Knowledge Base

Batch Deleted Status

KB-0045-22

Document Summary	
Article Type	User Guide
Products Affected	Exaquantum/Batch
Versions Affected	All Versions
Function Affected	Batch Web and Batch Reporting
Available Resolution	Not Applicable
Audience	System Integrators and Administrators
Summary	Some Valid Batches can have an incorrect execution status of ‘DELETED’ and therefore Exaquantum ignores the results.
Review Date	Document to be reviewed before End Apr 2023

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Chapter 1 Introduction

Under certain circumstances which are not fully understood it is possible for Active Batches to be incorrectly assigned an execution status of ‘DELETED’.

This causes Exaquantum/Batch to ignore any further status changes for this batch which will result in some data such as the following not being collected.

- Batch-End Timestamp
- Formula Item Updates
- Batch End Reports

An issue with ExaOPC was observed which resulted in this behaviors being exhibited and was fixed in the later releases as detailed in Chapter 2.

There have been other occasions/instances of the problem being observed, for which the root causes have still not been identified.

Further investigations at the time of occurrence with additional ‘Logging’ will be put in place as and when required.

A work-round has been devised (See Chapter 3 and Chapter 4) that requires the running of an SQL Script when the problem has been observed, which can also be run automatically as required.

The Script and Windows BAT file detailed in this document have undergone testing at Yokogawa Marex, but as is good practice, it is highly advised that a **Full Database Backup** be taken in advance of executing the SQL Script or Windows BAT File for the first time.

1.1 Audience

This guide is intended for system integrators and administrators.

Chapter 2 Related Known Issue

Prior to the release Exaopc/Batch R3.74 there was a bug which meant that there were some circumstances when Exaquantum Batch would obtain a partial batch list from the Control System which would then result in this behavior.

An initial patch for this problem was also made for R3.73 (R3.73.03).

All Batches so marked will be ignored by Exaquantum Batch even if at a later time they reappear in the list.

A formal fix for this problem was included in Exaopc R3.74 / Exaquantum/Batch R2.50.40 and also included modifications to better handle such abnormal conditions.

Chapter 3 Security Model

The information shown in this chapter describes the steps needed when implementing the solution at the different Security Levels within Exaquantum.

The procedure detailed in this document was undertaken using the Legacy Model of Security Level and used the Quantumuser account.

3.1 Security – Legacy Model

When implementing the solution at Legacy Security, the steps required are as detailed in this document, with reference to the account information detailed below.
As required, another user account can be created for the running of the Script.
(References to the Quantumuser account in this document will need to be updated as needed).

The user account created will need to be a member of the following security groups.

QAdministratorGroup

QUserGroup

3.2 Security – Standard Security Model

When implementing the solution at Standard Security, the steps required are as detailed in this document, with reference to the account information detailed below.
A user account in the following groups will be required in order to run this Script.
(References to the Quantumuser account in this document will need to be updated as needed).

The user account used needs to be a member of the following security groups:

QTM_DATA_READ

QTM_MAINTENANCE (Standard Standalone Security Model)

QTM_MAINTENANCE_LCL (Standard Domain Security Model)

Chapter 4 SQL Script

The SQL Script ClearDeletedStatusRestartAsRequired.sql can be obtained from the Yokogawa Affiliate Portal – Useful Tools and Scripts Section.

In this example it has been downloaded into the following directory C:\CRB

References to C:\CRB within this section of the document should be replaced with the directory into which the file has been downloaded.

4.1 SQL Script – Detailed Information

The SQL Script is shown below for informational purposes only with **embedded comments** detailing the steps that the script undertakes.

```
-- This Script Checks/Updates Exaquantum Batch Status Messages, Correcting Any Entries That Have Been Added In Error
--
-- This procedure uses the xp_cmdshell extended stored procedure so we temporarily enable it
--
use master
EXEC sp_configure 'show advanced options', 1
GO
-- To update the currently configured value for advanced options.
RECONFIGURE
GO
-- To enable the feature.
EXEC sp_configure 'xp_cmdshell', 1
GO
-- To update the currently configured value for this feature.
RECONFIGURE
GO
--
-- Switch to the QBatch database and define variables
--
use QBatch
Declare @BatchUId as integer
Declare @BatchId as nvarchar(64)
Declare @Period as integer
Declare @Message as nvarchar(64)
Declare @Count as integer
Declare @Waitcount as integer
--
-- Period is the schedule period. It is expected that this will be run once every 7 days so the period is set to 7.
--
set @Period = -7
--
-- The Waitcount is used to say how long the process should wait before attempt to restart the service or report an error
-- The value of 6 will provide a wait of up to 30 seconds.
--
Set @Waitcount = 6

--
-- We are looking for all the batches which do not have an end time but have a deleted status
-- We first get a list of all the batches of the requested period that have no EndTime
--
Declare BatchCursor cursor for Select batchUID,BatchId from BatchReportView where ActualEndTime is Null and ReservedTime
>= DATEADD(d,@Period,SYSDATETIME())

Open BatchCursor

Fetch Next from BatchCursor into @BatchUID, @BatchId

set @Count = 0
While @@FETCH_STATUS = 0
```

```
Begin
--
-- We now check to see whether the latest status recorded for each of the batches in turn is DELETED (ExacutionStatusUid of 13)
--
	if (Select top 1 ExecutionStatusUid from BatchExecStatusHistory where BatchUID = @BatchUID order by Timestamp
Desc) = 13
	Begin
		--
		-- If we have a deleted status then we increment the count by 1, remove that deleted status and raise an event
in the event log
		-- This is a warning not an error although we should not have this status clearing it is the reason for the running
of this script
		--
		Set @Count = @Count + 1
		Delete from QBatch..BatchExecStatusHistory Where ExecutionStatusUId = 13 and BatchUId = @BatchUId
		set @Message = 'Unexpected DELETE status removed from batch ' + @BatchId
		EXEC xp_logevent 60001 , @Message   , 'WARNING'
	End

	Fetch Next from BatchCursor into @BatchUID, @BatchId

End

Close BatchCursor

Deallocate BatchCursor

--
-- Before any changes will take place, the Automatic Batch Data Collection Service needs to be restarted
-- We only do this however if a change has been made
--
if @Count > 0
Begin
	DECLARE @result as Integer
	DECLARE @StoppedOK as Integer

	Set @StoppedOK = 0
	Exec @Result = xp_cmdshell 'Net Stop QBAutoBDC'
	IF (@result = 0)
	Begin
		-- Log an informational message to say that we have stopped the Service
		--
		set @Message = 'Automatic Batch Service Stop Requested by Delete Check'
		EXEC xp_logevent 60002 , @Message   , 'INFORMATIONAL'
		Set @StoppedOK = 1
	End
	ELSE
	Begin
		-- If we are unable to stop the service we need to flag this as an error
		--
		set @Message = 'Unable to stop Automatic Batch Data Collection Service'
		EXEC xp_logevent 60002 , @Message   , 'ERROR'
	End
	--
	-- If the stop request was successful
	--
	if @StoppedOK = 1
	begin
		-- This section checks to see if the stop was successful
		-- To do this a temporary table is required to store the service status
		CREATE TABLE #ServicesStatus
		(
			Status varchar(50)
		)
		-- Get current service status
		Insert Into #ServicesStatus EXEC xp_servicecontrol N'QUERYSTATE', N'QBAutoBDC'
		Declare @Status varchar(max)
		Select @Status=status from #ServicesStatus
		Truncate Table #ServicesStatus
		Set @count = 0
```

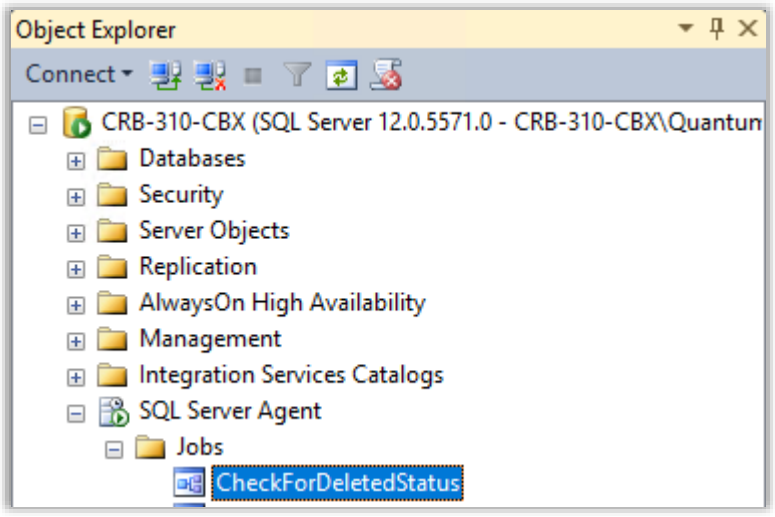
```
                While (@Status != 'Stopped.' and @Count <= @Waitcount)
                Begin
                        WAITFOR DELAY '00:00:05'
                        Insert Into #ServicesStatus Exec xp_servicecontrol N'QUERYSTATE', N'QBAutoBDC'
                        Set @Count = @Count + 1
                End
                Drop Table #ServicesStatus
                -- If the stop was successful we request the service to restart
                If @Count <= @Waitcount
                Begin
                        Exec @Result = xp_cmdshell 'Net Start QBAutoBDC'
                        IF (@Result = 0)
                        Begin
                                -- Log an informational message to say that we have restarted the Service
                                --
                                set @Message = 'Automatic Batch Service Start Requested by Delete Check'
                                EXEC xp_logevent 60003 , @Message   , 'INFORMATIONAL'
                        End
                        ELSE
                        Begin
                                -- If we are unable to start the service we need to flag this as an error
                                --
                                set @Message = 'Unable to start Automatic Batch Service'
                                EXEC xp_logevent 60003 , @Message   , 'ERROR'
                        End
                End
        End
End
--
-- Finally switch off the xp_cmdshell once more
--
Use Master
-- show advanced options
EXEC sp_configure 'show advanced options', 1
GO
RECONFIGURE
GO
-- disable xp_cmdshell
EXEC sp_configure 'xp_cmdshell', 0
GO
RECONFIGURE
GO
-- hide advanced options
EXEC sp_configure 'show advanced options', 0
GO
RECONFIGURE
GO
```

4.2 Running the SQL Script as an SQL Server Agent Job

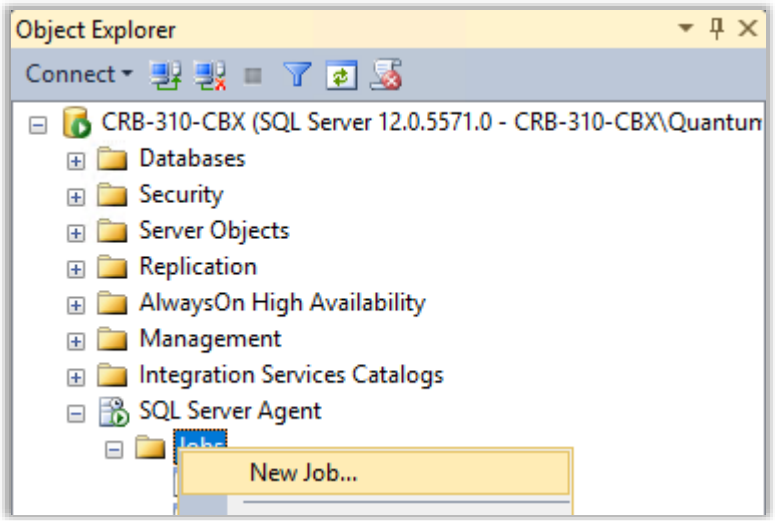
To Run the SQL Script as an SQL Server Agent Job use the steps below.

1) Open SQL Server Management Studio.

2) Navigate and open the SQL Server Agent/Jobs tree.
(In the example below a New Job has already been created).

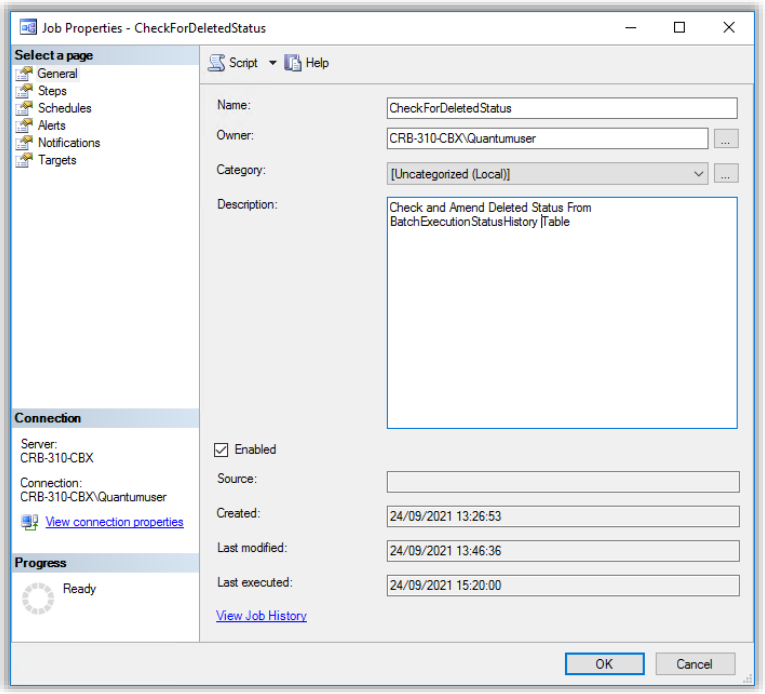


3) Select and Right-Click on the Jobs section of the Tree (As Below).



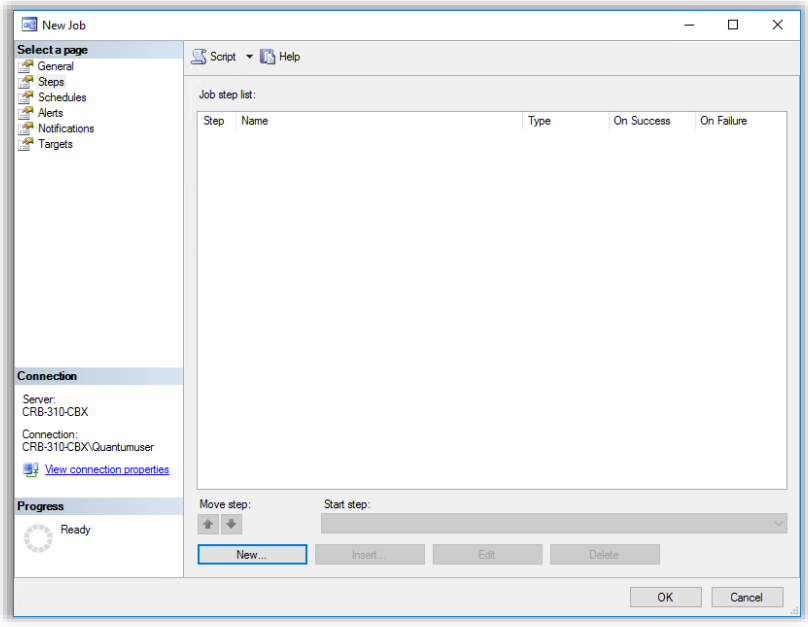
4) Select **New Job** and enter details as shown in the example screen below.

General Section



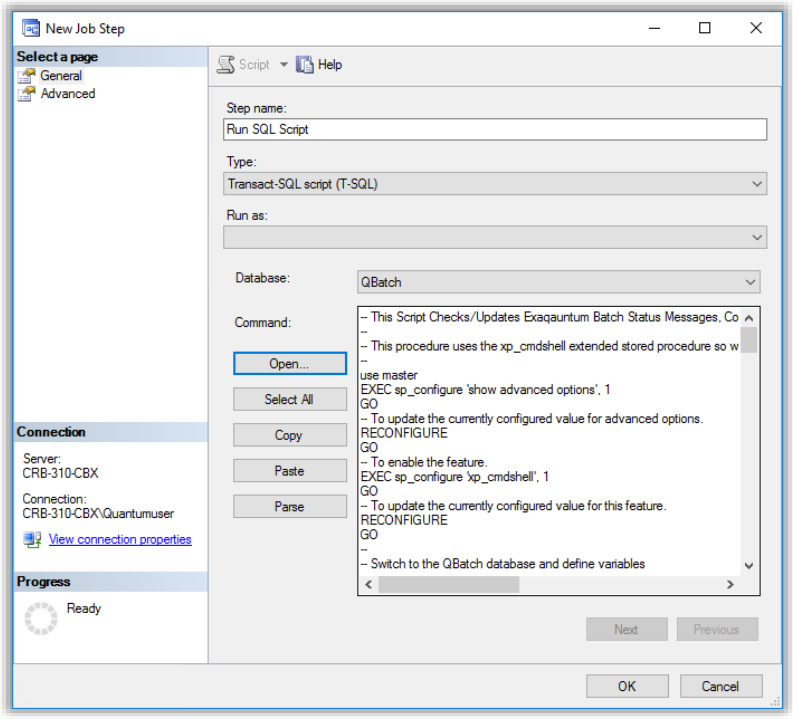
5) Select the **Steps** Option / **New** Button from the screen displayed below.

Steps Section



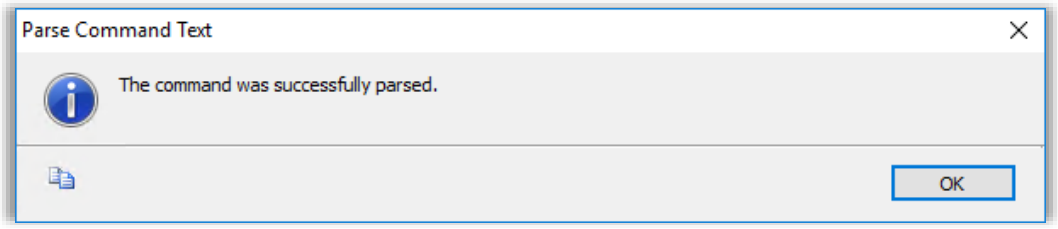
6) Enter the details as shown in the screen below.

New Job Step - General Section



To Enter the Command Text, Select Open and navigate to the saved SQL Script, which then be pasted into the command window automatically after selecting the Script file.

To ensure that the Commands have been pasted correctly, select the Parse option which should display the following dialogue box.

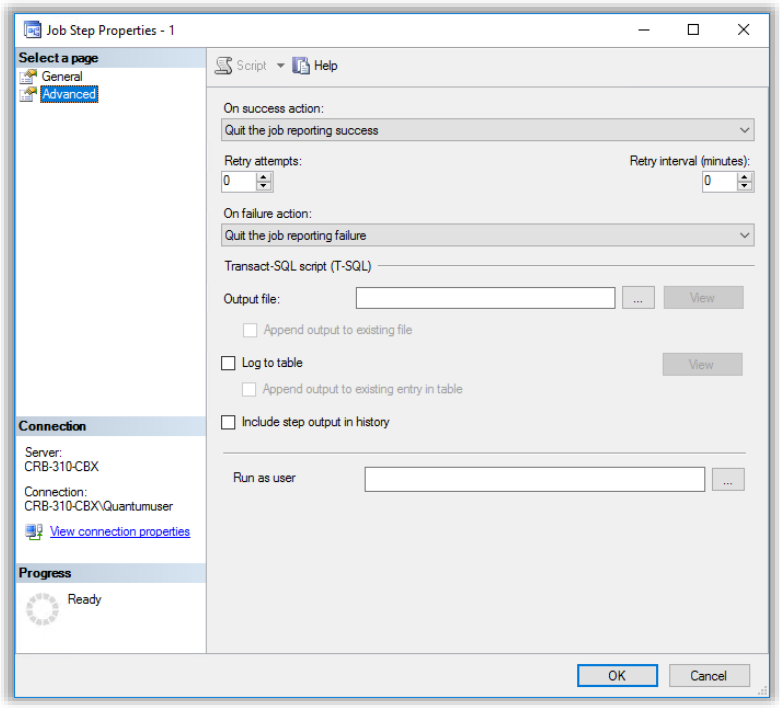


If the dialogue box is not as shown above, then please contact Yokogawa Marex Support at customer.services@ymx.yokogawa.com.

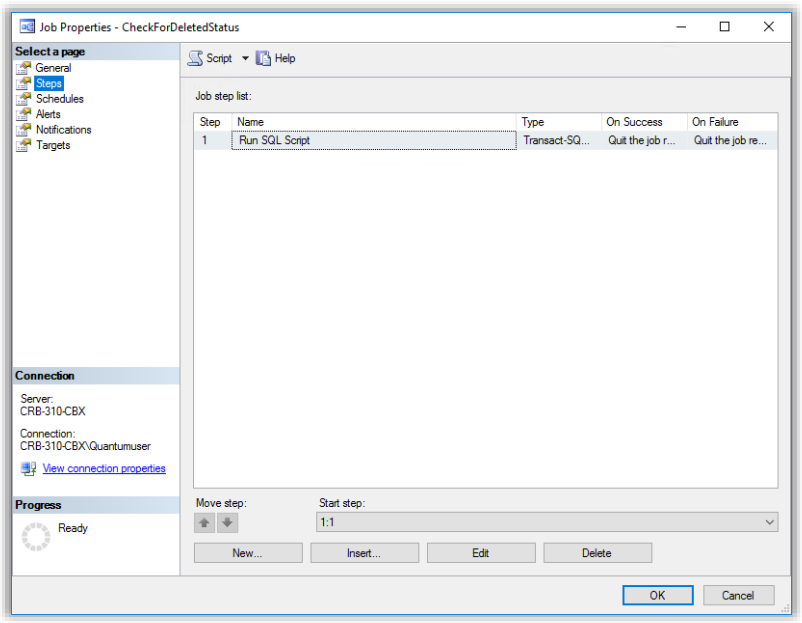
Click **OK** to close the dialogue box.

7) Enter the details and select any options as shown in the screen below.

New Job Step - Advanced Section

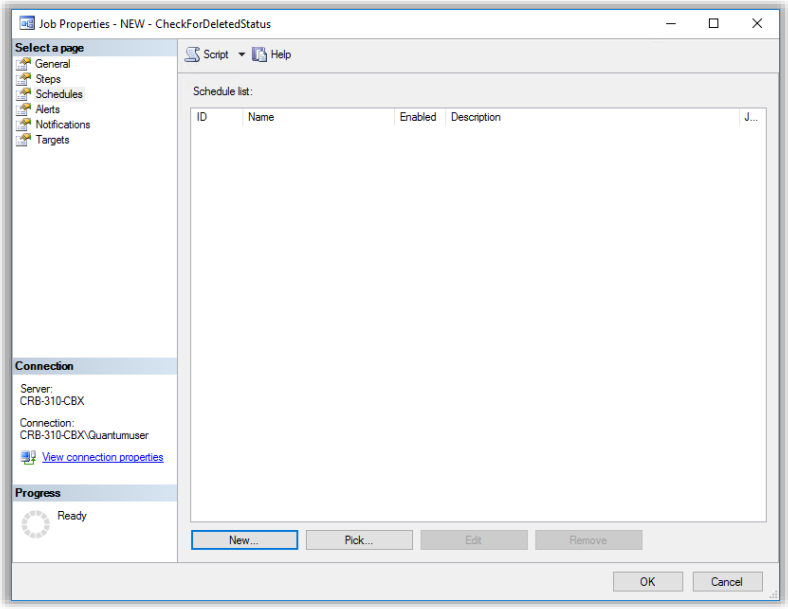


Click **OK** to close the Section and the following screen should be displayed.



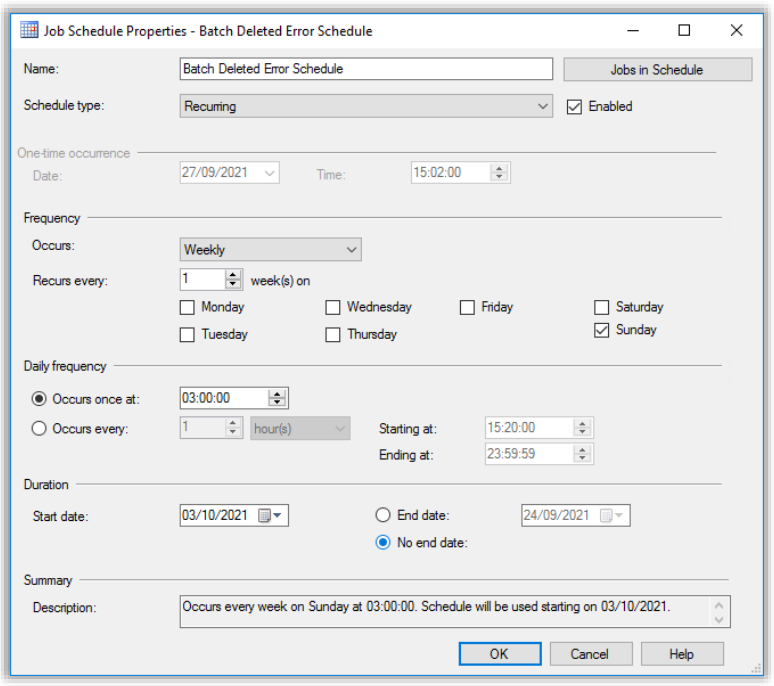
8) Select the **Schedules** Option / **New** Button shown in the screen below.

Schedules Section



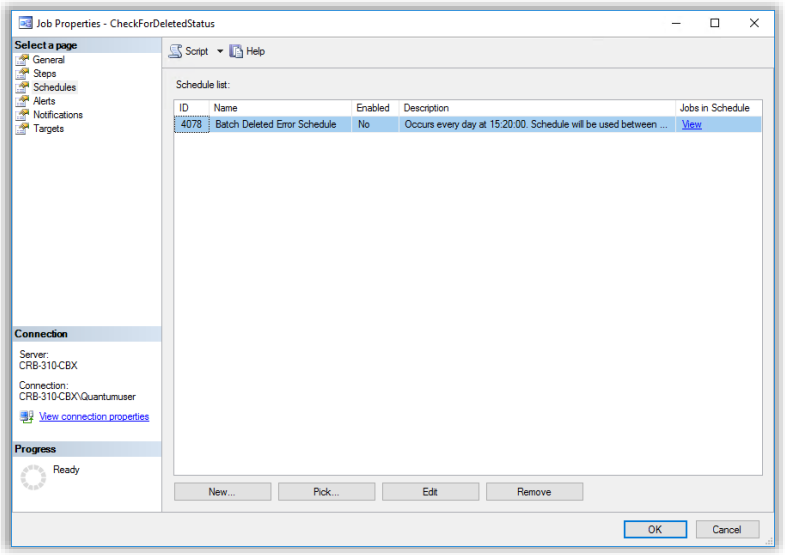
9) Enter the details as shown in the screen below.

Schedules Section

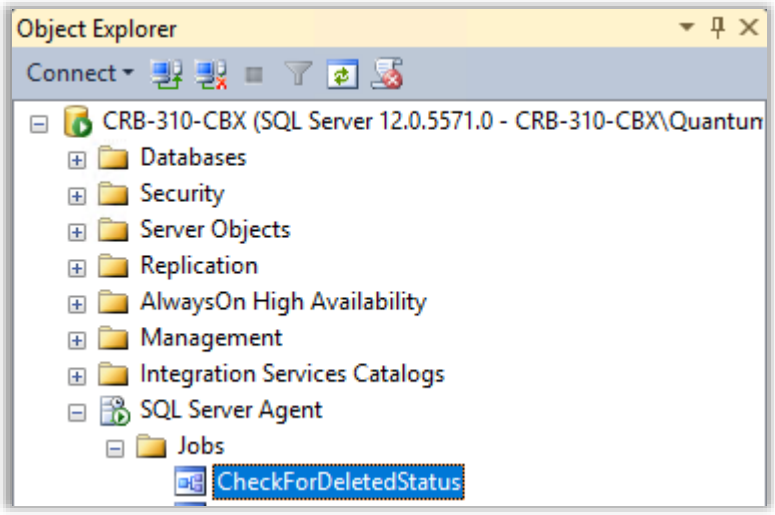


It is envisaged that the script would be run **weekly** on a day and at a time that is conducive with the operation of the Exaquantum Batch system.

Click **OK** to close the Section and the screen shown below should be displayed.



10) Click **OK** to return to the SQL Server Management Studio Main Screen.



The New SQL Server Agent Job created above will now be shown in the list and will be executed in accordance with the schedule that was selected.

4.3 Running the SQL Script from a Windows Batch (BAT) File

The SQL Script ClearDeletedStatusRestartAsRequired.sql and Windows Batch file ClearDeletedStatusRestartAsRequired.bat can be obtained from the Yokogawa Affiliate Portal – Useful Tools and Scripts Section

In this example they have been downloaded into the following directory C:\CRB

References to C:\CRB within this section of the document should be replaced with the directory into which the file has been downloaded.

The Windows Batch (BAT) file is shown below for informational purposes only.

```
@echo off

Echo ========================================
Echo Checking For QBatch Deleted Status Messages
Echo ========================================

sqlcmd -i C:\CRB\ClearDeletedStatusRestartAsRequired.sql

exit
```

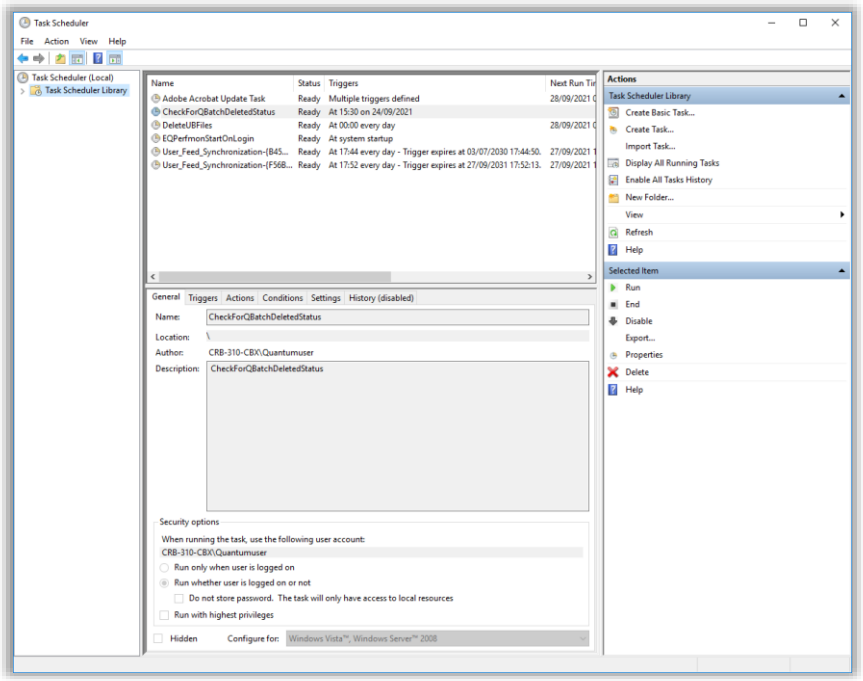
If the files are downloaded into another directory, the **C:\CRB** text above should be updated with the directory into which the file was downloaded.

Also, references to C:\CRB within this section of the document should be replaced with the correct directory.

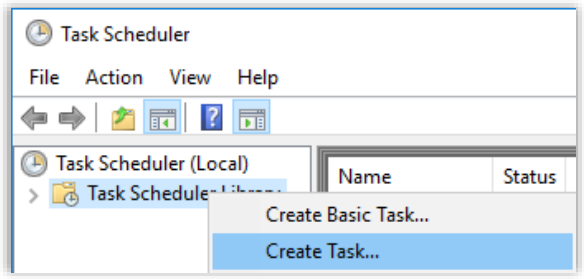
The SQL Script can be run using the Windows Batch (BAT) file with the Windows Task Scheduler by following the steps below.

1) Open the Windows Task Scheduler Application

   Select Task Scheduler Library from the tree and a new screen will be displayed (In the example below a New Task has already been created).

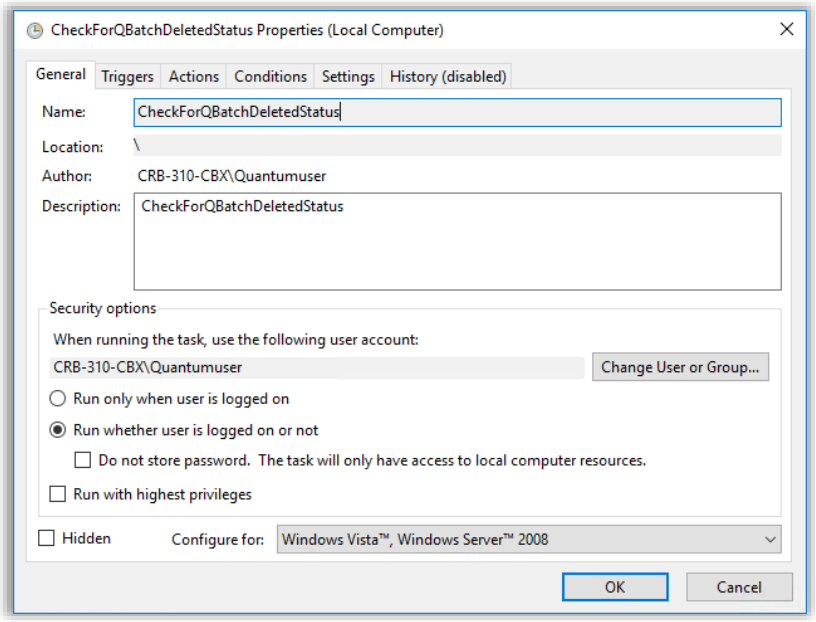


2) Select and Right-Click Task Scheduler Library and select **Create Task.**



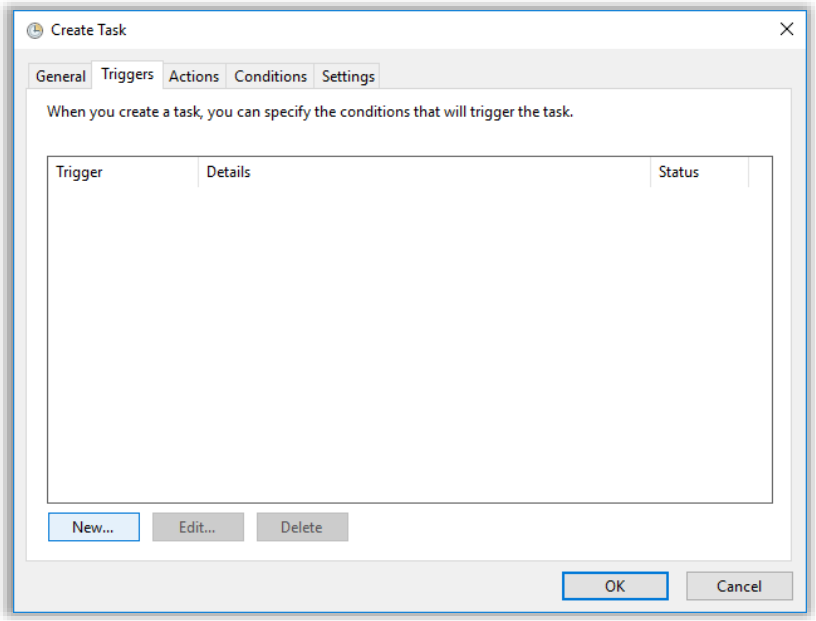
3) Enter the details and select any options as shown in the screen below.

General Tab



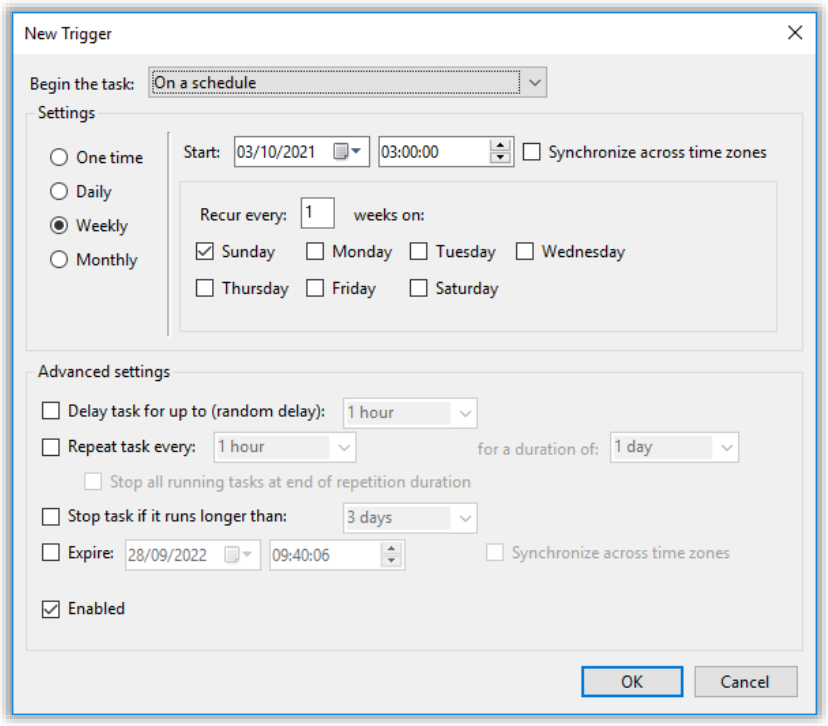
4) Select the Triggers tab and click the **New** button.

Triggers Tab

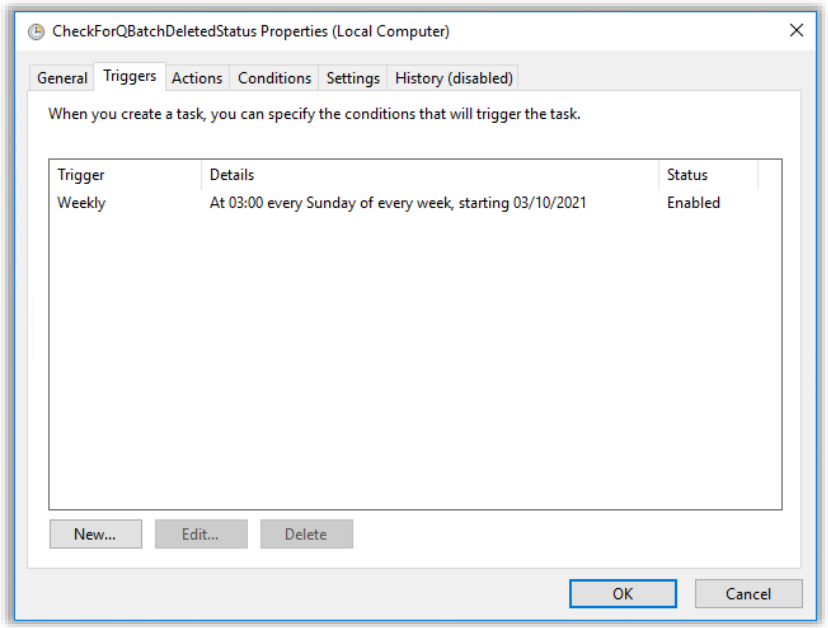


5) Enter the details and select any options as shown in the screen below.

New Trigger



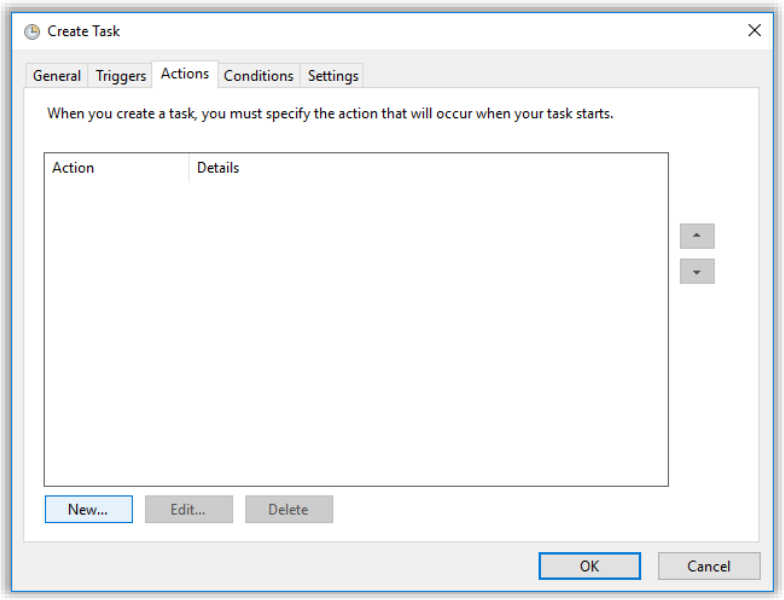
6) Click **OK** to return to the following screen.



It is envisaged that the script would be run **weekly** on a day and at a time that is conducive with the operation of the Exaquantum Batch system.

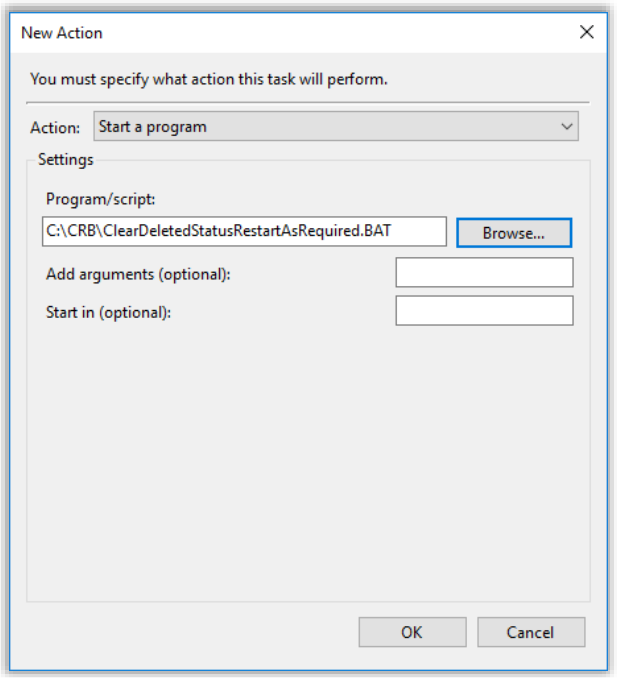
7) Select the Actions tab and click the **New** button.

Actions Tab



8) Enter the details and select any options as shown in the screen below.

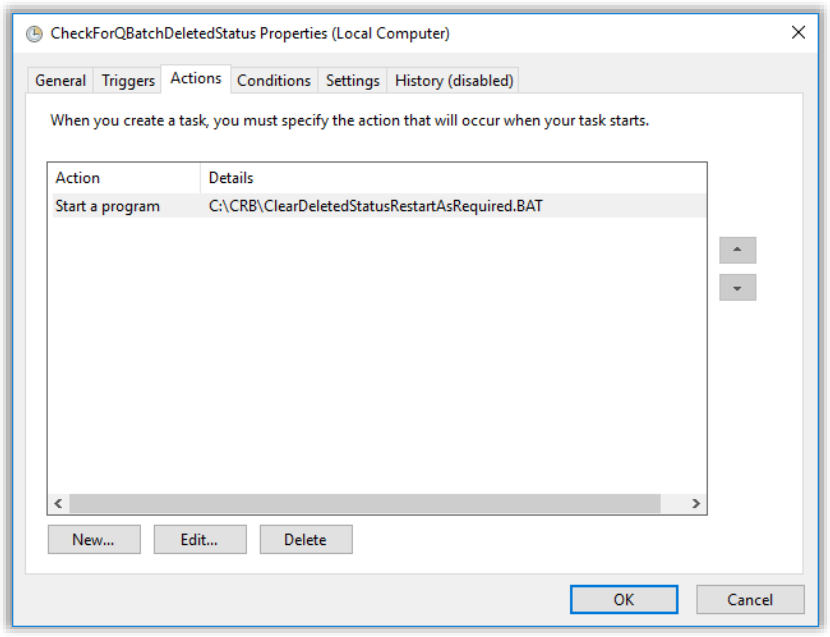
New Trigger



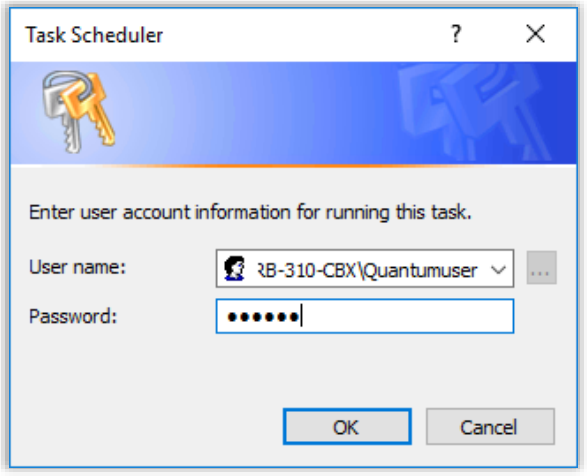
The SQL Script can be selected by the use of the **Browse** Button.

9) Click **OK** to return to the following screen.

Actions Screen



10) Click **OK** to close the screen and then the screen shown below will be displayed.



Enter the Password that is appropriate for the user that will be running the Task.

Please Note – If the Password is changed at any point, then the Actions screen will need to be edited and the New Password entered as described above.

11) Click **OK** to close the screen and return to the Main Task Scheduler Screen which can then also be closed.

Chapter 5 Logging in the Script

Within the SQL Script there are sections that will Log various details regarding the steps that are being undertaken by the Script and these are written to the Windows Event Log.

5.1 Information Logged when an Incorrect Status is present

If any Incorrect Status messages are discovered by the script, then the following details are added to the Windows Event Log.

Information Message
Configuration option 'xp_cmdshell' changed from 0 to 1. Run the RECONFIGURE statement to install. (*This configuration option is required for the running of the script*)

Warning Message
Error: 60001 Severity: 15 State: 1 Unexpected DELETE status removed from batch XX-XXX (*This message may repeat several times, depending upon how many Batches are affected*)

Information Message
Error: 60002 Severity: 10 State: 1 Automatic Batch Service Stop Requested by Delete Check (*This message denotes the Stop of the ABDC Service, to update Exaquantum Batch*)

Information Message
Error: 60003 Severity: 10 State: 1 Automatic Batch Service Start Requested by Delete Check (*This message denotes the Start of the ABDC Service, to update Exaquantum Batch*)

Information Message
Configuration option 'xp_cmdshell' changed from 1 to 0. Run the RECONFIGURE statement to install. (*This configuration option is required for the running of the script*)

5.2 Information Logged when an Incorrect Status is not present

If there are no Incorrect Status messages discovered by the script, then the following details are added to the Windows Event Log.

Information Message
Configuration option 'xp_cmdshell' changed from 0 to 1. Run the RECONFIGURE statement to install. (*This configuration option is required for the running of the script*)

Information Message
Configuration option 'xp_cmdshell' changed from 1 to 0. Run the RECONFIGURE statement to install. (*This configuration option is required for the running of the script*)

Chapter 6 Further Details

If you have any questions or queries about the information contained in this document, then please contact Yokogawa Marex at customer.services@ymx.yokogawa.com

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Trademark Acknowledgements

Highlights

The Highlights section gives details of the changes made since the previous issue of this document.

Summary of Changes

This is Issue 2.0 of the document related to Product Library version 5.0.

Detail of Changes

The changes are as follows:

Chapter/Section/Page	Change