

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.

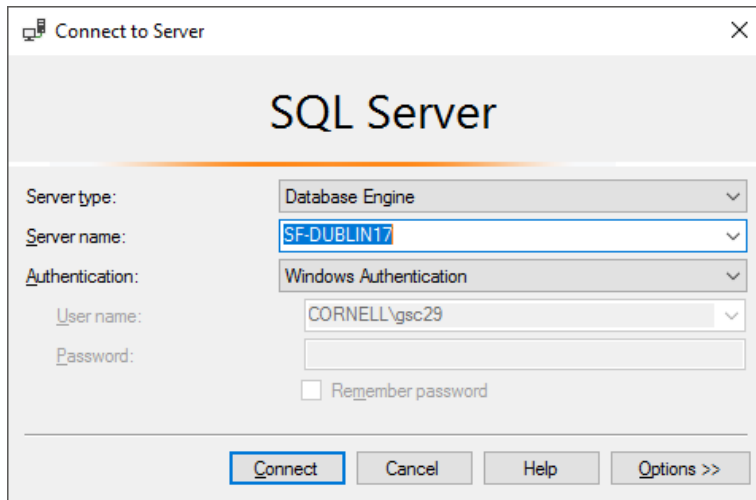
NOTES and Assumptions:

- 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.

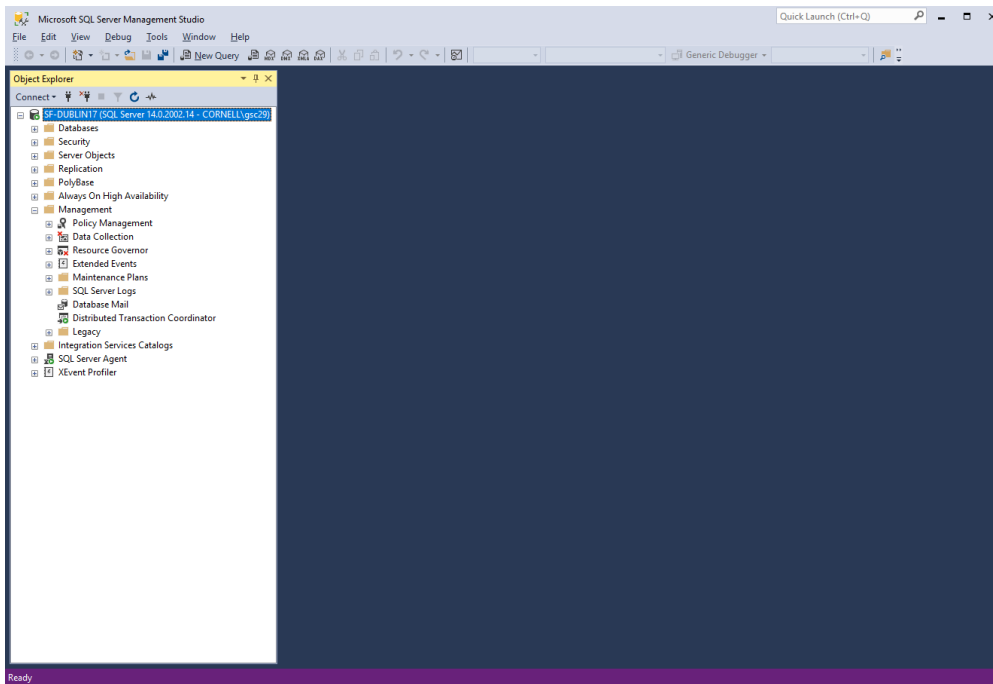
STEPS:

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:

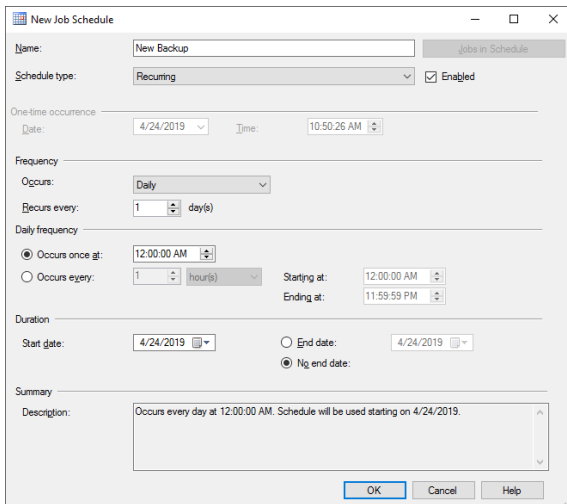
Description:

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: Jobs in Schedule

Schedule type: ☒ Enabled

One-time occurrence
Date: Time:

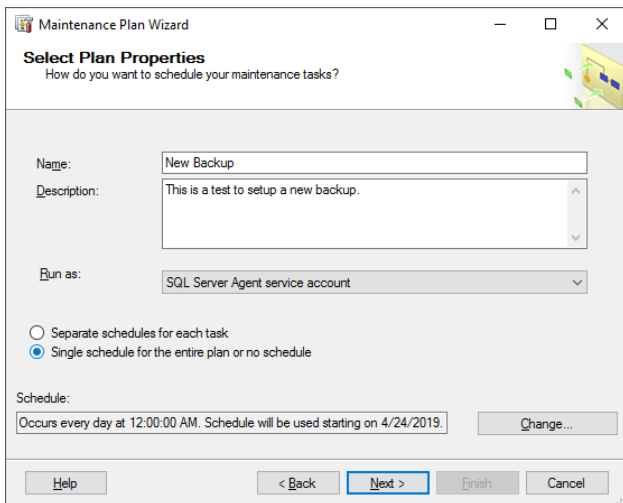
Frequency
Occurs:
Recurrs every: day(s)

Daily frequency
☒ Occurs once at:
☐ Occurs every: hour(s) Starting at: Ending at:

Duration
Start date: ☐ End date:
☒ No end date

Summary
Description:

Click **OK** when ready.



Maintenance Plan Wizard

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

Name:

Description:

Run as:

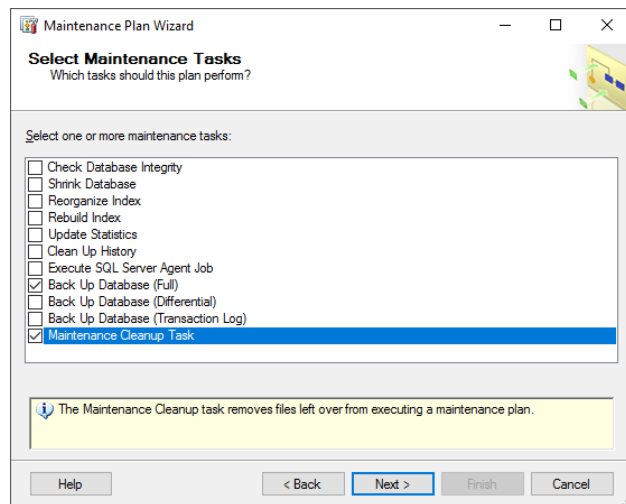
☐ Separate schedules for each task
☒ Single schedule for the entire plan or no schedule

Schedule:

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:

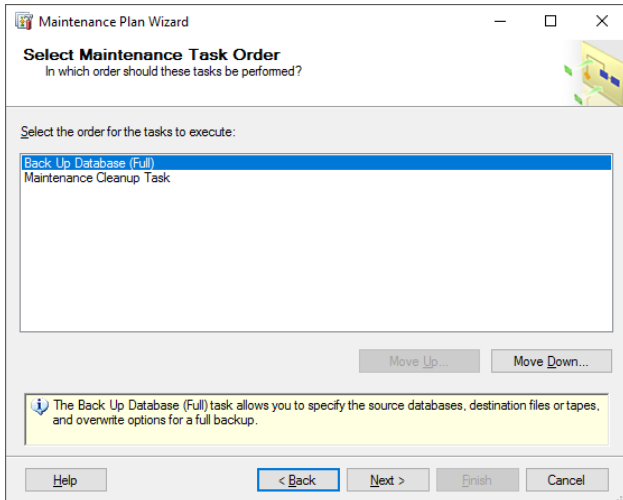
- ☐ Check Database Integrity
- ☐ Shrink Database
- ☐ Reorganize Index
- ☐ Rebuild Index
- ☐ Update Statistics
- ☐ Clean Up History
- ☐ Execute SQL Server Agent Job
- ☒ Back Up Database (Full)
- ☐ Back Up Database (Differential)
- ☐ Back Up Database (Transaction Log)
- ☒ Maintenance Cleanup Task

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

Now click **NEXT**.

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

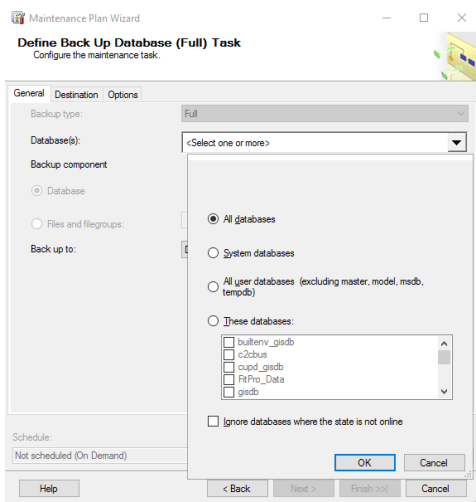
(NOTE: Like I mentioned above you could also choose other tasks like Rebuild Index, Reorganize Index, Shrink Database, etc ...)



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:

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

SQL credential:

Azure storage container:

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

Backup file extension: bak

Schedule: Not scheduled (On Demand)

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 ☐ Perform checksum
☐ Verify backup integrity ☐ Continue on error
☐ Backup encryption

Algorithm: AES 128
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)

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)

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 'Write a report to a text file' checkbox is checked. The 'Folder location' text box contains 'E:\Backups\Backup_Reports'. The 'Email report' checkbox is unchecked. The 'To:' dropdown menu is empty. At the bottom, there 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. It instructs the user to 'Click Finish to perform the following actions:'. A list box contains the following items: '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, there 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. It displays a summary of the progress: 5 Total, 0 Error, 0 Warning, and 5 Success. Below this, a 'Details' section shows a table of actions and their status.

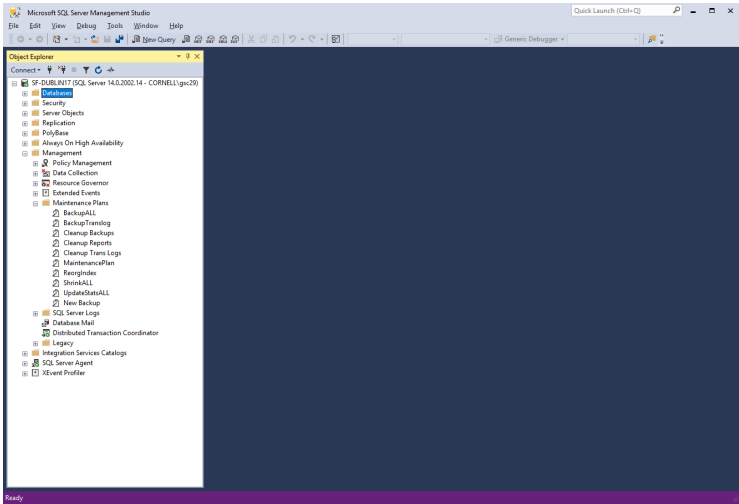
Action	Status	Message
Creating maintenance plan "New Backup"	Success	
Adding tasks to the maintenance plan	Success	
Adding scheduling options	Success	
Adding reporting options	Success	
Saving maintenance plan "New Backup"	Success	

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

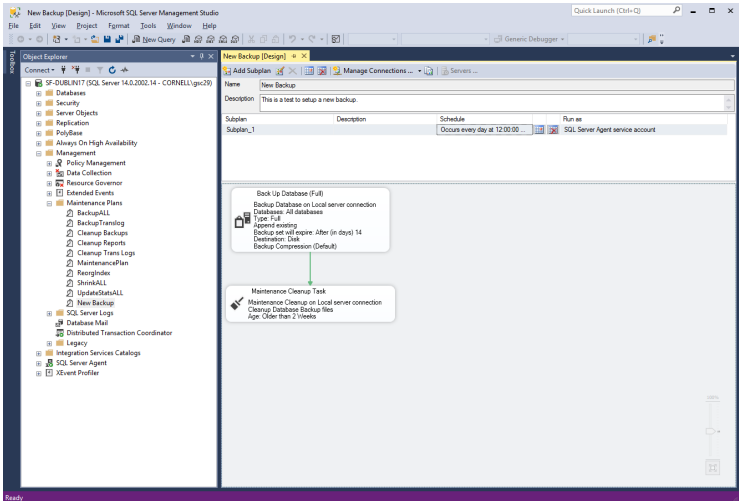
Now click **Close**.

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**.