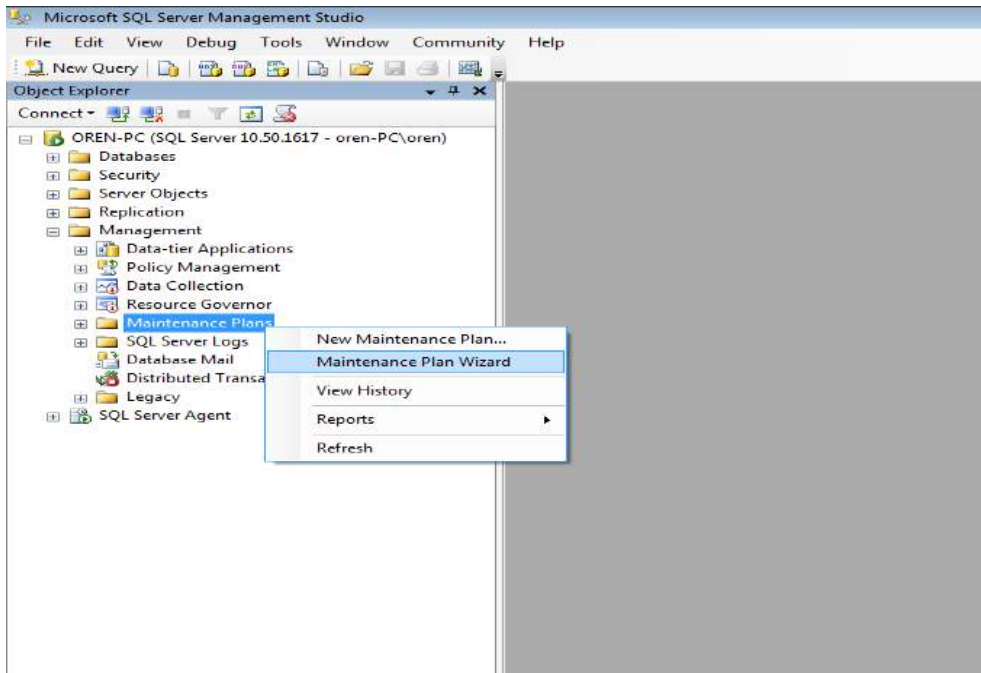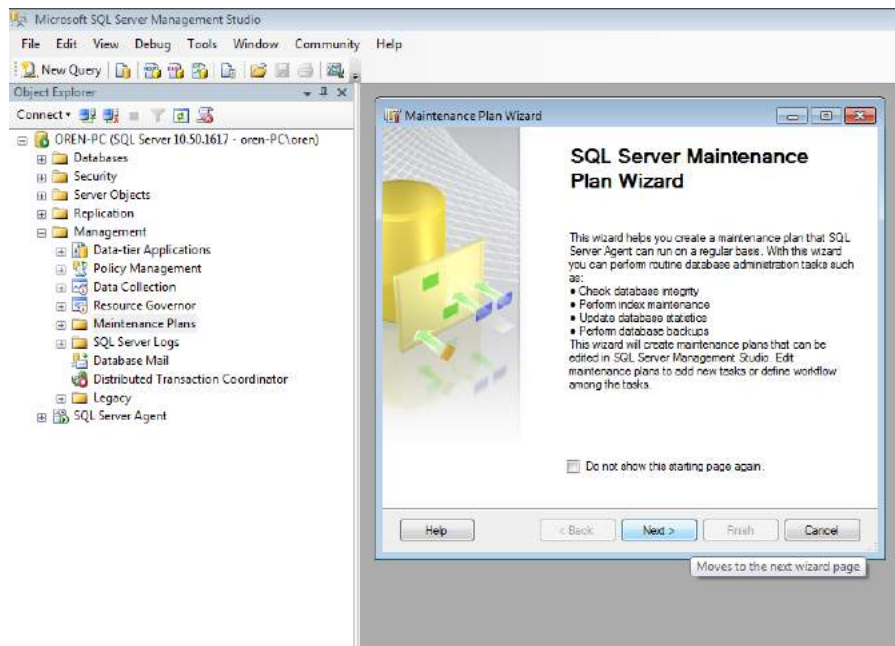# SQL MAINTENANCE PLAN

## For SAP Business One

Create a maintenance plan to do integrity check, back up, shrink and clean old file created by the plan on database.
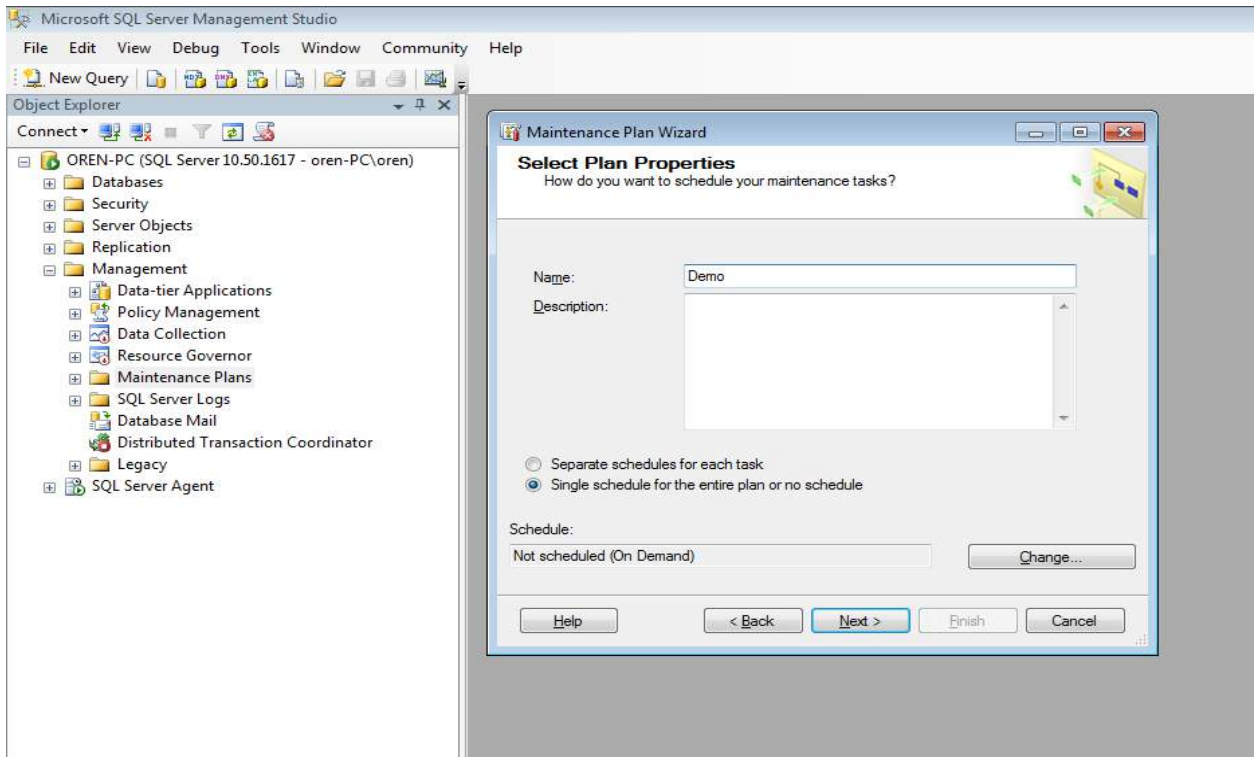
# Maintenance Plan

1. Open Microsoft SQL Management Studio to find Maintenance Plan.
2. Right click on Maintenance Plan to select Maintenance Plan Wizard.
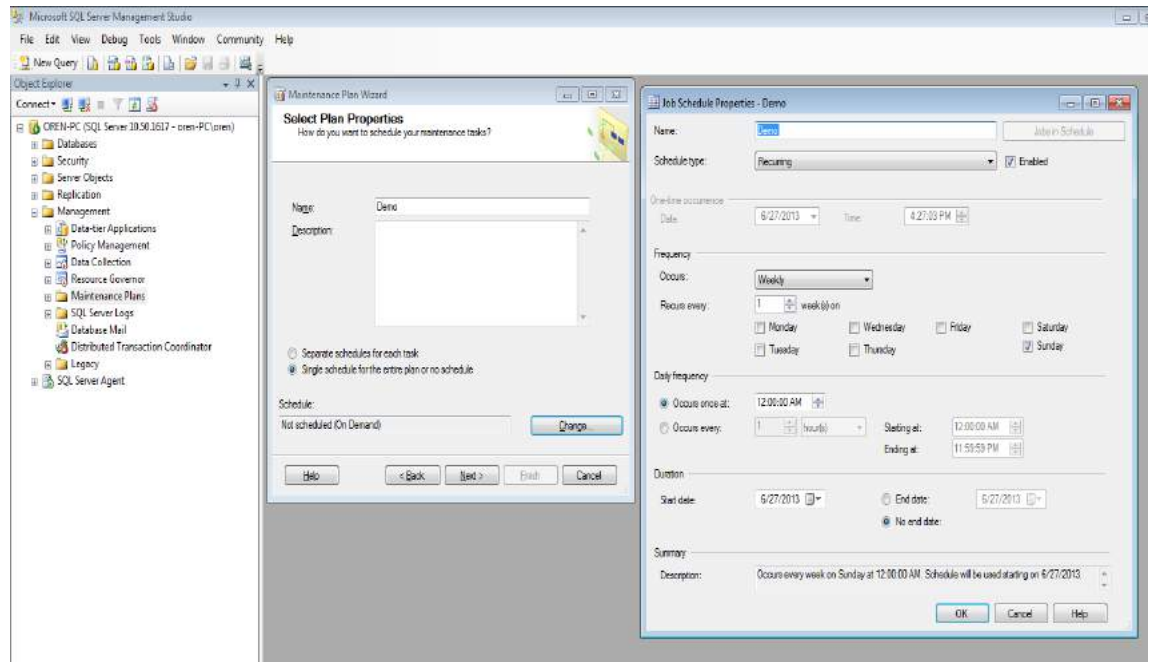


3. Click Next as shown below

4. Select Plan Properties page



4.1. On the Select Plan Properties page Enter:

- Name - Name of the maintenance plan you are creating.
- Description - describe your maintenance plan (optional but recommended).
- Select either one of the below to specify the recurring schedule of the maintenance plan. "Separate schedules for each task" (or) "Single schedule for the entire plan or no schedule". In case "Single schedule for the entire plan or no schedule" was chosen click on "Change" button under Schedule.
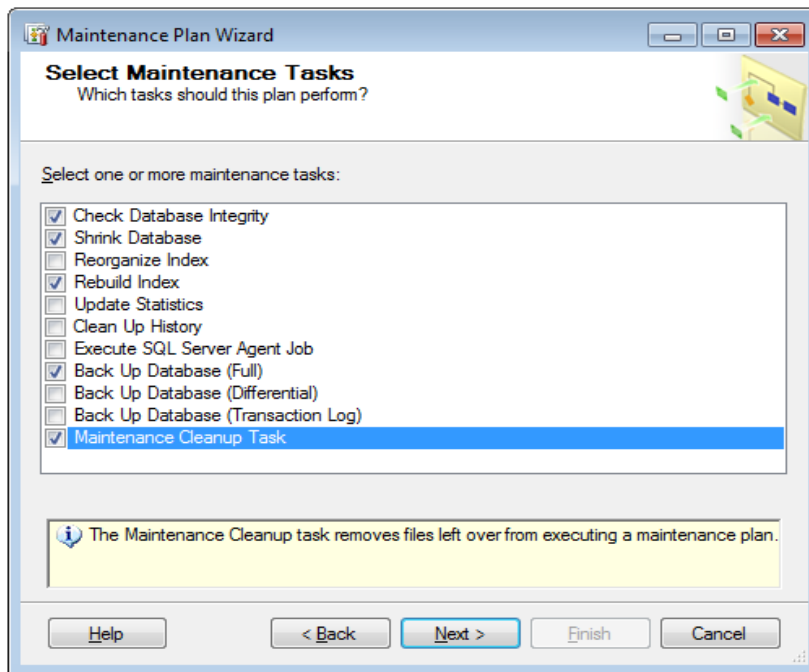
4.2. In the New Job Schedule dialog box enter

- Name - The job schedule's name.
- Schedule type list - select the type of schedule:
  - Start automatically when SQL Server Agent starts
  - Start whenever the CPUs become idle
  - Recurring. This is the default selection.
  - One time
- Select or clear the Enabled check box to enable or disable the schedule.
- If Recurring is chosen as the Schedule type:
  - Frequency – Select the frequency of occurrence:
    - If Daily- Select how often the job schedule repeats in days.
    - If Weekly, enter days of the week on which the job schedule needs to run.
    - If Monthly, select either Day or specific day of the week.
    - If the Day is selected, enter the date of the month and how often the job schedule repeats in months
    - If the specific day of the week is selected within the month that you want the job schedule to run and how often the job schedule repeats in months.
  - Under Daily frequency, specify how often the job schedule repeats on the day the job schedule runs:
    - If you select Occurs once at, enter the specific time of day when the job schedule should run in the Occurs once at box. Enter the hour, minute, and second of the day, as well as AM or PM.
    - If you select Occurs every, specify how often the job schedule runs during the day chosen under Frequency. For example, if you want the job schedule to repeat every 2 hours during the day that the job

schedule is run, select Occurs every, enter "2" in the first box, and then select hour(s) from the list. From this list you can also select minute(s) and second(s). Please note that the largest number allowed in the first box is "100".
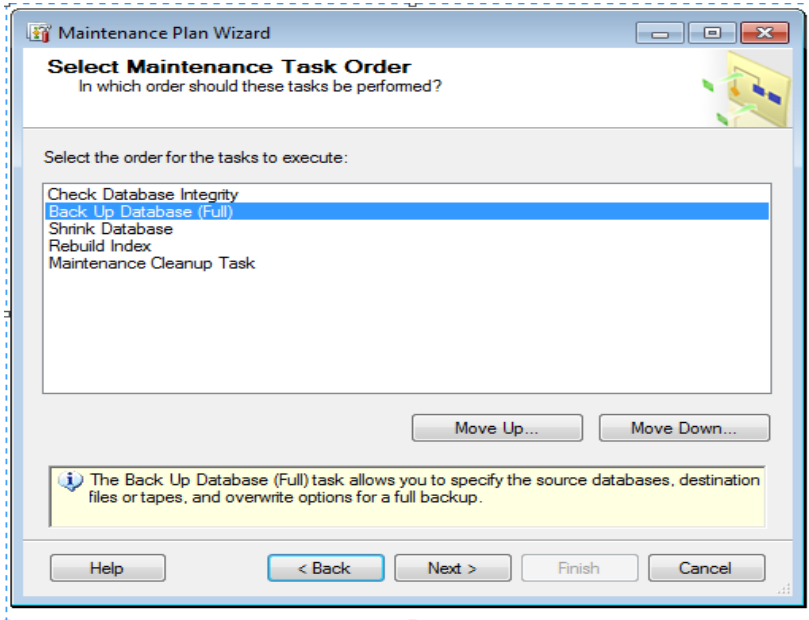
- In the Starting at box, enter the time that the job schedule should start running. In the Ending at box, enter the time that the job schedule should stop repeating. Enter the hour, minute, and second of the day, as well as AM or PM.
   - Under Duration, enter the start date and End date or No end date to indicate when the job schedule should stop running.
- If One Time, in the Date box, enter the date that the job schedule will be run. In the Time box, enter the time that the job schedule will be run
- Under Summary, in Description, verify that all job schedule settings are correct.
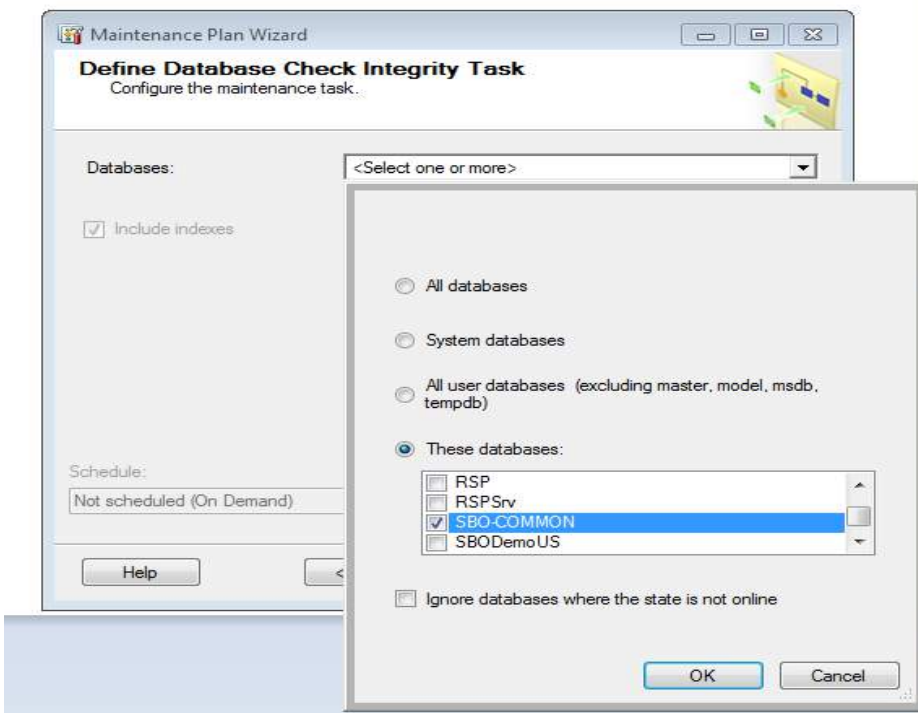- Click OK.

5. Select Maintenance Tasks



Choose the tasks that the plan needs to perform and Click Next. If Separate schedules for each task on the Select Plan Properties page above are selected, the order of the maintenance tasks cannot be changed.
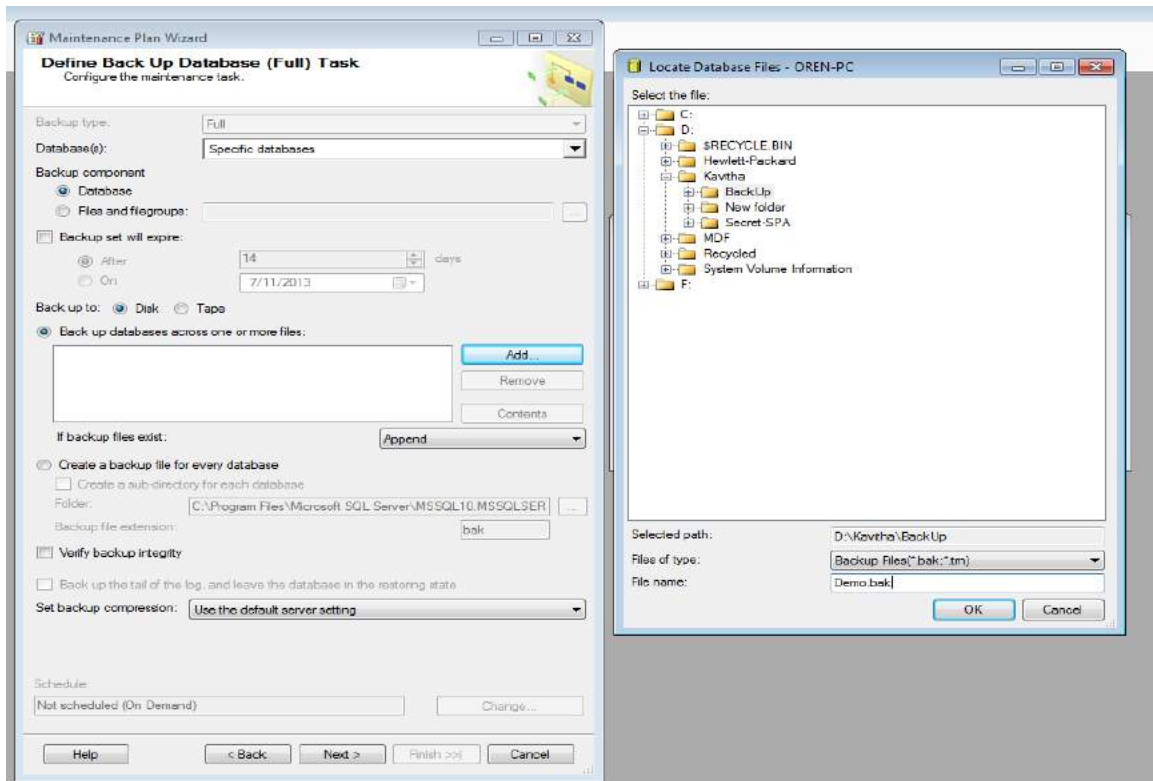
6. Select Maintenance Task Order



Rearrange the order in which the task needs to be performed by selecting the task and clicking the "Move Up" or "Move Down" buttons. Then click "Next".
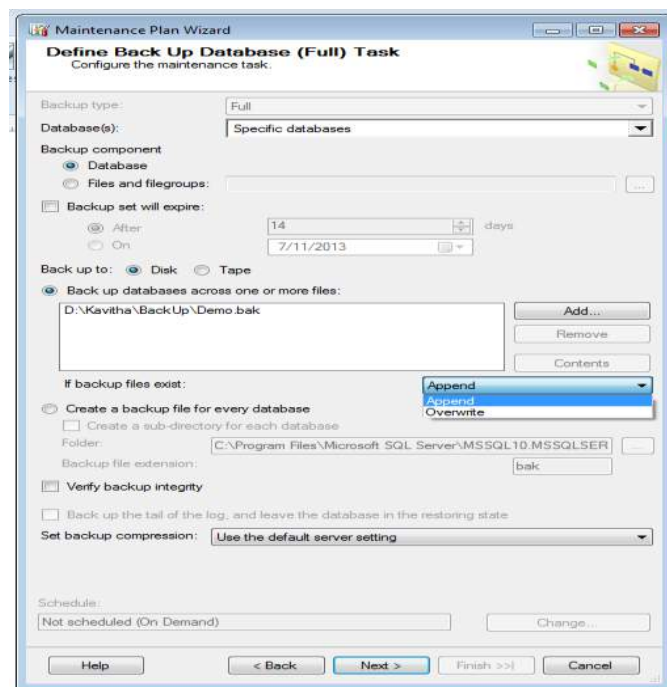
7. Integrity Check Task

- Define Database Check Integrity Task: Under Database, select the databases for which the Integrity check needs to be performed. Click Ok and when completed click Next.
- The options available are as below.
  o Under Databases to specify the databases affected by the task are.
  o All databases: The task runs against all Microsoft SQL Server databases except tempdb.
  o System databases: The task runs against SQL Server system databases except tempdb and user-created databases.
  o All user databases (excluding master, model, msdb, tempdb): The task runs against all user-created databases. No maintenance tasks are run against the SQL Server system databases.
  o These databases: The task runs against only those databases that are selected. At least one database in the list must be selected if this option is chosen.
  o Include indexes check box: Checks the integrity of all the index pages and the table data pages.
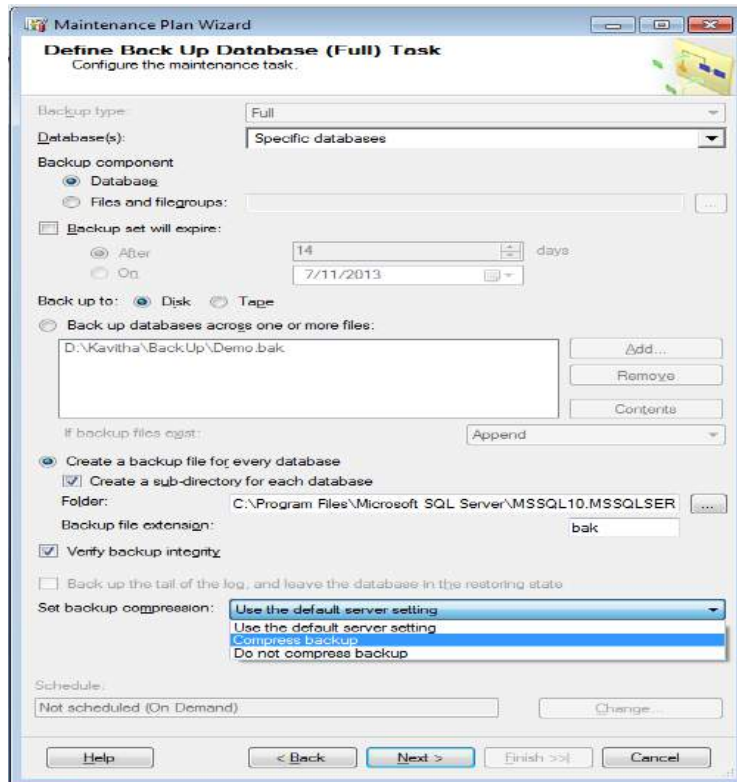
8. Back Up Database



Select the database or databases on which to run a full backup. When finished, click Next.

- The following options are available on this page.
  - Backup type list: Displays the type of backup to be performed. This is read-only.
  - Databases list: Specifies the databases affected by this task.
  - Backup component: Select Database to back up the entire database. Select File and filegroups to back up only a portion of the database. If selected, provide the file or filegroup name. When multiple databases are selected in the Databases box, only specify Databases for the Backup components. To perform file or filegroup backups, create a task for each database. These options are only available if a single database is chosen from the Databases list above.
  - Backup set will expire check box: Specifies when the backup set for this backup can be overwritten. Select After and enter a number of days to expiration, or select on and enter a date of expiration.
  - Back up to: Specifies the medium on which to back up the database. Select either Disk or Tape. Only tape devices attached to the computer containing the database are available.
  - Back up database(s) across one or more files: Click Add to open the Select Backup Destination dialog box. Click Remove to remove a file from the box. Click Contents to read the file header and display the current backup contents of the file. Select Backup Destination dialog box. Select the file, tape drive, or backup device for the backup destination.
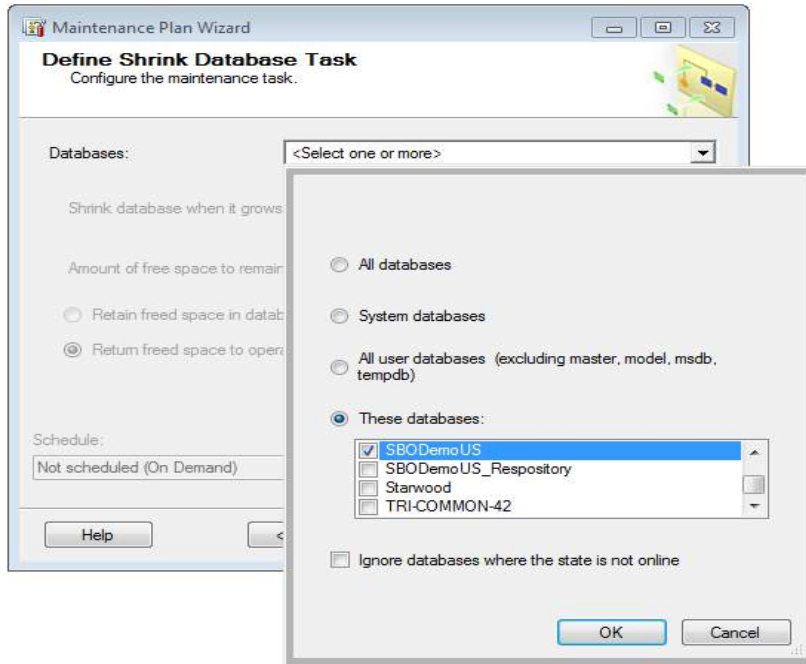


  - If backup files exist list: Specify how to handle existing backups. Select Append to add the new backups after any existing backups in the file or on the tape. Select Overwrite to remove the old content of a file or tape, and replace it with this new backup.

- o Create a backup file for every database: Create a backup file in the location specified in the folder box. One file is created for each database selected.
- o Create a sub-directory for each database check box: Create a sub-directory under the specified disk directory that contains the database backup for each database being backed up as part of the maintenance plan.
- o Folder box: Specify the folder to contain the automatically created database files.
- o Backup file extension box: Specify the extension to use for the backup files. The default is .bak.
- o Verify backup integrity check box: Verify that the backup set is complete and that all volumes are readable.
- o Set backup compression: Select "Use the default server setting", "Compress backup" (or) "Do not compress backup".
- o Define Backup Database (Differential): Select the database or databases on which to run a partial backup. When finished, click Next.
- o Define Backup Database (Transaction Log): Select the database or databases on which to run a backup for a transaction log.
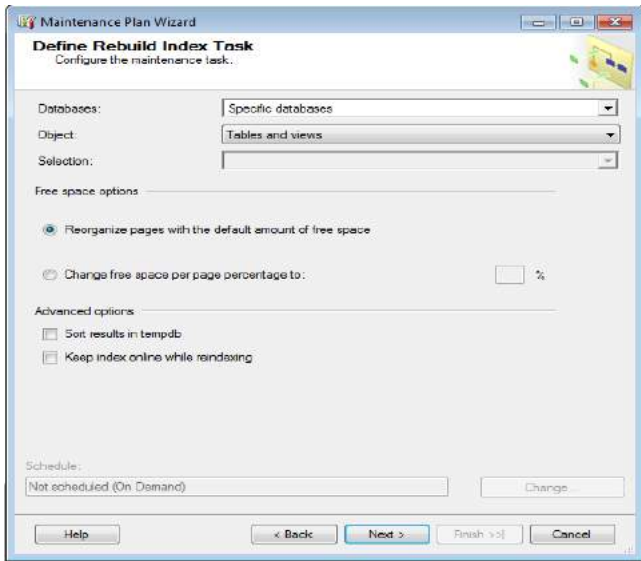
9. Database Shrink Tasks



This task attempts to reduce the size of the selected databases. When complete, click Next.

- Databases: Specify the databases affected by this task.

- Shrink database when it grows beyond box: Specify the size in megabytes that causes the task to execute.
- Amount of free space to remain after shrink box: Stop shrinking when free space in database files reaches this size (as a percentage).
- Retain freed space in database files: The database is condensed to contiguous pages but the pages are not deallocated, and the database files do not shrink. Use this option if you expect the database to expand again, and you do not want to reallocate space. With this option, the database files do not shrink as much as possible.
- Return freed space to operating system: The database is condensed to contiguous pages and the pages are released back to the operating system for use by other programs. This database files shrink as much as possible. This is the default option.
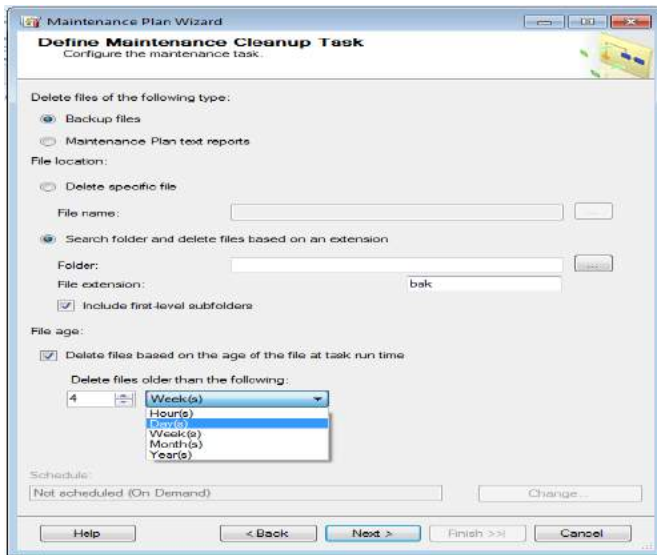
10. Reorganize Index Task



This task helps to select the server or servers where index pages need to be moved into a more efficient search order. When complete, click Next.
The options available are:

- Databases list: Specify the databases affected by this task.
- Object list: Limit the Selection list to display tables, views, or both. This list is only available if a single database is chosen from the Databases list above.
- Selection list: Specify the tables or indexes affected by this task. Not available when Tables and Views is selected in the Object box.
- Free space options area: Presents options for applying fill factor to indexes and tables.
- Default free space per page: Reorganizes the pages with the default amount of free space. This will drop the indexes on the tables in the database and re-create them with the fill factor that was specified when the indexes were created. This is the default option.
- Change free space per page to box: Drop the indexes on the tables in the database and re-create them with a new, automatically calculated fill factor, thereby reserving the specified amount of free space on the index pages. The higher the percentage, the more free space is reserved on the index pages, and the larger the index grows. Valid values are from 0 through 100.
- Advanced options area:  Presents additional options for sorting indexes and reindexing.
- Sort results in tempdb check box:  Determines where the intermediate sort results, generated during index creation, are temporarily stored. If a sort operation is not required, or if the sort can be performed in memory, the SORT_IN_TEMPDB option is ignored.
-

- Keep index online while reindexing check box: Uses the ONLINE option which allows users to access the underlying table or clustered index data and any associated non clustered indexes during index operations. Selecting this option activates additional options for rebuilding indexes that do not allow for online rebuilds: Do not rebuild indexes and Rebuild indexes offline.

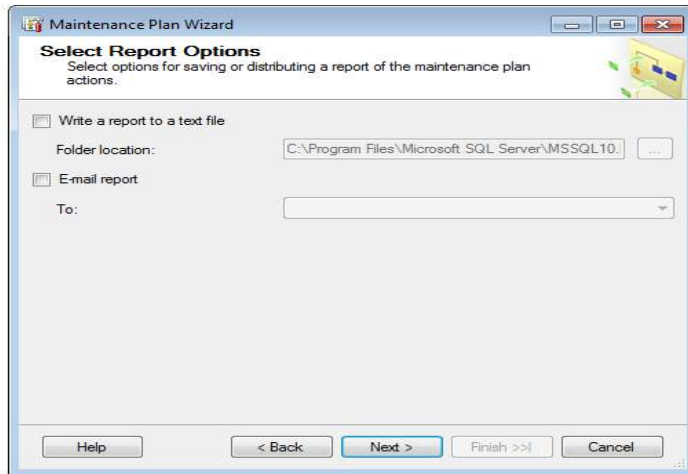11. Define Maintenance Cleanup Task



Used to specify the types of files to delete as part of the maintenance plan, including text reports created by maintenance plans and database backup files. When finished, click Next. The options available are

- Delete files of the following type: Specify the type of files to be deleted.
- Backup files: Delete database backup files.
- Maintenance Plan text reports: Delete text reports of previously run maintenance plans.
- File location: Specify path to files to be deleted.
- Delete specific file: Delete the specific file provided in the File name text box.
- Search folder and delete files based on an extension: Delete all files with the specified extension in the specified folder. Use this to delete multiple files at once, such as all backup files in the Tuesday folder with the .bak extension.
- Folder box: Path and name of the folder containing the files to be deleted.
- File extension box: Provide the file extension of the files to be deleted.
- Include first-level subfolders check box: Delete files with the extension specified for File extension from first-level subfolders under the folder specified in Folder.

- Delete files based on the age of the file at task run time check box: Specify the minimum age of the files that you want to delete by providing a number, and unit of time in the Delete files older than the following box.
- Delete files older than the following: Specify the minimum age of the files that you want to delete by providing a number, and unit of time (Hour, Day, Week, Month, or Year). Files older than the time frame specified will be deleted.
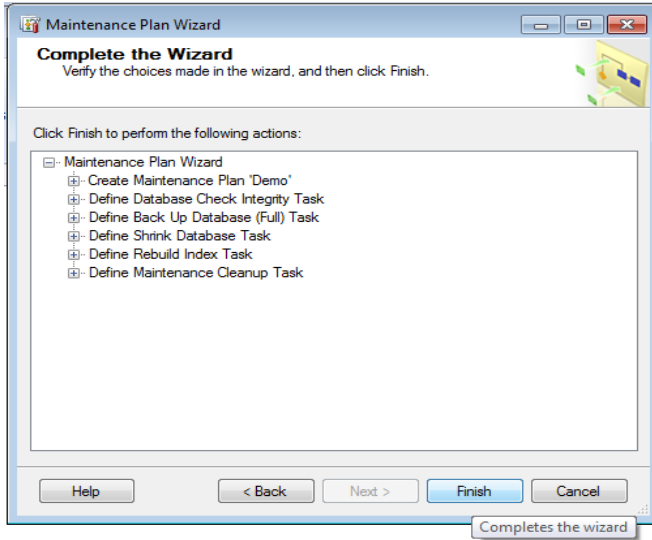
12. Select Report Options



Used to select options for saving or distributing a report of the maintenance plan actions. When finished, click Next. The options available are
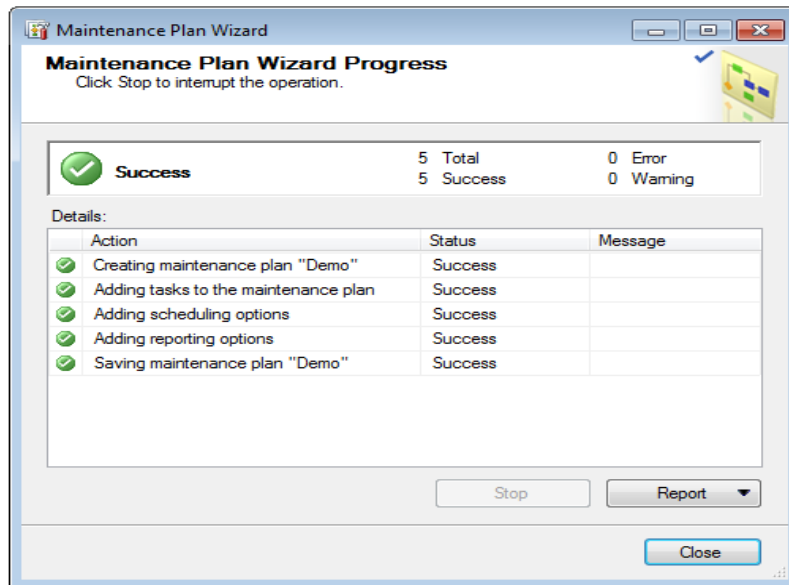
- Write a report to a text file check box: Save the report in a file.
- Folder location box: Specify the location of the file that will contain the report.
- E-mail report check box: Send an e-mail when a task fails. To use this task you must have Database Mail enabled and correctly configured with MSDB as a Mail Host Database, and have a Microsoft SQL Server Agent operator with a valid e-mail address.
- Agent operator: Specify the recipient of the e-mail.
- Mail profile: Specify the profile that defines the sender of the e-mail.

13. Complete the Wizard



On the Complete the Wizard page, verify the choices made on the previous pages, and click Finish.

14. Maintenance Wizard Progress:



Depending on the options selected in the wizard, the progress page might contain one or more actions. The top box displays the overall status of the wizard and the number of status, error, and warning messages that the wizard has received.

The options available are:

- Details: Provides the action, status, and any messages that are returned from action taken by the wizard.
- Action: Specifies the type and name of each action.
- Status: Indicates whether the wizard action as a whole returned the value of Success or Failure.
- Message: Provides any error or warning messages that are returned from the process.
  - Report: Creates a report that contains the results of the Create Partition Wizard. The options are View Report, Save Report to File, Copy Report to Clipboard, and Send Report as Email.View Report - Opens the View Report dialog box, which contains a text report of the progress of the Create Partition Wizard.
  - Save Report to File – Opens the Save Report As dialog box.
  - Copy Report to Clipboard - Copies the results of the wizard's progress report to the Clipboard.
  - Send Report as Email - Copies the results of the wizard's progress report into an email message.

*Reference:*
1. *http://msdn.microsoft.com/en-us/library/ms191002.aspx*