Brow	/se
Add a	rguments (optional):	C:\SuiteBackups	
Start in	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.

Specify the conditions that, along with the trigger, de run if any condition specified here is not true.	termine whether the task shou	ld 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 shou	ld run. The task will not
dle Start the task only if the computer is idle for: Wait for idle for:	10 minutes		Start the task only if the computer is idle for: Wait for idle for:	10 minutes	
Stop if the computer ceases to be idle Restart if the idle state resumes	THOU		Stop if the computer ceases to be idle	THOU	
Power 3 Start the task only if the computer is on AC power 5 Stop if the computer switches to battery power Wake the computer to run this task Vetwork 5 Start only if the following network connection is a			Power Power Start the task only if the computer is on AC power Stop if the computer switches to battery power Wake the computer to run this task Network Start only if the following network connection is a		
Any connection		~	Any connection		

 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.

erieral inggers -	Actions Conditions Settings	
When you create a	a task, you must specify the action that will occur when your task starts.	
Action	Details	1
Start a program	C:\BackupScripts\suite_backup.bat C:\SuiteBackups	
		~
		~
		_
<		

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

Task Scheduler (Local) Name	Status Triggers	Next Run Time	Last Run Time
- Microsoft	d Ready Multiple triggers defined	12/21/2022 12:28:39 AM	12/20/2022 12:20
() Microsofti	d 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:
(C) Sute Brck	ip Ready At 11:59 PM every day	12/20/2022 11:59:59 PM	11/30/1999 12:0
< <u> </u>			
Name	gers Actions Conditions Settings History (disabled) Suite Backup		
	Jane backup		
Location:	1		
Author	win-test-013/unruser		
Description:			
- Security op	ions		
When runn	ing the task, use the following user account:		
mruser			
	v when user is loaged on		
 Run on 			
	ether user is logged on or not		

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 is stored.

Pin to Quick Copy Paste sho access	rtcut Copy to		New folder	Properties Popen Open	Select all Select none Invert selection Select
← → ~ ↑		Search SuiteB		opti	Juna
Pictures # ^ Name	^		Date modifie	d Type	Size
	suite_backup_20122022_134326			:45 PM File folder	
	suite_backup_20122022_151305		12/20/2022 3:		
	suite_backup_20122022_151753		12/20/2022 3:17 PM File folder		
	backup_20122022_15		12/20/2022 3:		
	backup_20122022_15		12/20/2022 3:		
	backup_20122022_16	2957	12/20/2022 4:	30 PM File folder	
This PC					
3D Objects					
Desktop					
1 Documents					
Downloads					
h Music					
Pictures					
Videos					
Windows (C:)					

Restore a Backup

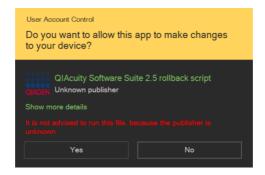
Important: In case of a disaster recovery, install the QIAcuity Software Suitefirst. Please make sure that the software version is identical to the version of the backup.

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

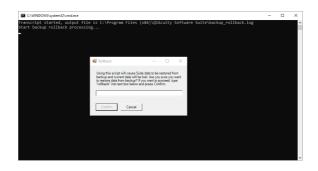
To restore a backup, run **suite_rollback.exe** as administrator inside the desired backup folder and follow the instructions.

Pin to Quick Conv. Parte	View Cut Copy path Paste shortcut		New folder	Properties		
Clipboard		Organize	New	Open	s	elect
← → ~ ↑ <mark> </mark> « Wi	i > suit > 🗸 🗸	ට Search suite	_backup_2012202	2_163817		Q
Pictures Pictures Construction ReckupScripts QlAcuity Softwa GuiteBackups OneDrive This PC Dobicts Dektop Cocuments	Name config potgres security G audit_trail deta_backup C QlAidentty S suite_rollback suite_rollback		Date modifier 12/18/2022 1 12/20/2022 4: 12/18/2022 1 12/20/2022 4: 12/20/2022 4: 12/20/2022 4:	:39 PM File 38 PM File 33 PM File 33 PM Da 38 PM Tes 38 PM Da 34 PM Wi	pe e folder e folder ta Base File ct Document ta Base File ndows Batch File ndows PowerS	Size 24 KB 67 KB 2,880 KB 1 KB 8 KB
Downloads Downloads Music Pictures Videos Undows (C:) 8 Rems	٢	21/05/2024 13:40		ows Batch File	1 KB 12 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.

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)\QlAcuity 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.

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	-		Х
	The rollback of the backup cannot be executed due regional language settings!	to incomp	atible	
	Regional settings during backup: de_DE Current regional settings: English_United States.12	52		
	The rollback script will be now terminated. Please s settings to the one used for creating the backup and QIAcuity Software Suite before running the rollback	reinstall		
	Close			

Error	Solution
PS>TerminatingError(): "service QIAcuitySuite cannot be stopped" >> TerminatingError(): "service QIAcuitySuite cannot be stopped" Backup failed: service QIAcuitySuite cannot be stopped	Please run the backup script with administrator rights.
The command line window closes itself right after the script gets started and the backup directory is not created on the network drive, no log is present	Please check that the user performing the backup has permission to write on the network drive.
Error message pop up during manual backup about not enough disk space. The command line remains open.	Please check the disk space at the backup target location
D), is a valid path for beckup Transcript transfer, dortur (file is D):vuite_backup_21062023_103720/data_backup.log Start backup processing. Backup directory D:/suite_backup_21062023_103720 will be created (original root path: D:/). QAcaty Software Sute backup falled	
There is not enough disk space for backup. Data size: 633.246499061544 MB, free disk space: 18.8515423 MB.	

For automated backup, the error message "PS>TerminatingError(): "There is not enough disk 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 Please restore the backup one more Suite causes internal error while trying to log in to the application. time.

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Document Revision History

Revision	Description
December 2023	Initial release for Software Suite version 2.5.
July 2024	Second release for Software Suite version 2.5.0.0, 2.5.0.1, and 2.5.1.0

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