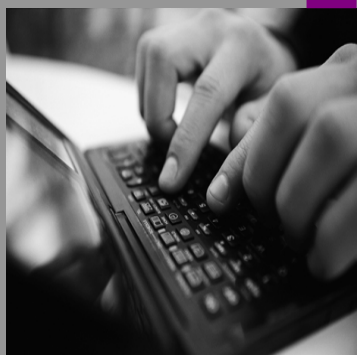

How-to Guide
SAP NetWeaver '04

How To... Apply an Enterprise Level Backup Strategy for MDM 5.5

Version 1.01 – Mai 2005

Applicable Releases:
SAP NetWeaver '04
Master Data Management 5.5 (MDM 5.5)

THE BEST-RUN BUSINESSES RUN SAP

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1 Business Scenario

SAP MDM 5.5 is an industry-leading platform for enterprise-wide product content management and cross-media catalog publishing. It collects all of product content in an enterprise, including parametric information and rich content such as images, paragraphs of merchandising text, and PDF documents, as well as all of the organizational intelligence about the product content, into a centralized repository. Hence, how to protect those valuable master data in repositories against data loss or data corruption becomes a crucial task for all MDM 5.5 customers.

Normally, protecting data is a complex, technical, and expensive operation that requires extra staffing or extensive time commitments to learn and execute. But as a mature industry leading platform, SAP MDM 5.5 provides a complete set of simple-to-use backup utilities with it as shown in Figure 1.1.

Figure 1.1 Backup utilities of SAP MDM 5.5

2 Introduction

This guide describes how to apply an enterprise level backup strategy for an MDM 5.5 platform. It contains the following sections:

1. Archive and unarchive repositories

   The MDM 5.5 archiving mechanism allows you to backup your repository in a DBMS-independent format known as an MDM 5.5 archive. You can use the Archive command to backup a repository, and later use the Unarchive command to restore it from the archive.

   While you can certainly use the various backup methods provided by the DBMS, an MDM 5.5 archive offers the following benefits:

   - Ease of use. Creating an MDM 5.5 archive does not require specialized DBMS knowledge and is done using a simple menu command interface from the MDM 5.5 Console.
   - Segmenting. You can automatically segment an MDM 5.5 archive into multiple files, each of a maximum file size, for easy offline storage on various media types (including CD-ROM/RW, Zip, and Jazz), and also to avoid the file-size limitations of some operating environments.
   - DBMS version independence. The MDM 5.5 archive is independent of the version of the DBMS, and will always work with MDM 5.5 even when the underlying DBMS is upgraded to a new release.
   - DBMS brand independence. An MDM 5.5 archive can be unarchived to any brand of DBMS supported by MDM 5.5, for cross-brand compatibility.
   - No repository down time. You can create an MDM 5.5 archive even while a loaded repository is being accessed by MDM 5.5 Client users.
   - Redundancy. An MDM 5.5 archive complements the backup methods offered by the DBMS.
   - Location. Each MDM 5.5 archive is stored on the MDM 5.5 Server machine rather than on the DBMS machine.

   Best practices: A productive MDM 5.5 system should backup its repositories at least once a day.

   MDM 5.5 archive files are stored in / restored from a common directory on your MDM 5.5 Server which is described in the xcs.ini.

2. Master slave architecture

   The MDM 5.5 system provides a powerful mechanism to create a master/slave relationship between a master repository and one or more slave repositories. Each slave repository is a read-only copy of the master repository, which is used to manage the repository information.

   You can use the Create Slave command to create a slave duplicate of an original repository. You can then periodically use the Synchronize Slave command to update the slave with changes made to the master since the previous synchronization. Finally, you can use the Normalize command to turn either a master or slave into a normal repository.

Master/slave repositories provide at least two major benefits:

- Staging. They allow you to create a staging environment on a single machine using a single copy of the software that completely insulates the published slave from changes made to the staging master until you are ready to publish the updates by synchronizing the slave.

- Publishing updates. They allow you to disseminate updates to multiple slaves across multiple machines that may be geographically dispersed, and do so efficiently since the synchronization process itself transmits only updates rather than the entire repository.

3. Duplicate Repositories

   The duplicate command can be used to duplicate an existing repository as backup. It allows us to discard subsequent changes and revert to the point of duplication.
   It is safer to duplicate a repository to a separate DBMS machine so that the repository is not only secure against user corruption but also against hardware failure.

4. Native DBMS backup.

   You can always use the native backup and restore methods provided with your DBMS by invoking the DBMS commands directly. This requires knowing the names of the actual databases (or schemas) and is outside the scope of this guide.

5. Scheduled backups

   Methods 1-3 can also be executed by alternative commands of CLIX. CLIX is a separate MDM 5.5 application that allows you to manage MDM 5.5 repositories using a command line interface instead of the MDM 5.5 Console. CLIX makes most operational MDM 5.5 Console commands accessible via a command line interface and from within batch files, making it useful for scheduling and automating routine maintenance and backup operations.

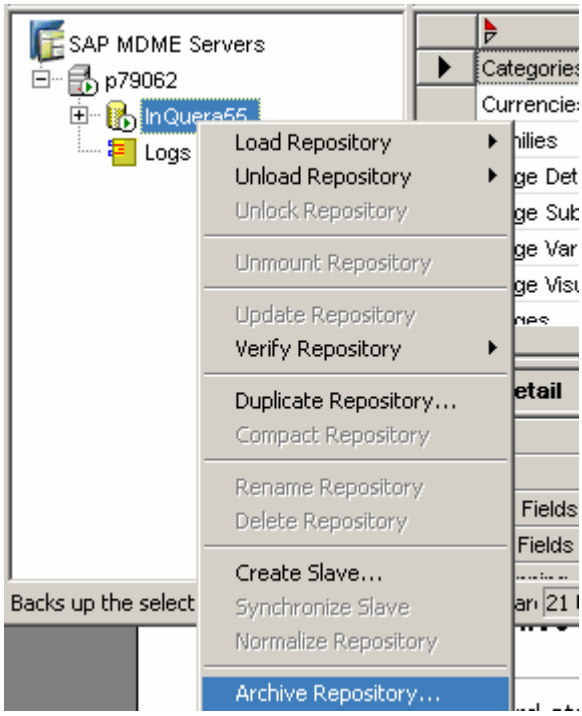
3 A Step By Step Solution

Let's go through the sections mentioned above step by step with a sample InQuera repository.

3.1 Archive and Unarchive a Repository

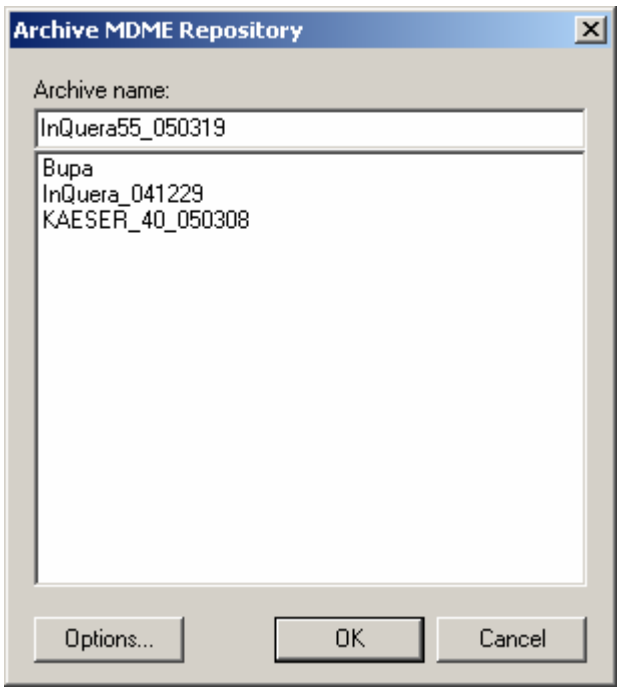
3.1.1 Archive a Repository

1. In the Console Hierarchy tree, right-click on the repository name and choose Archive Repository from the context menu, or select the tree node and choose Repositories > Archive from the main menu.

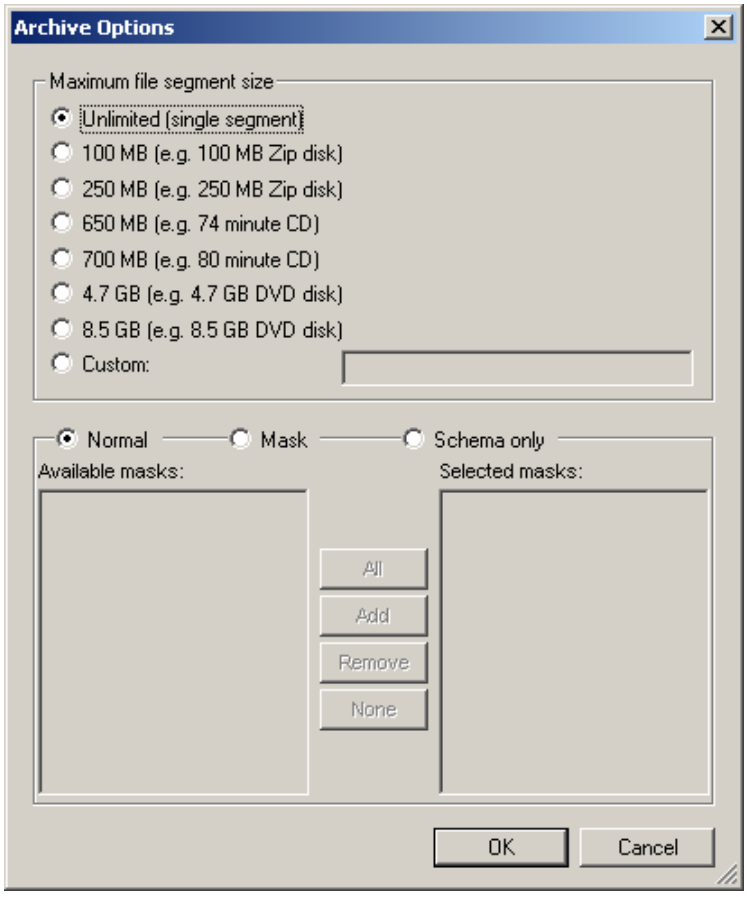


2. Give the name of the archive.

MDM 5.5 by default assign the following name format: <CatalogName_yymmdd>

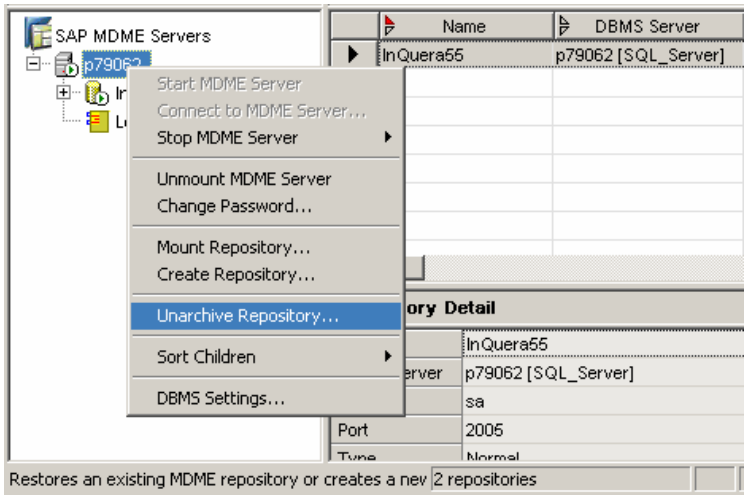


3. Click the Options button to open the Archive Options dialog.

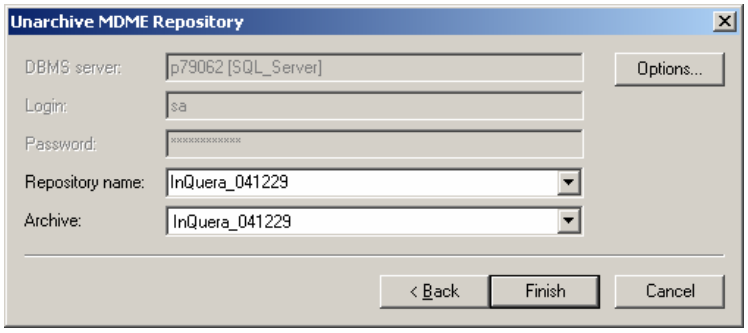


3.1.2 Unarchive a Repository

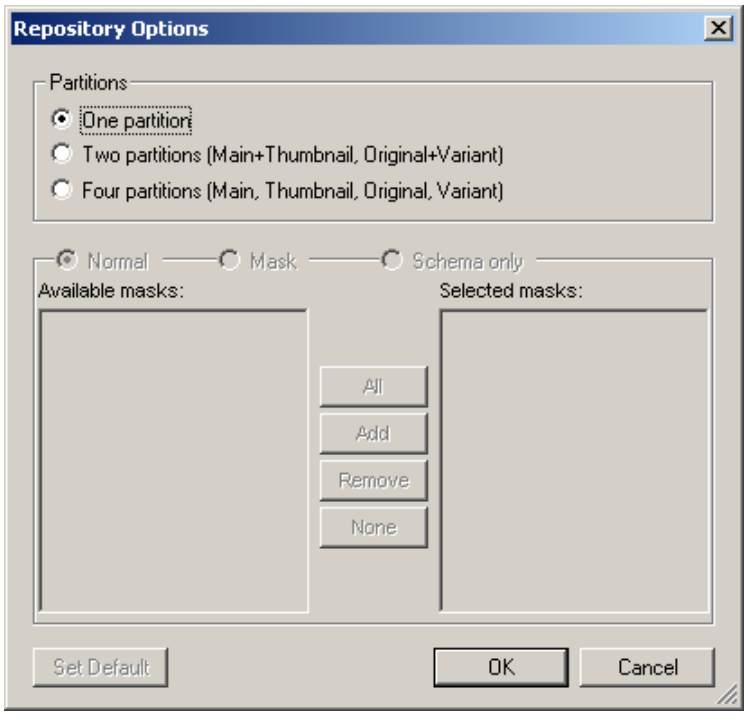
1. In the Console Hierarchy tree, right-click on the MDM 5.5 server and choose Unarchive Repository from the context menu, or select the tree node and choose Repositories > Unarchive.



2. MDM 5.5 opens the Unarchive MDM 5.5 Repository dialog. Select the archive file from the drop-down list.



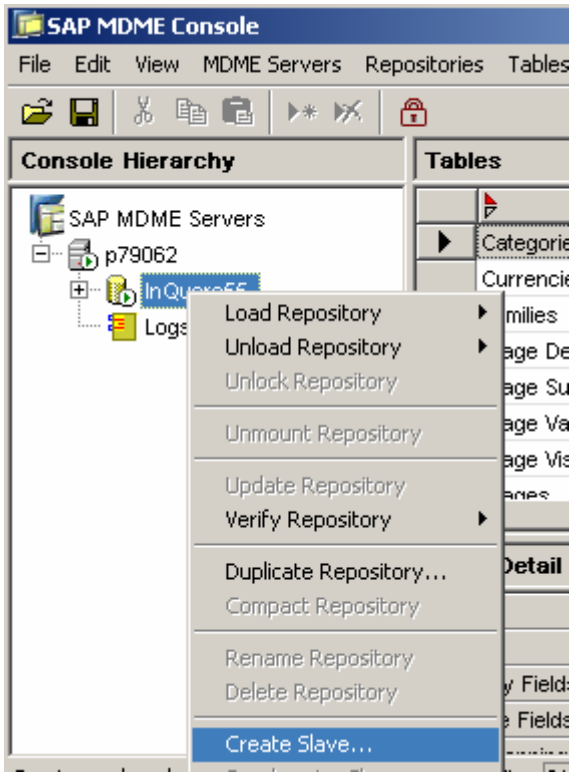
3. If necessary, click the Options button to open the Repository Options dialog to change the number of partitions given to the new MDM 5.5 repository from the default currently set for the Default Partitions DBMS setting



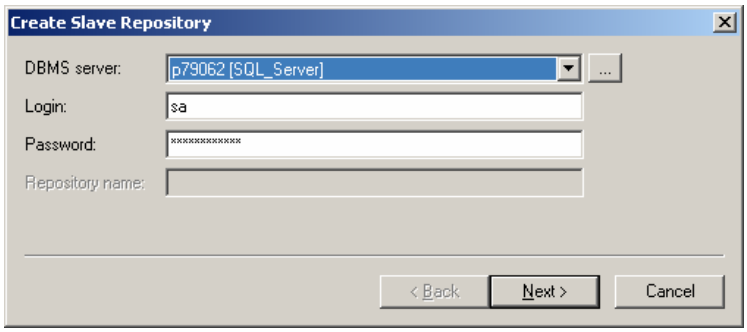
3.2 Master Slave Architecture

3.2.1 Create a Slave Repository

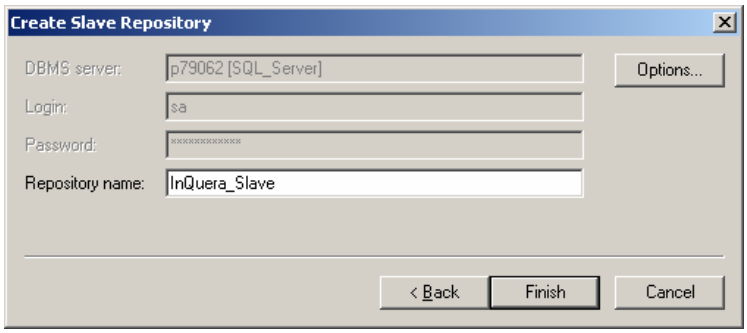
1. In the Console Hierarchy tree, right-click on the repository name for which we want to create a slave and choose Create Slave from the context menu, or select the tree node and choose Repositories>Create Slave from the main menu.



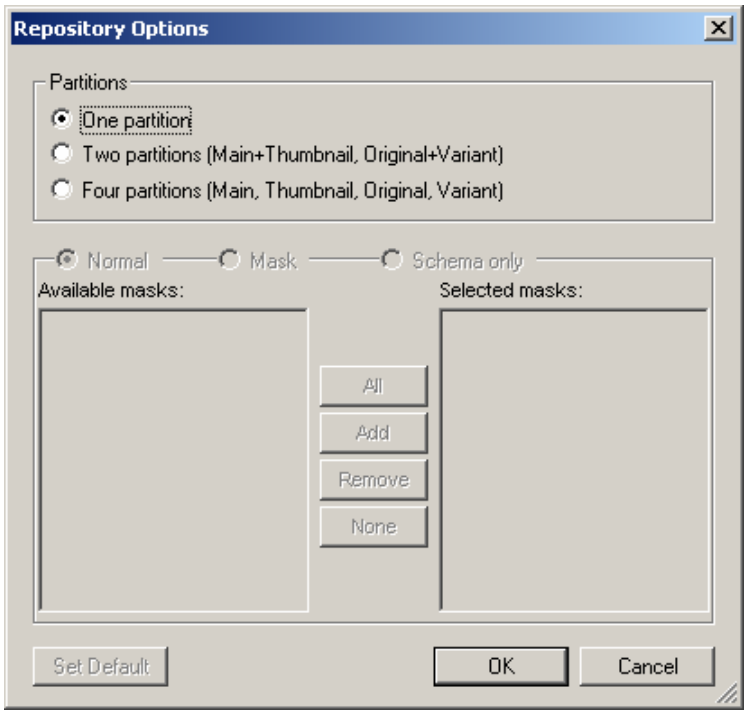
2. MDM 5.5 opens the Create MDM 5.5 Repository dialog.



3. Give the name of the slave repository.



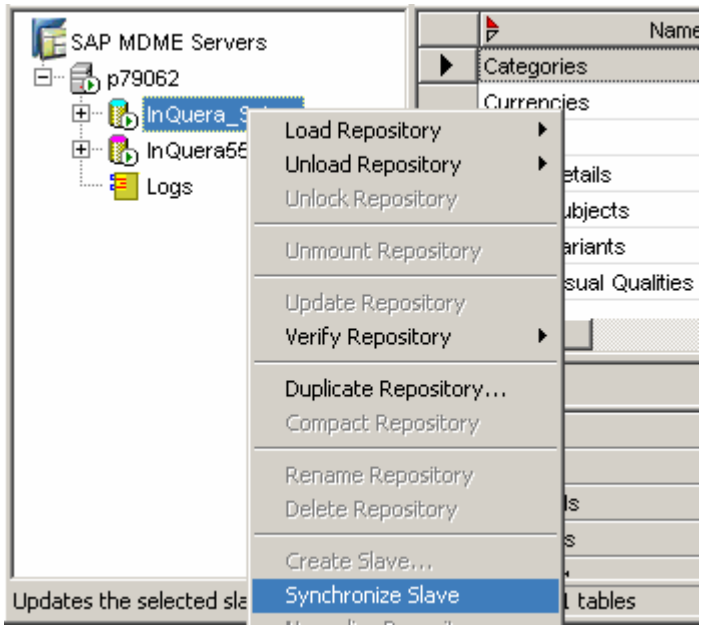
4. If necessary, click the Options button to open the Repository Options dialog to: (1) change the number of partitions given to the new MDM 5.5 repository from the default currently set for the Default Partitions DBMS setting; and/or (2) create a subset or Schema-only repository.



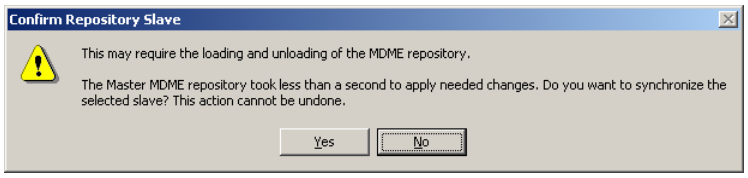
5. Once the master/slave relationship is established, any modifications to the underlying repository information should occur only using the MDM 5.5 Console, Client or APIs. Altering data through other means can result in unpredictable and undesirable behavior.

3.2.2 Synchronize a Slave Repository

1. In the Console Hierarchy tree, right-click on the slave repository name, and choose Synchronize Slave from the context menu, or select the tree node and choose Repositories > Synchronize Slave from the main menu.



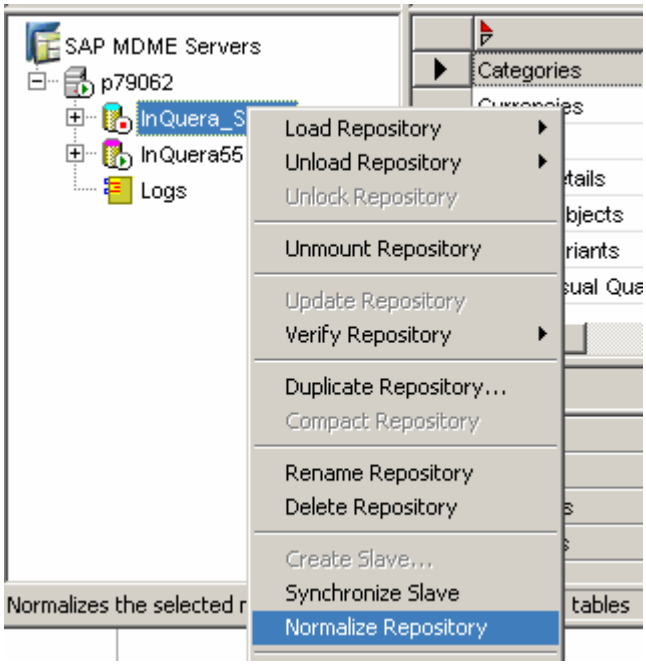
2. Since only changes are transmitted from the master to the slave, the synchronization takes much less time than if you duplicated the MDM 5.5 repository each time.



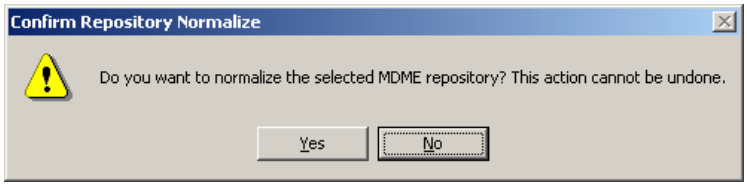
3.2.3 Normalize a Repository

1. Unload the Slave repository.

In the Console Hierarchy tree, right-click on the Slave repository name and choose normalize Repository from the context menu, or select the tree node and choose Repositories > Normalize from the main menu.

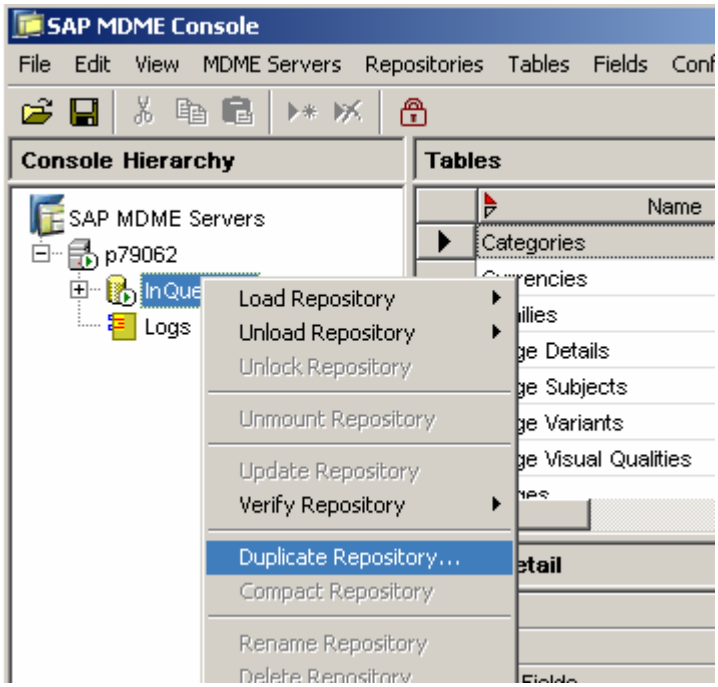


2. Note: If you normalize a master MDM 5.5 repository, you will "orphan" all of its slave repositories. The orphaned slaves will be accessible but you will not be able to synchronize them.

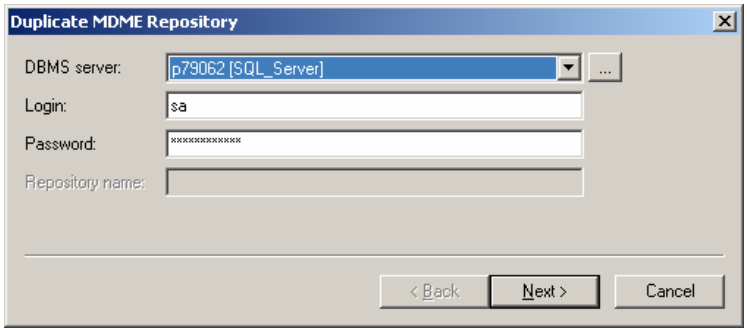


3.3 Duplicate a Repository

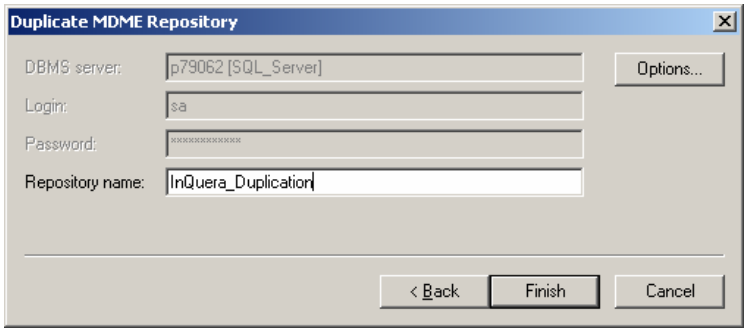
1. In the Console Hierarchy tree, right-click on the repository name and choose Duplicate Repository from the context menu, or select the tree node and choose Repositories > Duplicate from the main menu.



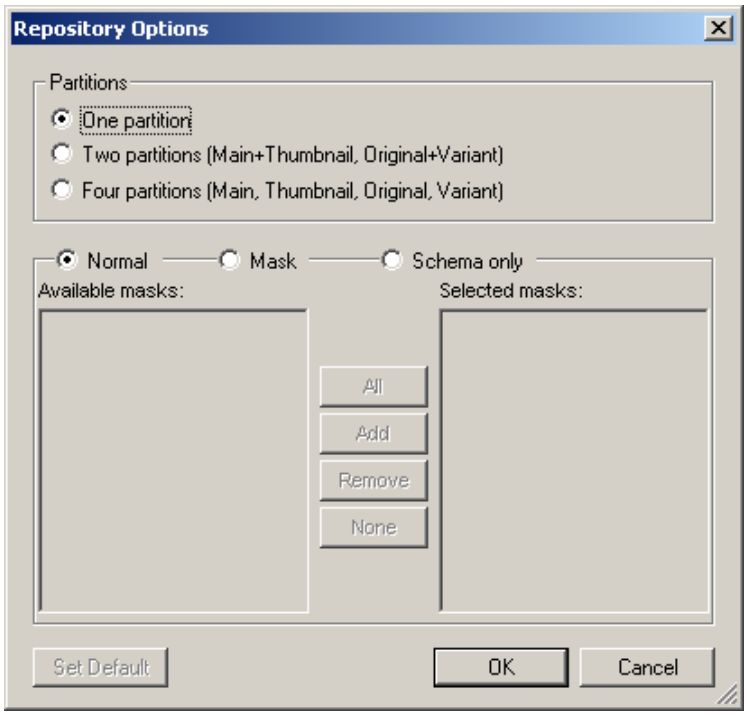
2. MDM 5.5 opens the Duplicate MDM 5.5 Repository dialog.



3. Give the name of the duplicated repository.



4. If necessary, click the Options button to open the Repository Options dialog to change the number of partitions given to the new MDM 5.5 repository from the default currently set for the Default Partitions DBMS setting.

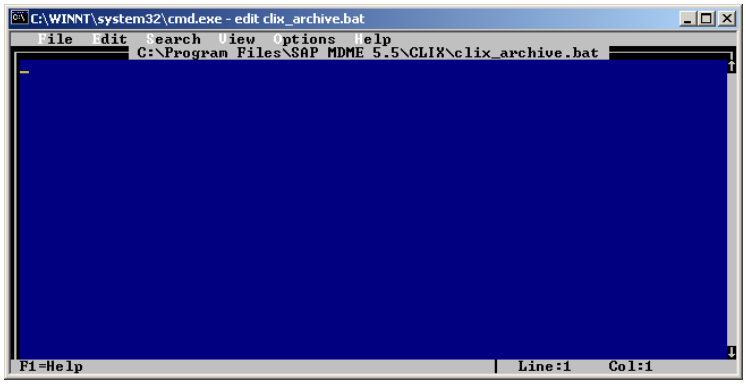


3.4 Scheduled Backups

3.4.1 Scheduled Archiving

1. Enter Dos Command in the Clix folder. Type

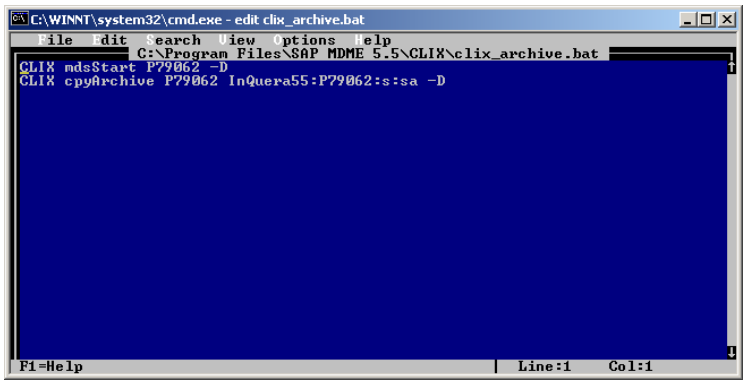
edit clix_synchronize.bat



2. Type the following commands and save this batch file:

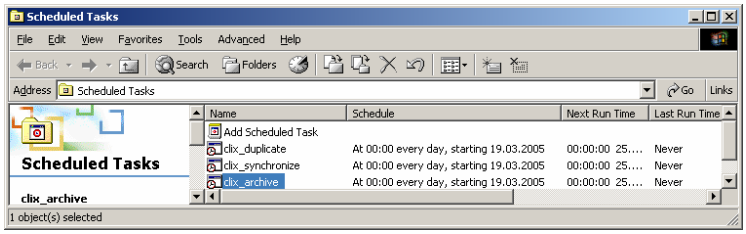
CLIX mdsStart P79062 -D

CLIX cpyArchive P79062 InQuera55:P79062:s:sa -D



3. Press Start, follow the path All Programs ➔ Accessories ➔ System Tools ➔ Scheduled Tasks, where you can add a new scheduled task and make it run automatically. Double-click on Add Scheduled Task to start the wizard. After the configuration the clix_archive.bat

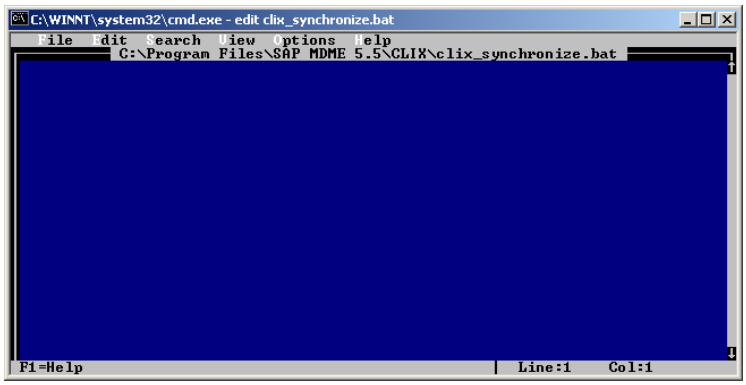
will be executed at 00:00 every day.



3.4.2 Scheduled Synchronization of a Slave Repository

1. Enter Dos Command in the Clix folder. Type

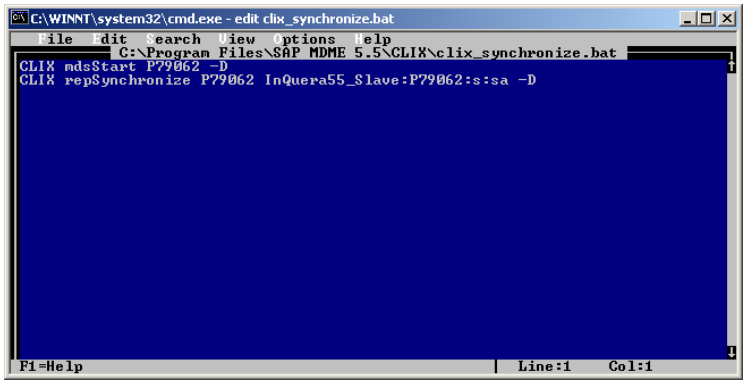
edit clix_synchronize.bat



2. Type the following commands and save this batch file:

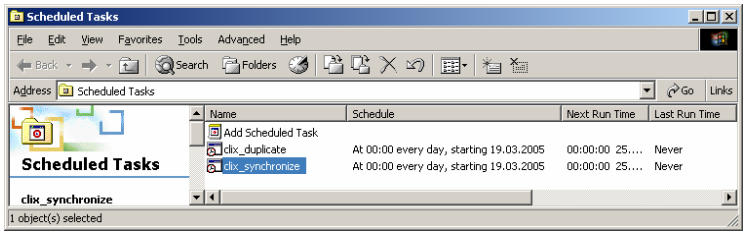
CLIX mdsStart P79062 -D

CLIX repSynchronize P79062 InQuera55_Slave:P79062:s:sa -D



3. Press Start, follow the path All Programs ➔ Accessories ➔ System Tools ➔ Scheduled Tasks, where you can add a new scheduled task and make it run automatically. Double-click on Add Scheduled Task to start the wizard. After the configuration the clix_synchronize.bat

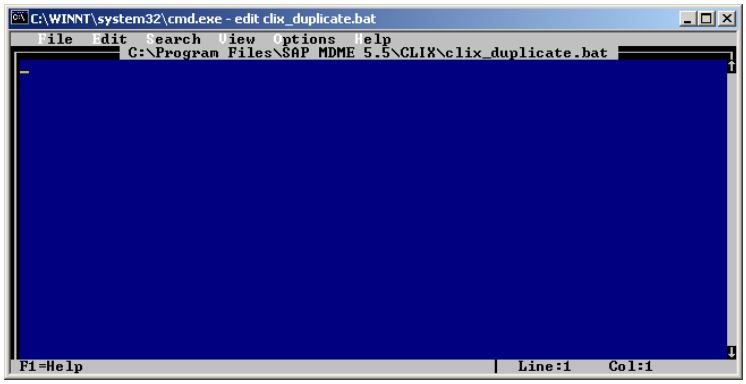
will be executed at 00:00 every day.



3.4.3 Scheduled Duplication

1. Enter Dos Command in the Clix folder. Type

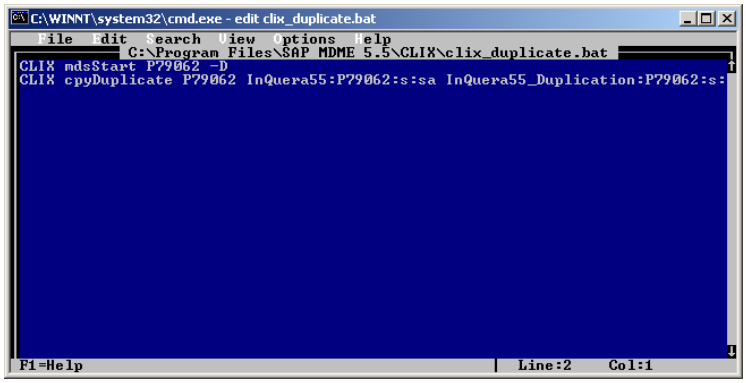
edit clix_duplicate.bat



2. Type the following commands and save this batch file:

CLIX mdsStart P79062 -D

CLIX cpyDuplicate P79062 InQuera55:P79062:s:sa:AStrongSAPwd InQuera55_Duplication:P79062:s:sa:AStrongSAPwd –F



Note:

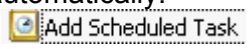
a) The option flag –F forces the overwrite of an existing repository with same name.

b) “AStrongSAPwd” corresponds to the password of SA user of the MS SQL server.

c) The duplicated repository can be mounted on the same MDM 5.5 server.

3. Press

. Follow the path Programs ➔ Accessories ➔ System Tools ➔ Scheduled Tasks, where you can add a new scheduled task and make it run automatically.

Double-click on 

to start the wizard. After the configuration the clix_duplicate.bat will be executed at 00:00 every day.

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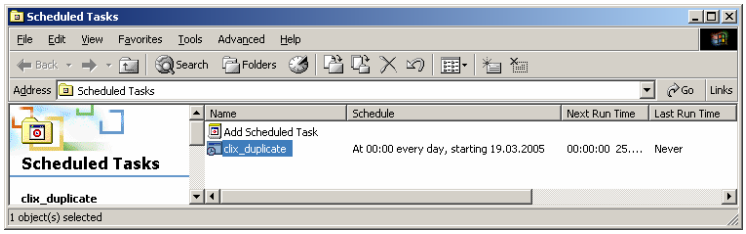

4 Appendix

Sample Batch Files

4.1.1 clix_duplicate.bat

```
CLIX mdsStart P79062 -D
CLIX cpyDuplicate P79062 InQuera55:P79062:s:sa:AStrongSAPwd
InQuera55_Duplication:P79062:s:sa:AStrongSAPwd -F
```

4.1.2 clix_synchronize.bat

```
CLIX mdsStart P79062 -D
CLIX repSynchronize P79062 InQuera55_Slave:P79062:s:sa -D
```

4.1.3 clix_archive.bat

```
CLIX mdsStart P79062 -D
CLIX cpyArchive P79062 InQuera55:P79062:s:sa -D
```

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