

PRIORITY ON SQL SERVER
EXPRESS EDITION: BACKUP AND
MAINTENANCE

MEDATECH
FUTURE PROOF YOUR BUSINESS

PRIORITY ON SQL SERVER EXPRESS EDITION: BACKUP AND MAINTENANCE

TABLE OF CONTENTS

One: Priority Backup	2
Requirements.....	2
Running a Backup	2
Verification.....	2
Storage	2
Backup Procedure	3
Backups via the Tabula Task Scheduler	3
To install the Tabula Task Scheduler:	3
To activate the automatic backup procedure:.....	3
Storing the Backup on a Tape	4
Two: Maintenance	4
Clearing Temporary Tables	4
Recovery	4
Requirements.....	4
Recovery Procedure	5
Appendix A: SQL Code to Recover User Data.....	6

Note: This document contains instructions for creating a backup of the data in your system, as well as performing a recovery if such an action is necessary.

ONE: PRIORITY BACKUP

Backups require the knowledge of a systems administrator. They are used as a contingency source for the recovery of data when the database has been damaged (e.g., by a virus or hardware malfunction). In order to minimize such damage, backups should be performed on a regular basis, according to the instructions contained in this document.

REQUIREMENTS

- 4 to 5 daily backup tapes (one for each day of the week, except the last), each marked for one day of the week (e.g., Monday, Tuesday).
- 4 weekly backup tapes for the month's work.

RUNNING A BACKUP

Daily Tapes: Each day of the week (except for the last – see Weekly Backup), a backup should be made of the system data on the tape designated for that day. The daily tapes are meant to be used on a rotational basis: they are taped over on the same day of every consecutive week (e.g., every Tuesday, the backup is made on the tape labelled "Tuesday," which will always contain the backup data from the previous Tuesday).

Weekly Tapes: The backup tape for the last day of the week will serve as the weekly backup containing the source data for the entire week. Weekly backup tapes are held for a month, rather than overwritten every week. They should be clearly marked with the date they were recorded, otherwise you will not know to which week they belong.

VERIFICATION

The log files should be checked on a daily basis to verify that the backup was completed successfully. When changing the backup tape, it is important to note that a message appears on the screen indicating that the backup was successfully completed. Another important verification procedure is a random check of the contents of one of the backup tapes, including a full reading of the tape, to be performed once a month.

STORAGE

It is very important that the backup tapes be stored at a location other than the company building. This will ensure against loss of critical data in the event of irreversible damage to the company site (e.g., as a result of a fire). The person responsible for performing the backup procedures should store the weekly backup tapes of the system data from the previous three weeks in his or her home.

BACKUP PROCEDURE

Backups are performed via the Run Daily Backup program (System Management > System Maintenance > Periodic Maintenance), which only the system manager is permitted to run. This program backs up both the SQL Server database and the system directories, saving the data in the backup sub-folder of the priority directory. Daily backups are stored in this folder for three days, which allows you to transfer a backup from Friday to a different tape on Monday. Older files are deleted automatically by the program. If you want to store backups for a longer period, increase the value assigned to the SQLBACKUPDAYS constant in the System Constants form.

It is recommended to run the backup program automatically by means of the Tabula Task Scheduler, in order to ensure that the process is carried out routinely and accurately.

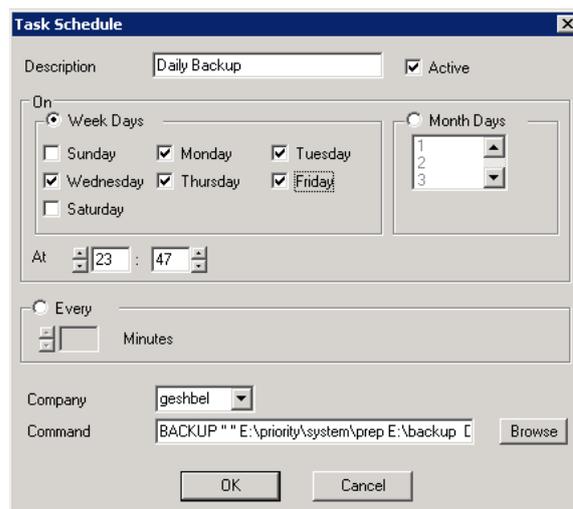
BACKUPS VIA THE TABULA TASK SCHEDULER

TO INSTALL THE TABULA TASK SCHEDULER:

- Run the Tabula Services Setup program on the Priority server (System Management > System Maintenance).
- Flag the Tabula Task Scheduler option, and press Update to authorize the installation.
- Run the Task Scheduler program and press the Start Tabula Task Scheduler button.

TO ACTIVATE THE AUTOMATIC BACKUP PROCEDURE:

- Run the Task Scheduler program on the Priority server and press the Task List button.
- Move to the "Daily Backup" procedure and press Modify.
- Flag the Active option.
- In the Week Days section, flag the days of the week on which you want to perform backups (usually, every day of the week), and specify the desired time underneath.



- In the Command field, the backup command appears. The next-to-last parameter defines the folder to which the data will be transferred. The default value is

- C:\priority\backup, but it may be revised. Do not change any of the other parameters.
- f. Press OK and close the windows you opened.
 - g. Repeat Steps A through F and define an automatic backup to be performed hourly. In the Task List, select the "Hourly Backup" program. Flag the Every option and specify the interval between backups (in minutes) underneath. These backups save the logs (i.e., the last transactions performed in the entire company), and not all of the system data.
 - h. In the same manner, define the "Weekly Backup". In the Week Days section, flag the day of the week on which the backup will be performed (for example, Saturday) and specify the desired time underneath.

STORING THE BACKUP ON A TAPE

Copy the backup directory (created when running the backup program – for example, C:\priority\backup) onto the backup tape.

TWO: MAINTENANCE

CLEARING TEMPORARY TABLES

Priority programs save intermediate results and other data in temporary tables. This data is usually deleted when a program finishes running. However, when the program is prevented from terminating properly (e.g., due to a power outage, computer crash, procedure freeze) this data remains stored in the tables, needlessly increasing the size of the database. You can delete all such unnecessary data by running the Clean Temporary Tables task in the Tabula Task Scheduler. It is recommended to run this program now and then, but only on a weekend or at night, when nobody is working on the system.

Note: The program only requires several minutes to run; however, it could cause serious problems if it runs simultaneously with other programs. Make sure that it does not overlap with any other tasks in the Scheduler.

RECOVERY

The following are instructions for performing a recovery when data needs to be retrieved from a backup. These actions should be performed on the server only.

Important: This section is intended for authorized DBA professionals. If needed, you can purchase DBA services from Eshbel.

REQUIREMENTS

- Up-to-date server – If you are performing the recovery on your backup server, rather than the original Priority server, make sure that it contains the current release of Priority, with the same service pack that was last run before the system crashed, as well as SQL Server 2005 Express Edition.
- Sufficient disk space – Make sure that there are at least 2GB of open memory on the server drive, as well as twice as much memory as that used by the data file directory on the original SQL server.

- No users are currently using the system – Users cannot be working in Priority during a recovery.
- Active remote software – In case you need assistance from the Eshbel technical support staff.
- The latest available backup tape.
- SQL Management Studio – Make sure that this SQL Express administrative tool is installed on your computer. You can download this tool without charge from the Microsoft web site: <http://msdn.microsoft.com/vstudio/express/sql/download>.

RECOVERY PROCEDURE

- a. Recover the databases from the backup tape to the SQL server. If you used the Priority's built-in backup program, these data are located in the priority/backup/data directory. If the data from the old server are available, you should also recover the log files recorded after the last full backup, which include the latest transactions performed in the entire company. If the logs were copied to another computer in the network as part of the backup routine, recover them from that computer.
- b. If you are using the backup server (i.e., the alternate server) to recover data, change the name of the server to that of the original server. In addition, change the name of the SQL server as well. To do so, execute the following commands in the SQL Management Studio:

```
sp_dropserver old_computer_name
```

```
sp_addserver new_computer_name, local
```

- c. Recover user data from the backup. To do so, use the code in Appendix A.
- d. Change the names of the system and bin.95 sub-folders in the priority directory, to system_old and bin95_old, then recover those directories from the tape.

Note: Do not overwrite the old directory – make sure that you have already changed its name.

- e. Define Sharing for the recovered directory, according to the definitions of the original directory.
- f. If there were companies in the system that did not undergo backup (e.g., practice companies), delete them by running the Delete Company program in Priority System Management > System Maintenance > Companies Afterwards you can create new practice companies.
- g. Copy the tabula.ini file from the c:\priority\backup directory to the C:\WinNT or C:\Windows directory. Note: If the file was not backed up, you can receive a new Priority license from Eshbel and install it.
- h. Make sure that the backup process has been properly defined in the computer in which the recovery is performed (see Section I). If necessary, redefine the maintenance programs and backup scheduling.

- i. Check the state of the Priority system by running several reports. These checks are intended to determine if there are any breaks or problems in the continuity of document numbers after the completion of the recovery:
 - Check J. Entry No. Continuity (Financials > General Ledger > Financial Statements > Auxiliary Reports)
 - Check Finance Doc No. Continuity (same menu path; run the report for the most commonly used document in your system)
 - Document No. Continuity Check (Inventory > Inventory Maintenance – again, run this report for the most commonly used document in your system).
- j. Users can now enter and work in the system. When you have verified that the Priority system is working as it should with the new data, delete the system_old and bin.95_old folders and all their contents. If you recovered the databases from a backup tape to a temporary directory on the disk, you can delete this directory as well.

APPENDIX A: SQL CODE TO RECOVER USER DATA

```
use master
go

declare logincur cursor fast_forward for
select name, password, sid
from system.dbo.tabula_sql_logins
where name <> 'tabula'

declare @loginame varchar(50),
        @passwd nvarchar(128),
        @sid varbinary(85),
        @qry nvarchar(128)

open logincur

fetch next from logincur
into @loginame, @passwd, @sid

while (@@fetch_status = 0)
begin

exec master..sp_addlogin @loginame, @passwd, 'system', 'us_english', @sid, 'skip_encryption'
set @qry = N'grant view server state to [' + @loginame + ']'
exec sp_executesql @qry
exec master..sp_addsrvrolemember @loginame, 'sysadmin'

fetch next from logincur into @loginame, @passwd, @sid

end

close logincur
deallocate logincur
go
```