



Synergize Database Management Guide

All Customers

V1





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Disclaimer

The following publication, Synergize Database Management Guide documentation for Microdea customers is designed to assist the Synergize Administrator to configure, optimize, administer and maintain the Synergize environment. While every effort has been made to ensure that all material is as complete and accurate as possible, the enclosed material is presented on an "as is" basis. Microdea Inc. does not assume any liability or responsibility to any person or entity with respect to loss or damages incurred from the information contained in this workbook. This workbook was developed by Microdea Inc. and is an original work of Microdea Inc. Any similarities between material presented in this workbook and actual Synergize implementations are completely coincidental.





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Database Backup and Maintenance





Database Backup and Maintenance

Two recommendations for maintaining SQL Server 2012 databases:

- 1. Create a Database Maintenance Plan that creates a Full Backup within SQL Server.
- 2. Create a Database Maintenance Plan that creates a Transaction Log back up within SQL Server.

Create Full Backups Using a Database Maintenance Plan within SQL Server 2012

- 1. Open the SQL Server Management Studio
- 2. Expand Management and right-click Maintenance Plans. Choose Maintenance Plan Wizard.





Solution1 - Microso	ft SQL Serv	er Man	agement	Studio
File Edit View Proje		Tools	Window	Help
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🕀 🛅 Legacy		History		
	Deee	rts		•
DQL Server				
	Refre	esn		
•				F

3. Click Next to proceed past the start page and to the first step of the wizard. Type a descriptive name for your maintenance plan.



🛐 Maintenance Plan W	izard	
Select Plan Prop How do you want to	perties schedule your maintenance tasks?	
Na <u>m</u> e:	Backup_Plan	
<u>D</u> escription:		
 Separate schedules Single schedule for Schedule: 	: for each task the entire plan or no schedule	
Not scheduled (On Dema	nd)	Change
<u>H</u> elp	< Back <u>N</u> ext >	Einish Cancel

- 4. Make sure **Single schedule for the entire plan or no schedule** is selected (use the same schedule for all the tasks in this maintenance plan). Click the Change button to open the Job Schedule Properties window.
 - a. Choose Recurring for the Schedule type and select the Enabled check box. In the Frequency section, choose Occurs Daily and Recurs every 1 day. In the Daily frequency section, specify a time when the database is least utilized (e.g., 2:00 AM). Click OK.





📕 Job Schedule Properti	ies - Backup_Plan
<u>N</u> ame:	Backup_Plan Jobs in Schedule
<u>S</u> chedule type:	Recurring 🔽 Enabled
One-time occurrence Date:	4/23/2010 Ime: 4:01:00 PM
Frequency	
O <u>o</u> curs:	Daily
Re <u>c</u> urs every:	1 day(s)
Daily frequency	
Occurs once <u>at</u> :	2:00:00 AM
O Occurs every:	1 Image: Starting at: 12:00:00 AM Ending at: 11:59:59 PM
Duration	
Start <u>d</u> ate:	4/23/2010 💌 O End date: 4/23/2010 💌
	No end date:
Summary	
Descri <u>p</u> tion:	Occurs every day at 2:00:00 AM. Schedule will be used starting on 4/23/2010.
	OK Cancel Help

- 5. Click **Next** to proceed to the Select Maintenance Tasks page.
- In the Select Maintenance Tasks page, select Check Database Integrity, Shrink Database, Reorganize Index and Back Up Database (Full). Click Next.





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 Back Up Database (Full) task allows you to specify the source databases, destination files or tapes, and overwrite options for a full backup.
Help < Back Next > Finish Cancel

- 7. On the Select Maintenance Task Order page, use the **Move Up** and **Move Down** buttons to arrange the tasks in the following order and then click **Next**.
 - a. Shrink Database
 - b. Reorganize Index
 - c. Check Database Integrity
 - d. Back Up Database (Full)



🛐 Maintenance Plan Wizard	
Select Maintenance Task Order In which order should these tasks be performed?	· Ju
Select the order for the tasks to execute:	
Shrink Database Reorganize Index Check Database Integrity Back Up Database (Full)	
Move <u>U</u> p	Move <u>D</u> own
The Back Up Database (Full) task allows you to specify the source data files or tapes, and overwrite options for a full backup.	bases, destination
<u>H</u> elp < <u>B</u> ack <u>Next</u> > <u>Finish</u>	Cancel

 On the Define Shrink Database Task page click the down-arrow to the right of Databases and choose your database from the list. Click **OK** to close the database selection window. Keep the default values for **Shrink database when it grows beyond** (i.e., 50 MB) and for **Amount of free space to remain after shrink** (i.e., 10%). Click **Next**.

a.



🛐 Maintenance Plan Wizard	_ _ ×
Define Shrink Databas Configure the maintenance tas	
<u>D</u> atabases:	<select more="" one="" or=""></select>
<u>S</u> hrink database when it grows	
Amount of free space to remain	All <u>d</u> atabases
C <u>R</u> etain freed space in datab	O <u>S</u> ystem databases
Return freed space to oper-	 All user databases (excluding master, model, msdb, tempdb)
	Ihese databases:
Schedule: Not scheduled (On Demand) Help	✓ exfmea ▲ master ■ model ■ msdb ■ ReportServer ▼
	Ignore databases where the state is not online
	OK Cancel

- On the Define Reorganize Index Task page, click the down-arrow to the right of Databases and choose your database from the list. Click **OK** to close the database selection window. Click **Next**.
- 10. On the Define Database Check Integrity Task page, click the down-arrow to the right of Databases and choose your database from the list. Click **OK** to close the database selection window. Click **Next**.
- 11. On the Define Back Up Database (Full) Task page, click the down-arrow to the right of Databases and choose your database from the list. Click **OK** to close the database selection window. Choose the media for the backup (i.e., Disk or Tape) and the location for the backup. Select **Verify backup integrity**. Click **Next**.



🛐 Maintenance Plan Wiza	ard 🗧	
Define Back Up Da Configure the maintenar	atabase (Full) Task nce task.	
Bac <u>k</u> up type:	Full	7
<u>D</u> atabase(s):	Specific databases	•
Backup component © Databas <u>e</u> © Files and filegroups:		[]
Backup set will expire:	,	
After	14 days	
C On	5/ 7/2010	
Back up to: 💿 Djsk 🔘	Таре	
O Back up databases acro	iss one or more files:	
	Add Remo <u>v</u> e Contents	
If backup files exist:	Append	-
Create a backup file for	every database	
Create a sub-director		
Folder:	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSER	
Backup file extensi <u>o</u> n:	bak	
🔽 Verify backup integrity		
📕 Back up the tail of the lo	og, and leave the database in t <u>h</u> e restoring state	
Set backup compression:	Use the default server setting	•
Caladda		
Schedule: Not scheduled (On Demand))	1
norscheduled (off Deitland)	, <u>e</u> nange	
<u>H</u> elp	< <u>B</u> ack <u>Next></u> Einish>> Cancel	

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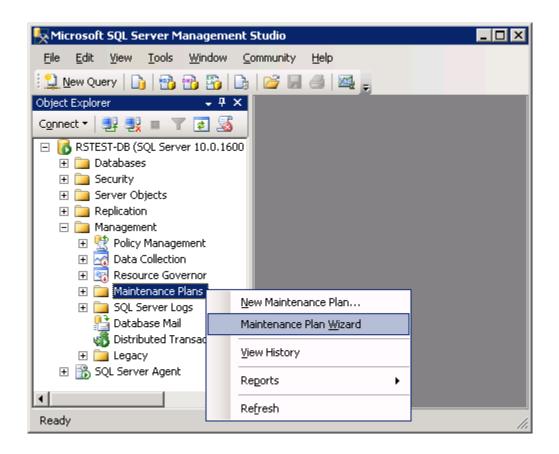
- 12. On the Select Report Options page, you can choose to have the maintenance plan generate reports. This is optional. Click **Next**.
- 13. The final page of the wizard summarizes the Maintenance Plan and the tasks that will be run. Click **Finish**.
- 14. The Maintenance Plan Wizard checks the settings and then adds the job to the SQL Server Agent Jobs and will run at the next scheduled time.

Create Transaction Log Backups Using a Database Maintenance Plan within SQL Server 2012

Note: These instructions follow the same steps as above, but because we suggest running transaction log backups throughout the day (this may vary depending on your business needs), we suggest creating a separate Maintenance Plan, which has a more frequent schedule than once a day, for the transaction logs.

- Open the SQL Server Management Studio by choosing Start > Programs > Microsoft
 SQL Server 2012 > SQL Server Management Studio.
- Expand Management and right-click Maintenance Plans. Choose Maintenance Plan Wizard.





- Click **Next** to proceed past the start page and to the first step of the wizard. Type a descriptive name for your maintenance plan (e.g., MaintenancePlan-Transaction_Log).
- Make sure **Single schedule for the entire plan or no schedule** is selected. Click the **Change** button to open the Job Schedule Properties window.
- Choose Recurring for the Schedule type and select the Enabled check box. In the Frequency section, choose Occurs Daily and Recurs every 1 day. In the Daily frequency section, select Occurs every and choose 4 hours and Starting at 12:00 AM (assuming that you have followed the previous section's suggestion and set the full backup to 2:00 AM -- to ensure it will not be running at the same time as the full backup). Click OK.



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🛄 Job Schedule Prope	erties - MaintenancePlan-Transaction_Log
<u>N</u> ame:	MaintenancePlan-Transaction_Log Jobs in Schedule
<u>S</u> chedule type:	Recurring 💽 Enabled
One-time occurrence Date:	4/28/2010 <u>T</u> ime: 9:54:39 AM ₩
Frequency	
O <u>c</u> curs:	Daily
Re <u>c</u> urs every:	1 day(s)
Daily frequency	
O Occurs once <u>a</u> t:	12:00:00 AM
Occurs every:	4 📑 hour(s) 💌 Starting at: 12:00:00 AM 🚆
	Ending at: 11:59:59 PM
Duration	
Start <u>d</u> ate:	4/28/2010 ▼ ○ End date: 4/28/2010 ▼
	 No end date:
Summary	
Descri <u>p</u> tion:	Occurs every day every 4 hour(s) between 12:00:00 AM and 11:59:59 PM. Schedule will be used starting on 4/28/2010.
	OK Cancel Help

- Click Next to proceed to the Select Maintenance Tasks page.
- On the Select Maintenance Tasks page, choose Back Up Database (Transaction Log). Click Next.

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🛐 Maintenance Plan Wizard	_ 🗆 🗡
Select Maintenance Tasks Which tasks should this plan perform?	A.
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 	
<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

- On the Select Maintenance Task Order page click **Next**.
- On the Define Back Up Database (Transaction Log) Task page click the down-arrow to the right of Databases and choose your database from the list. Click **OK** to close the database selection window. Choose the media for the backup (i.e., Disk or Tape) and the location for the backup. Select **Verify backup integrity**. Click **Next**.



🛐 Maintenance Plan Wiz	zard	
Define Back Up D Configure the mainten	Database (Transaction Log) Tas	sk
Bac <u>k</u> up type:	Transaction Log	v
<u>D</u> atabase(s):	Specific databases	
Backup component		
 Database Files and filegroups: 		
_		
<u>B</u> ackup set will expire:	14 da	118
C On	5/12/2010	/*
Back up to: 💿 Djsk 🔘	,	
C Back up databases aci		
	-	<u>A</u> dd
		Remo <u>v</u> e
		Cantanta
l If backup files e <u>x</u> ist:	A 1	Contents
	Append	
 Create a backup file fog Create a sub-director 		
	C:\Program Files\Microsoft SQL Server\MSSQ	L10.MSSQLSER
Backup file extensi <u>o</u> n:	, -	trn
Verify backup integrity		
Back up the tail of the	log, and leave the database in t <u>h</u> e restoring stat	e
Set backup compression:	Use the default server setting	- -
	,	
Schedule:		
Not scheduled (On Deman]	<u>C</u> hange
Help	< <u>B</u> ack <u>N</u> ext> Einish>	> Cancel
<u>H</u> elp	< <u>B</u> ack <u>N</u> ext > Einish >	

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- On the Select Report Options page, you can choose to have the maintenance plan generate reports. This is optional. Click **Next**.
- The final page of the wizard summarizes the Maintenance Plan and the tasks that will be run. Click **Finish**.
- The Maintenance Plan Wizard checks the settings and then adds the job to the SQL Server Agent Jobs and will run at the next scheduled time.