

Redistribute ControlPointMetaStore Data Files Technical Note



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# How to Redistribute ControlPointMetaStore Data Files for Maximum Performance

For best performance, **ControlPointMetastore** database files should be evenly distributed across all available drives in your environment. If they are not distributed evenly, follow the steps in this document to redistribute them in order to maximize the I/O bandwidth of the four largest types of data and index database files:

- ControlPointMetaStore\_ControlPointMetaData\_data1 .. n
- ControlPointMetaStore\_ControlPointMetaData\_index1 .. n
- ControlPointMetaStore\_Metadata\_data1 .. n
- ControlPointMetaStore\_Metadata\_index1 .. n

## **Examine the Metastore Database configuration**

Examine the metastore database configuration to identify the files to redistribute.

#### To examine the metastore database configuration

- 1. Log into Microsoft SQL Server Management Studio (SSMS).
- 2. In the Object Explorer pane on the left side of the interface, expand the Databases entry.
- 3. Under Databases, right-click the ControlPointMetastore database, and then click Properties.
- In the Database Properties dialog box that appears, click Files under Select a page in the left pane.

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5. Identify the critical data files.

Most of the data stored in the database is limited to several critical files. It is important that these files are distributed across the available set of drives in round-robin fashion. The **File Name** for the critical files are as listed below, where N represents a number from 1 to 16:

ControlPointMetaStore\_ControlPointMetaData\_dataN.ndf

ControlPointMetaStore\_ControlPointMetaData\_indexN.ndf

ControlPointMetaStore\_Metadata\_dataN.ndf

ControlPointMetaStore\_Metadata\_indexN.ndf

There are different ways to distribute files. For example, you can do it using SQL commands, as described on the page https://dba.stackexchange.com/questions/52007/how-do-i-move-sql-server-database-files or by using Microsoft SQL Server Management Studio (SSMS), as described in Redistribute files in an optimal fashion, below.

#### NOTE:

For each schema, distribute all n files across the available set of drives in round-robin fashion. Start file distribution for each schema at the first drive in the set regardless of where you distributed the last file of the previous schema.

For example, suppose you have three drives (E, F, and G) and there are four database files for each schema (n = 4). You would start distributing files as follows:

Path	File name
E:\db\	ControlPointMetaStore_ControlPointMetaData_data1.ndf
F:\db\	ControlPointMetaStore_ControlPointMetaData_data2.ndf
G:\db\	ControlPointMetaStore_ControlPointMetaData_data3.ndf
E:\db\	ControlPointMetaStore_ControlPointMetaData_data4.ndf
E:\db\	ControlPointMetaStore_ControlPointMetaData_index1.ndf
F:\db\	ControlPointMetaStore_ControlPointMetaData_index2.ndf
G:\db\	ControlPointMetaStore_ControlPointMetaData_index3.ndf
E:\db\	ControlPointMetaStore_ControlPointMetaData_index4.ndf

Note how both the last file of the ControlPointMetaStore\_ControlPointMetaData\_data schema and the first file of ControlPointMetaStore\_ControlPointMetaData\_data are both on the E drrive.

## Redistribute files in an optimal fashion

For optimal performance, redistribute database across the SQL server drives available.

#### Before you begin

Idenfity the files to redistribute and develop a plan to redistribute them as described by Examine the Metastore Database configuration, on the previous page.

#### To redistribure files

- 1. Stop all ControlPoint services.
- 2. Log into Microsoft SQL Server Management Studio (SSMS).
- 3. In the Object Explorer pane on the left side of the interface, expand the **Databases** entry.
- 4. Under Databases, right-click the ControlPointMetastore database, and then click Properties.
- 5. In the Database Properties dialog box that appears, do the following.
  - a. For each schema in the **Logical Name** column that you want to move (as previously described), note its actual location on disk in the **Path** and **File Name** columns.

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For example, given the previous figure:

- Logical Name: ControlPointMetaStore\_ControlPointMetaData\_data1
  - **Path:** F:\db\
  - File Name: ControlPointMetaStore\_ControlPointMetaData\_data1.ndf
- Logical Name: ControlPointMetaStore\_ControlPointMetaData\_data2
  - **Path:** F:\db\
  - File Name: ControlPointMetaStore\_ControlPointMetaData\_data2.ndf
- b. Note the Path and File Name values for the ControlPointMetaStore\_primary.mdf file.
   You will need this information when reattaching the database in a later step.
- c. Click Cancel.
- 6. Detach the **ControlPointMetastore** database as follows:
  - a. Right-click the ControlPointMetastore database, click Tasks, and then click Detach.
  - b. On the Detach Databases dialog box, click OK.
- 7. Distribute the database files you noted to new locations and keep track of their new paths.
- 8. Right-click **Databases**, and then click **Attach**.
- 9. Click Add, browse to the ControlPointMetaStore\_primary.mdf file, select it, and click OK.

10. For each database file you moved, set its **Current File Path** to the correct value from your notes.

If the **Current File Path** value for a particular file is incorrect, the **Message** column contains the text "Not Found". You must correct the path for any such entries because SSMS will not let you the attach the database until all files point to the correct location.

11. Click **OK**.

SSMS attaches the database, which makes it ready for use.

12. Restart Metastores and all other ControlPoint services that you stopped.