

## Enterprise PDM SQL Maintenance Plan

### Reorganizing and Rebuilding Database Indexes

#### Purpose

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The purpose of this document is to provide instructions as to how to set up a SQL Maintenance Plan to maintain and/or improve general EPDM vault performance by scheduling a regular reorganization, and rebuilding of EPDM Database Indexes. This procedure is based on SolidWorks Knowledge Base Solution ID S-042552 and is recommended for all SolidWorks Enterprise PDM customers.

#### Background

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Many tables in the file vault database contain indexes – to ensure data is found efficiently when lookups are done by various database operations. SQL server automatically maintains these indexes whenever insert, update, or delete operations are made to the underlying data. Over time as you perform a lot of file operations in the vault - for example after an upgrade where a lot of records may have been modified, or performed a migration where many new records were added - the various database table indexes becomes scattered (fragmented - similar to how a hard drive can become fragmented). You can update and refresh the indexes by running a maintenance plan to rebuild / reorganize the indexes. If the indexes are very fragmented, this operation may improve general performance with searching, browsing etc. in the vault.

#### Notes

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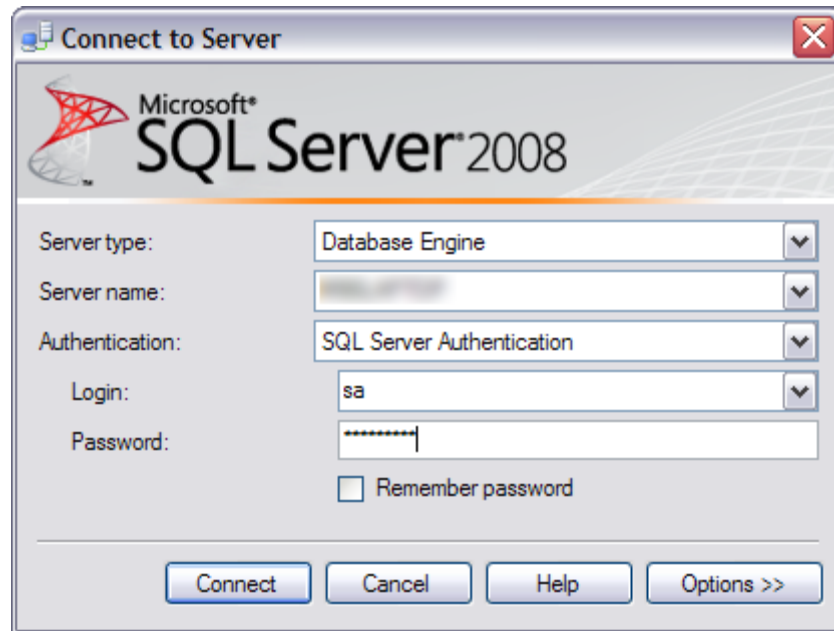
The following should be taken into account when implementing a SQL Server Maintenance Plan

1. SQL Server Integration Services is a required Feature on the SQL Server to run Maintenance Plans.
2. ALWAYS ensure that a proper backup is in place before making any changes to the SQL database.
3. NEVER manually create your own Index, or otherwise directly edit the Database.
4. Running the Plan once a week should help maintain a Healthy vault.
5. It is possible to run the Plan while the vault is in use, however, overall performance may be affected while the plan in running. It is recommended to schedule this activity during off-hours.

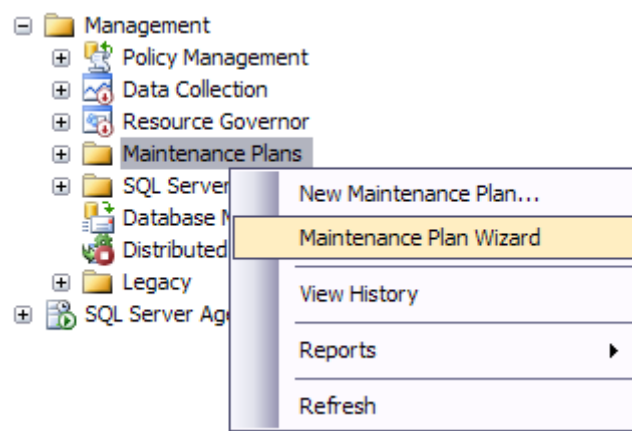
## How to Rebuild and Reorganize Database Indexes

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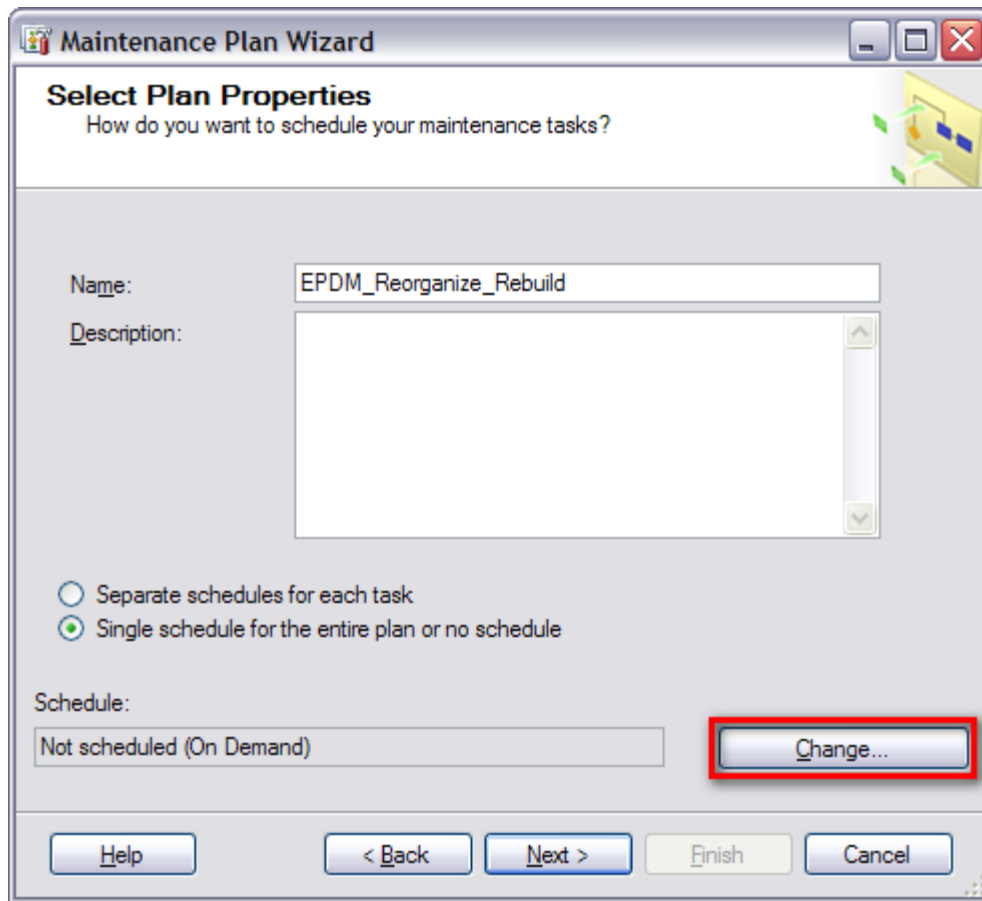
1. Log into SQL Server Management Studio using the 'sa' username and password.



2. Expand the **Management** Folder right-click **Maintenance Plans**, and select **Maintenance Plan Wizard**.



3. Select Plan Properties: Name the plan, and click **Change** to set up the recurring schedule.



4. Job Schedule Properties: Set up recurring schedule during off-peak hours, then click **OK**.

The screenshot shows the 'Job Schedule Properties' dialog box for a job named 'EPDM\_Reorganize\_Rebuild'. The dialog is titled 'Job Schedule Properties - EPDM\_Reorganize\_Rebuild' and has a 'Jobs in Schedule' button. The 'Name' field contains 'EPDM\_Reorganize\_Rebuild'. The 'Schedule type' is set to 'Recurring' and is 'Enabled'. The 'One-time occurrence' section is disabled. The 'Frequency' section is set to 'Weekly' with a recurrence of '1' week(s) on Saturday. The 'Daily frequency' section is set to 'Occurs once at' 1:00:00 AM. The 'Duration' section is set to 'Start date' 5/13/2010 and 'No end date'. The 'Summary' section contains the description: 'Occurs every week on Saturday at 1:00:00 AM. Schedule will be used starting on 5/13/2010.' The dialog has 'OK', 'Cancel', and 'Help' buttons at the bottom.

Name: EPDM\_Reorganize\_Rebuild Jobs in Schedule

Schedule type: Recurring  Enabled

One-time occurrence

Date: 5/13/2010 Time: 4:58:34 PM

Frequency

Occurs: Weekly

Recurs every: 1 week(s) on

Monday  Wednesday  Friday  Saturday  
 Tuesday  Thursday  Sunday

Daily frequency

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

Duration

Start date: 5/13/2010  End date: 5/13/2010  No end date

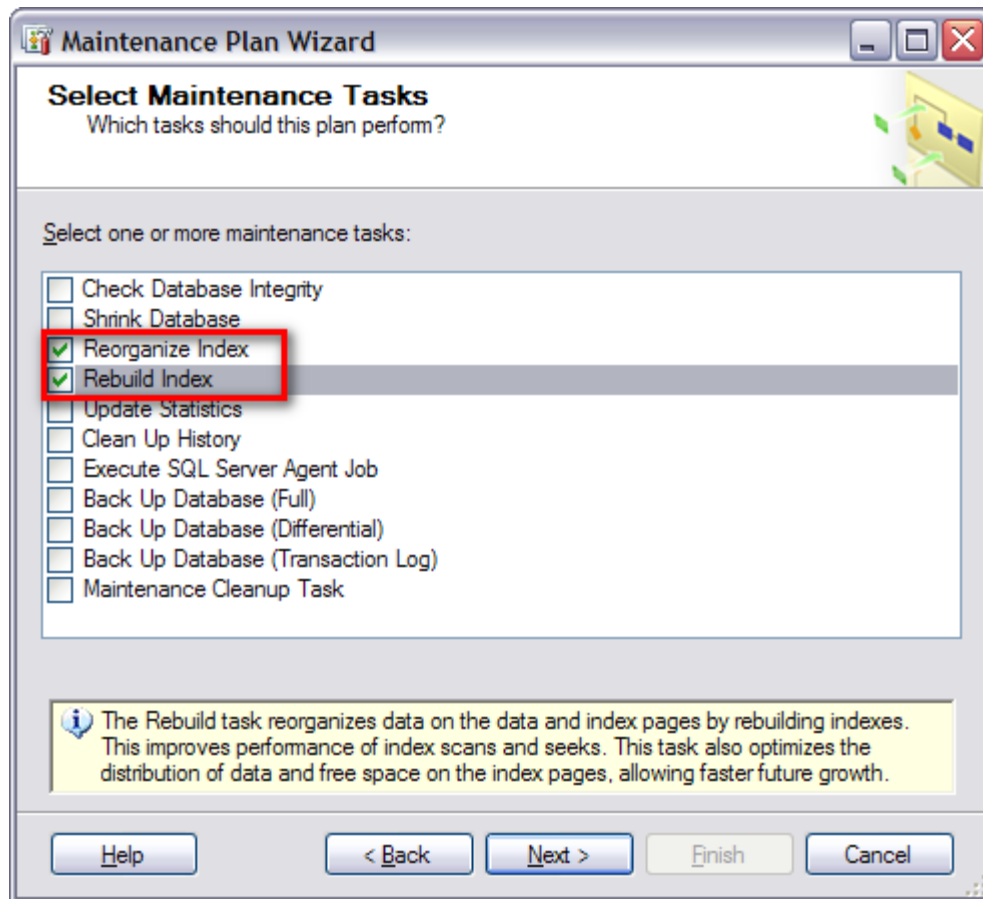
Summary

Description: Occurs every week on Saturday at 1:00:00 AM. Schedule will be used starting on 5/13/2010.

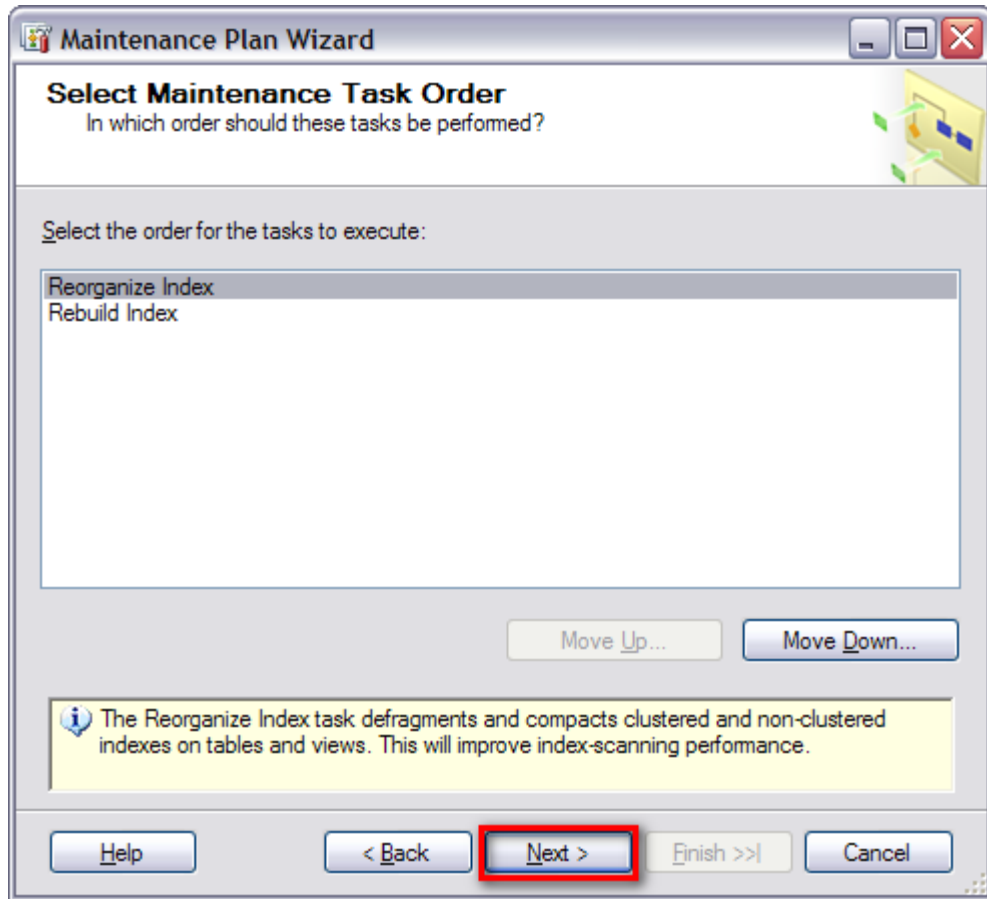
OK Cancel Help

5. Once the Schedule has been determined, click **Next**.

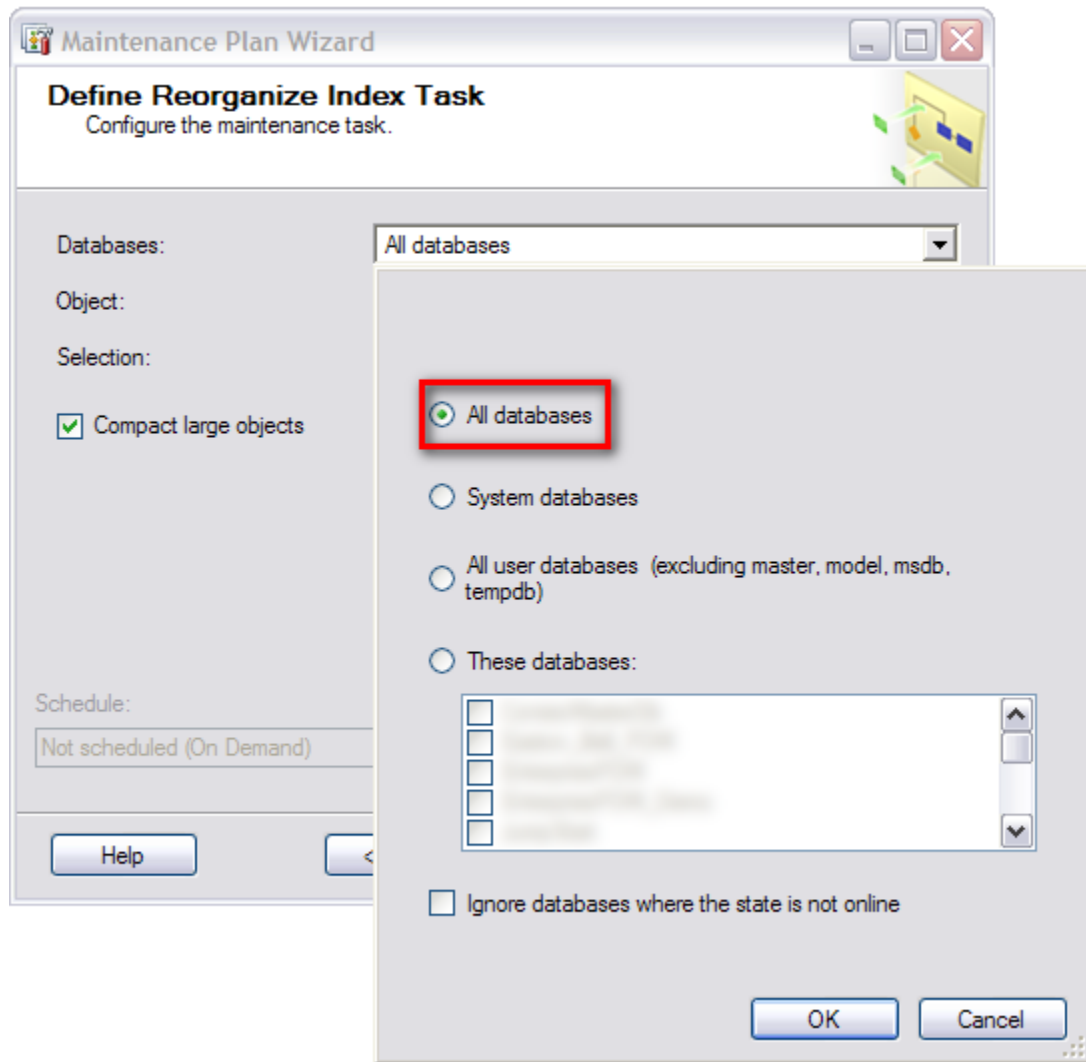
6. Select Maintenance Tasks: **Reorganize Index, Rebuild Index**. Then click **Next**.



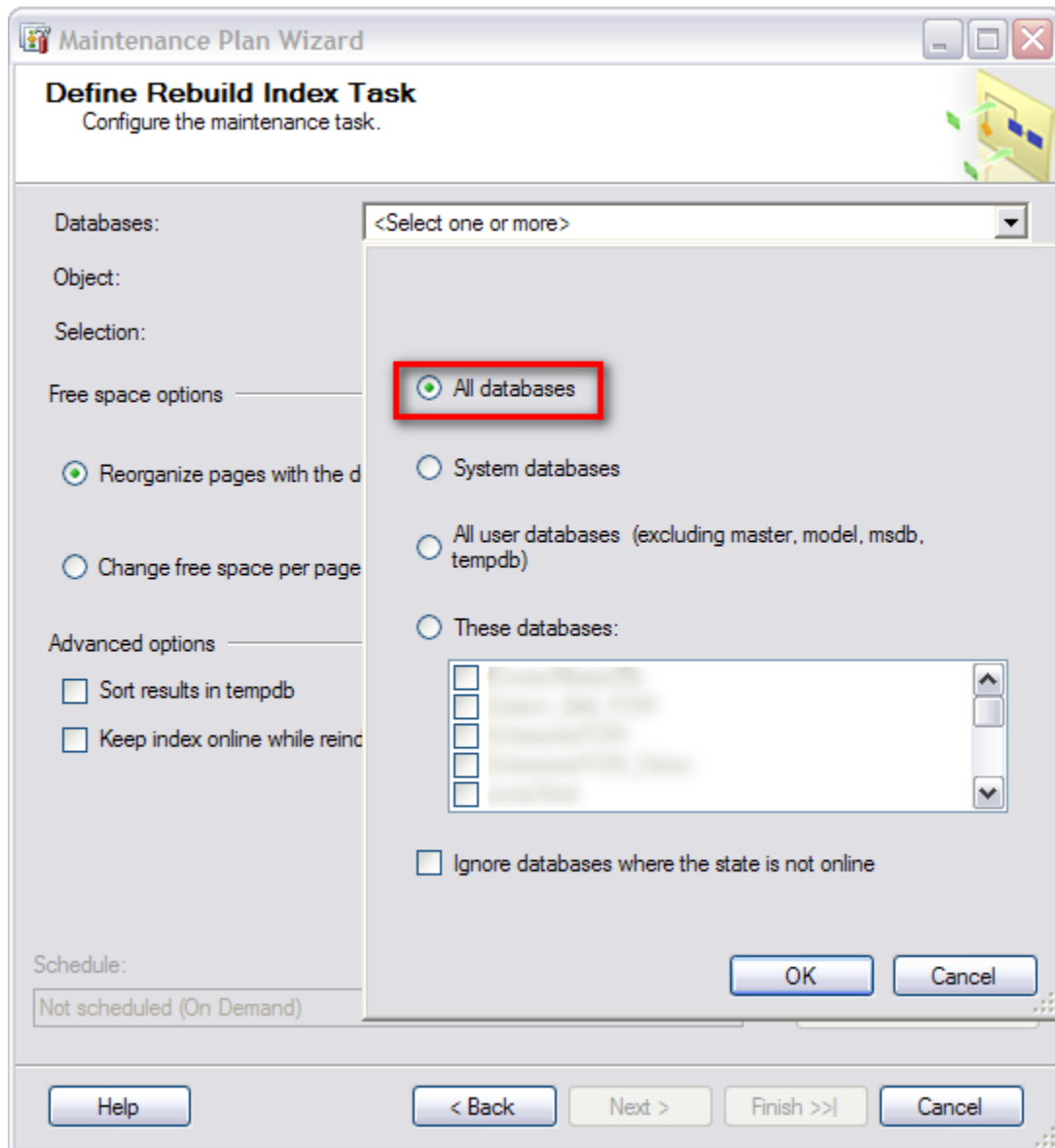
7. Select Maintenance Task Order: Click **Next**.



8. Define Reorganize Index Task: Select **All Databases**, then click **Next**.

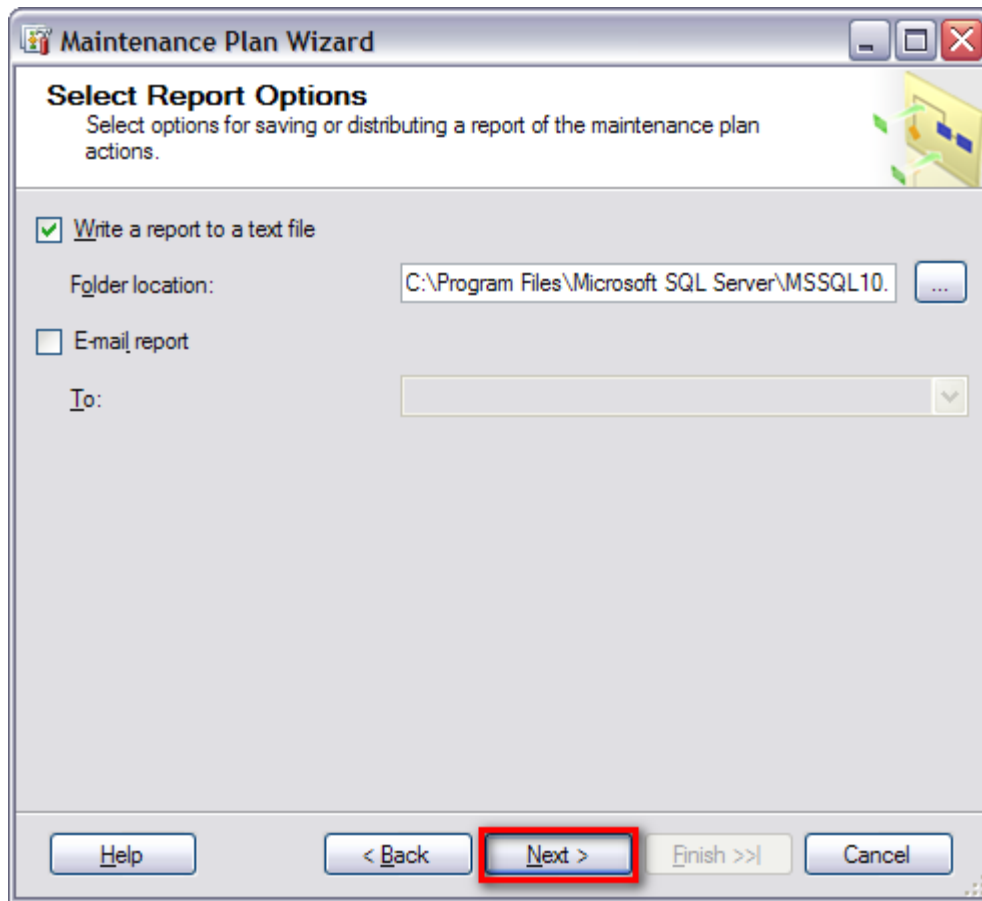


9. Define Rebuild Index Task: Select **All Databases**, then click **Next**.

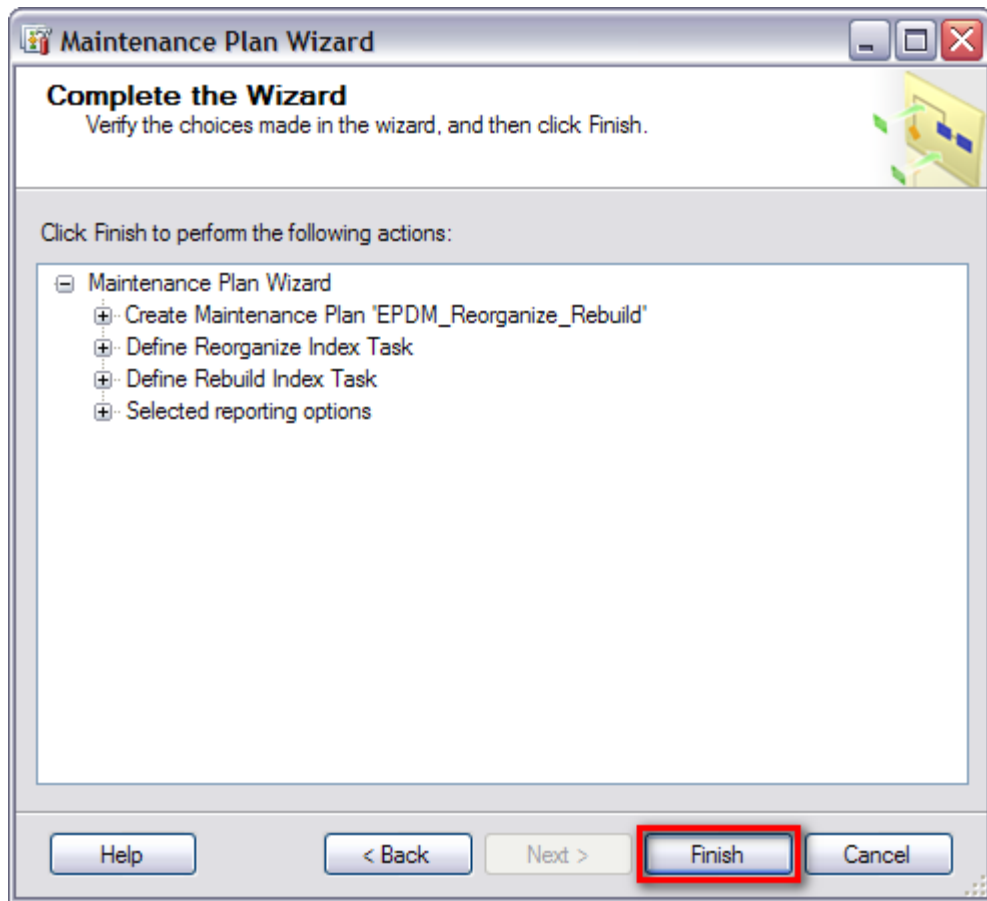




10. Select Report Options: Click **Next**.



11. Complete the Wizard: Click **Finish**.



12. Close the Wizard

