

Creating and maintaining a SQL Server backup (through SQL Server Studio)

This will walk you through setting up a FULL backup solution for ALL databases on a server and setup the cleanup task to delete older backup files.

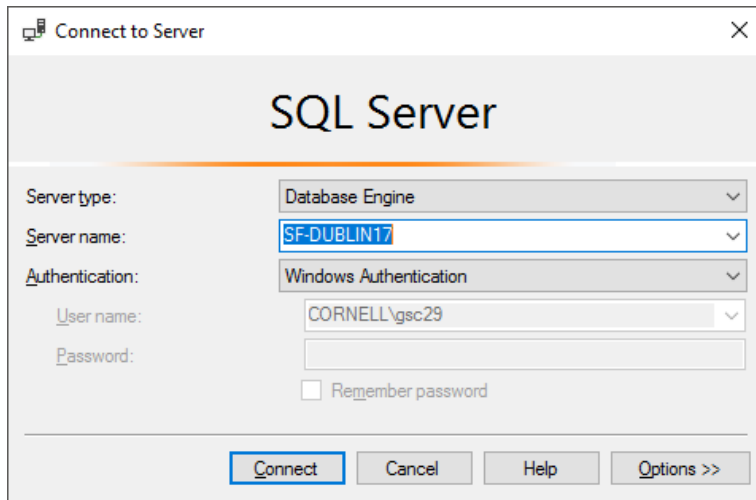
NOTES and Assumptions:

- It is very important to make sure you calculate the size that your backups will consume on the disk and size your disk needs accordingly. The wizard gives you the option to expire backups and remove them.
- This walk through assumes you have access to the SQL Server Windows machine via Windows Authentication.
- This example is for a FULL backup (think LEVEL ZERO in RMAN) ... You can in Step #7 choose differential backups. If you setup a Differential Backup(s) you can then apply PIT recovery via transactions logs assuming all files & logs are present during recovery. But that is a different topic.

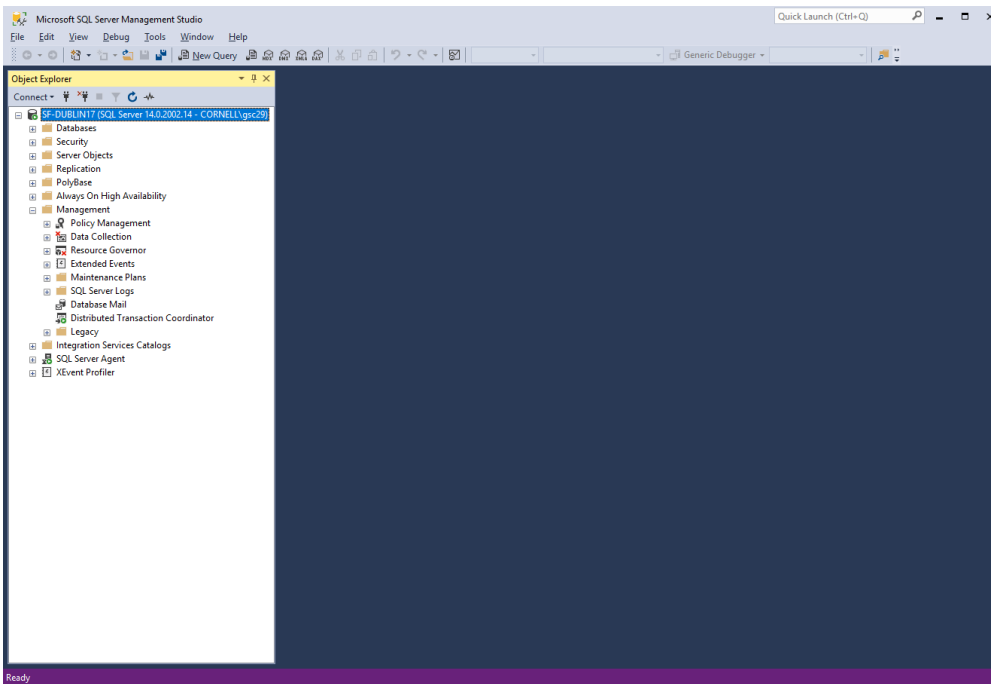
STEPS:

1). Log into box running SQL Server (i.e. SF-DUBLIN17).

2). Start SQL Server Studio, and choose **Connect**.



3). On the left side choose, **Management**.



4. Right click Maintenance Plans, and choose **Maintenance Plan Wizard**.

5. Give the new plan a NAME, Description. Leave Run AS set to default SQL Server Agent service account.

Maintenance Plan Wizard
Select Plan Properties
How do you want to schedule your maintenance tasks?

Name:

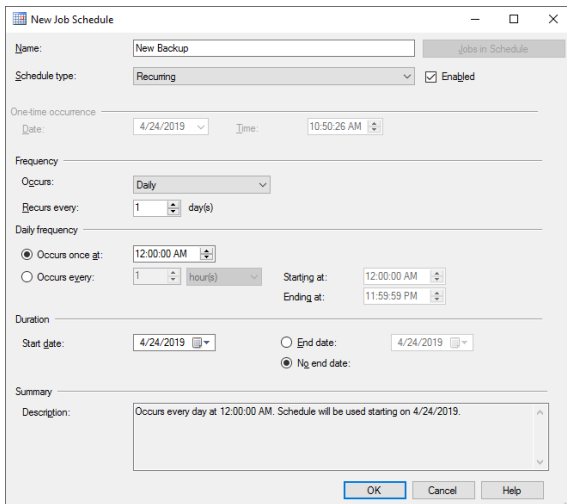
Description:

Run as:

☐ Separate schedules for each task
☒ Single schedule for the entire plan or no schedule

Schedule:

6. Next at the bottom of this screen pick **CHANGE** on Schedule. Use this screen to pick when backup occurs, and for how long. In the example below the backup runs every night at midnight and will do so forever (until changed).



New Job Schedule

Name: New Backup

Schedule type: Recurring ☒ Enabled

One-time occurrence
Date: 4/24/2019 Time: 10:50:26 AM

Frequency
Occurs: Daily
Recurrs every: 1 day(s)

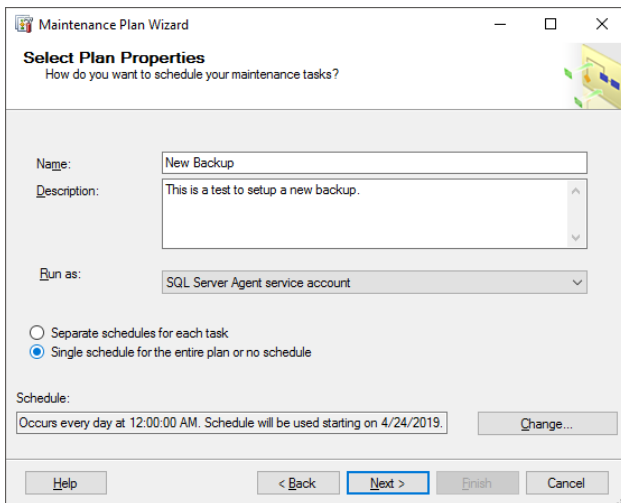
Daily frequency
☒ Occurs once at: 12:00:00 AM
☐ Occurs every: 1 hour(s) Starting at: 12:00:00 AM Ending at: 11:59:59 PM

Duration
 Start date: 4/24/2019 ☐ End date: 4/24/2019
☒ No end date

Summary
 Description: Occurs every day at 12:00:00 AM. Schedule will be used starting on 4/24/2019.

OK Cancel Help

Click **OK** when ready.



Maintenance Plan Wizard

Select Plan Properties
How do you want to schedule your maintenance tasks?

Name: New Backup

Description: This is a test to setup a new backup.

Run as: SQL Server Agent service account

☐ Separate schedules for each task
☒ Single schedule for the entire plan or no schedule

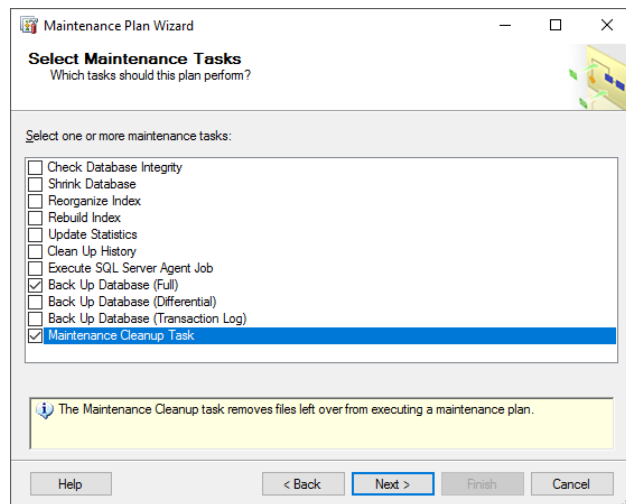
Schedule: Occurs every day at 12:00:00 AM. Schedule will be used starting on 4/24/2019. [Change...](#)

Help < Back Next > Finish Cancel

Notice the schedule is now filled in. Now click **NEXT**.

7. On the next screen choose Back Up Database (Full) and pick Maintenance Cleanup Task.

(NOTE: you can choose multiple task and choose the order in which they are run).



Maintenance Plan Wizard

Select Maintenance Tasks
Which tasks should this plan perform?

Select one or more maintenance tasks:

- ☐ Check Database Integrity
- ☐ Shrink Database
- ☐ Reorganize Index
- ☐ Rebuild Index
- ☐ Update Statistics
- ☐ Clean Up History
- ☐ Execute SQL Server Agent Job
- ☒ Back Up Database (Full)
- ☐ Back Up Database (Differential)
- ☐ Back Up Database (Transaction Log)
- ☒ Maintenance Cleanup Task

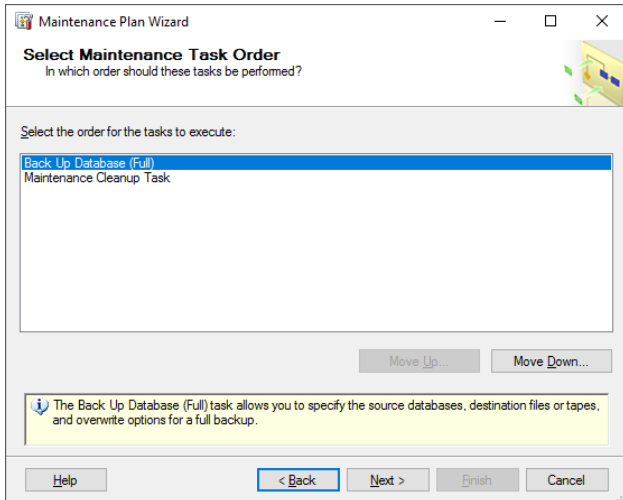
The Maintenance Cleanup task removes files left over from executing a maintenance plan.

Help < Back Next > Finish Cancel

Now click **NEXT**.

8. On the next screen choose the order for tasks to be run. Obviously we want the backup run first.

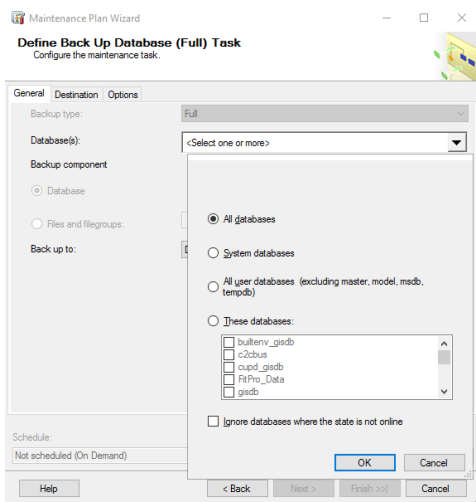
(NOTE: Like I mentioned above you could also choose other tasks like Rebuild Index, Reorganize Index, Shrink Database, etc ...)



Now click **NEXT**.

9. On the next screen we will determine which databases to backup and where to back them up.

Choose Database(s) and pick All Databases then click **OK**.



Now click on the **Destination** tab.

10. Use the ... button to choose where (what disk) to store the backup(s) on. I suggest clicking the create sub-folders for each database. In this example we are backing up everything to the E: drive under E:\Backups and giving each file a .bak extension.

Maintenance Plan Wizard
Define Back Up Database (Full) Task
 Configure the maintenance task.

General | Destination | Options

☐ Back up databases across one or more files:

If backup files exist: Append

☒ Create a backup file for every database
☒ Create a sub-directory for each database
 Folder: E:\Backups

SQL credential: Create...

Azure storage container:

URL prefix: https://<storageaccount>.blob.core.windows.net/

Backup file extension: bak

Schedule:
 Not scheduled (On Demand)

Help < Back Next > Finish >> Cancel

Now click on the **Options** tab.

11. Choose the expiration date of the backup by picking Backup Set Will Expire field. In this example we will keep the backup for 14 days.

(Note you can also choose compression, verifying the backup here. I leave them set at default.)

Maintenance Plan Wizard
Define Back Up Database (Full) Task
 Configure the maintenance task.

General | Destination | Options

Set backup compression: Use the default server setting

☒ Backup set will expire:
☒ After: 14 days
☐ On: 5/ 8/2019

☐ Copy-only backup
☐ Verify backup integrity
☐ Backup encryption

Algorithm: AES 128
 Certificate or Asymmetric key: Certificate or Asymmetric key

☐ For availability databases, ignore replica priority for backup and backup on primary settings

☐ Block size: 65536 bytes
☐ Max transfer size: 65536 bytes

Schedule:
 Not scheduled (On Demand)

Help < Back Next > Finish >> Cancel

Now click **NEXT**.

12. This screen sets up the backup file deletion plan. Make sure you point it (middle of screen) to where you sent your backups (see Step #10), click the Include first-level subfolders box and choose the BAK file extension. This example shows files older than 2 weeks will be deleted.

Maintenance Plan Wizard
Define Maintenance Cleanup Task
 Configure the maintenance task.

Delete files of the following type:
☒ Backup files
☐ Maintenance Plan log reports

File location:
☐ Delete specific file
 File name:

☒ Search folder and delete files based on an extension
 Folder: E:\Backups
 File extension: bak
☒ Include first-level subfolders

File age:
☒ Delete files based on the age of the file at task run time
 Delete files older than the following:
2 Week(s)

Schedule:
 Not scheduled (On Demand)

Help < Back Next > Finish >> Cancel

Now click **NEXT**.

13. Determine where to write the backup report. In this example we will write it to E:\Backups\Backup_Reports

The screenshot shows the 'Select Report Options' step of the Maintenance Plan Wizard. The window title is 'Maintenance Plan Wizard'. The subtitle is 'Select Report Options' with the instruction 'Select options for saving or distributing a report of the maintenance plan actions.' There are two checkboxes: 'Write a report to a text file' (checked) and 'Email report' (unchecked). The 'Folder location:' text box contains 'E:\Backups\Backup_Reports'. Below it is an 'To:' dropdown menu. At the bottom are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

Now click **NEXT**.

14. The last screen gives you a summary of your new plan.

The screenshot shows the 'Complete the Wizard' step of the Maintenance Plan Wizard. The window title is 'Maintenance Plan Wizard'. The subtitle is 'Complete the Wizard' with the instruction 'Verify the choices made in the wizard, and then click Finish.' Below the subtitle is a list of actions to be performed: 'Maintenance Plan Wizard', 'Create Maintenance Plan "New Backup"', 'Define Back Up Database (Full) Task', 'Define Maintenance Cleanup Task', and 'Selected reporting options'. At the bottom are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

Now click **Finish**.

15. The plan will be validated and saved.

The screenshot shows the 'Maintenance Plan Wizard Progress' screen. The window title is 'Maintenance Plan Wizard'. The subtitle is 'Maintenance Plan Wizard Progress' with the instruction 'Click Stop to interrupt the operation.' At the top, there is a green checkmark icon and the word 'Success'. Below this is a summary table:

5	Total	0	Error
5	Success	0	Warning

Below the table is a 'Details:' section with a table showing the progress of each step:

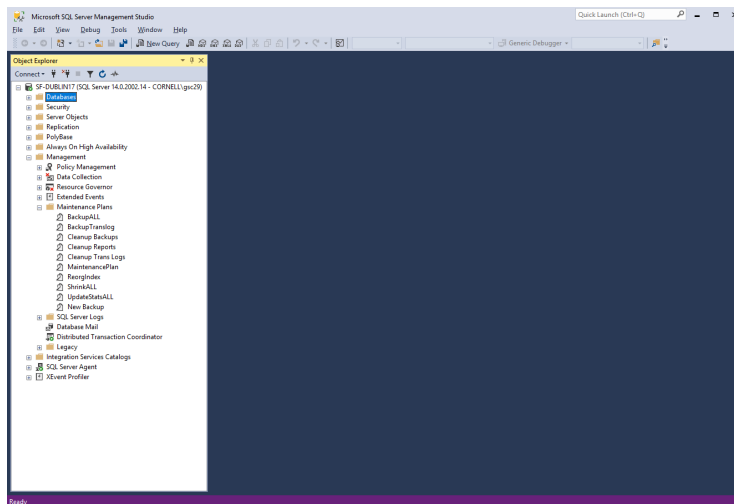
Action	Status	Message
Creating maintenance plan "New Backup"	Success	
Adding tasks to the maintenance plan	Success	
Adding scheduling options	Success	
Adding reporting options	Success	
Saving maintenance plan "New Backup"	Success	

At the bottom are buttons for 'Stop', 'Report', and 'Close'.

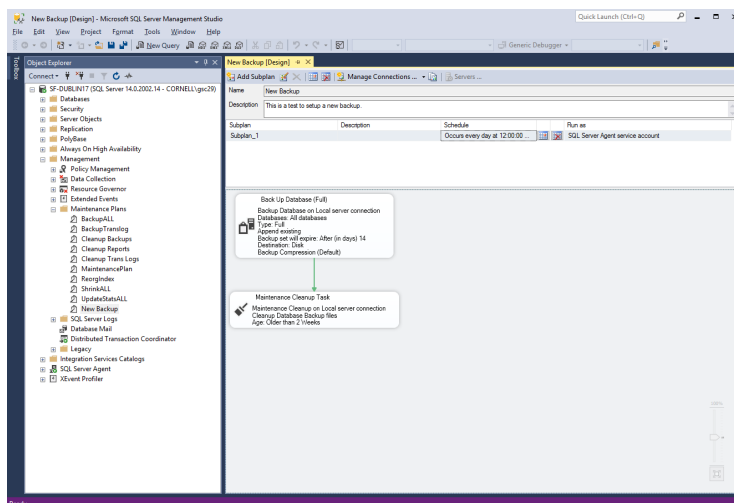
Now click **Close**.

That's it you're done.

Now if you go back to the Maintenance Plan screen you will see your new plan in place!



By Double clicking your new plan you can see the layout.



If you need to make any changes to your plan you can double click the actual part of the plan and it will take you back to the creation task for changing /updating.

If you need to delete the plan simply right click the plan and choose **DELETE**.