

# XMPie Server Maintenance

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# 1 Overview

To maximise performance of XMPie PersonalEffect, it is important to maintain your servers correctly. The following guide will step through some recommended maintenance tasks that should be performed to ensure that a system continues to run smoothly and to help pre-empt any issues that may arise.

# 2 Audience

The tasks outlined in this document should only be performed by the system engineer who is responsible for the maintenance of the XMPie PersonalEffect servers. This document assumes a high level of Microsoft Windows Server knowledge and it is possible to cause irreversible damage to the XMPie PersonalEffect installation if not followed correctly. Before running any of these tasks it is always recommended to perform a backup this server SQL.

# 3 Frequency of Maintenance Items

To maintain performance, it is important to run the tasks that are outlined in this document at regular intervals. You can refer to the chart below to see the recommended interval for each task.

**IMPORTANT:** These tasks should only be performed during off peak periods, when your server is not in use.

Level	Task Description	Recommended	Reference
uProduce	Backup the XMPie Server	Daily & before upgrade	<a href="#">Page 2</a>
SQL	Backup the XMPie SQL Instance	Daily & before upgrade	<a href="#">Page 4</a>
Windows	Install Windows Updates	Weekly & before upgrade	<a href="#">Page 6</a>
Windows	Check Windows Time	*Weekly	<a href="#">Page 6</a>
Windows	Defragment the File System	Monthly	<a href="#">Page 6</a>
Windows	Check Disk Usage	Weekly & Before upgrade	<a href="#">Page 7</a>
uProduce	Delete uProduce Temporary Files	Monthly	<a href="#">Page 7</a>
uProduce	Remove old jobs from the Job Center	Monthly	<a href="#">Page 8</a>
SQL	Check SQL Database file size	**Weekly (or before any large campaign)	<a href="#">Page 9</a>
Analytics	Remove old Events from the Tracking Database	**Weekly (or before any large campaign)	<a href="#">Page10</a>
SQL	Rebuild SQL Database Indexes	Monthly	<a href="#">Page 10</a>

\* If your Windows time is correct each time you check, it means the NTP server is functioning correctly and you can cut back on the frequency of this maintenance task.

\*\* This task is critical if running Microsoft SQL Express Edition.

## 4 Backing up the XMPie Server

As a precautionary step, it is crucial to backup the PersonalEffect System in order to be prepared for any scenario in which the system crashes or completely fails. The backup should include databases, files system and registry.

**IMPORTANT: Backup should be performed daily and before any software upgrades.**

There are two options when performing a backup:

- A full system backup which will back up the complete operating system and PersonalEffect installation. This will take more space and may take longer, but it will allow you to recover from a failure quicker and will cover you for failures not only within the XMPie system but also within the Windows OS.
- The other option is to only backup the XMPie file system and registry settings.

If you are performing a full system backup there are many tools available which are outside of the scope of this document. One such tool that comes free with Windows Server 2008 R2 is the “Windows Server Backup” application. Documentation can be found here:

<http://technet.microsoft.com/en-us/library/cc753528.aspx>

If you choose to backup only the file system, please refer to the chart on the following page that contains all the locations critical to XMPie that need to be backed up. For information on how to backup the registry and database, refer to the following links <http://windows.microsoft.com/en-us/windows7/Back-up-the-registry> and <http://msdn.microsoft.com/en-us/library/ms187510.aspx> respectively.

**To backup the File System:**

Application	Folder that should be backed up	Server	Comments
uProduce	[drive letter]:\xmpie	*uProduce machine	
uStore	[drive letter]:\xmpie\uStore	*uProduce machine	
Marketing Console	[drive letter]:\inetpub\wwwroot\MarketingConsole and [drive letter]:\inetpub\wwwroot\MarketingWebServices	*uProduce machine OR **Web Server	
RURL Wizard	[drive letter]:\xmpie\XMPieWebSites	*uProduce machine OR **Web Server	
Isapi_Rewrite (Helicon)	[drive letter]:\Program Files\Helicon\ISAPI_Rewrite3\httpd.conf	*uProduce machine OR **Web Server	The path may vary in case of localized OS or 64-bit environment

**To backup the Registry:**

Application	Registry Entry that should be backed up	Server	Comments
All	HKLM\SOFTWARE\XMPie [32 bit] or HKLM\SOFTWARE\Wow6432Node\XMPie [64 bit]	*uProduce machine AND **Web Server	

**To backup the Database:**

Application	Databases that should be backed up	Server	Comments
uProduce	XMPDB2, XMPDBASSETS, XMPDBHDS & XMPDBIF	*uProduce machine	
Marketing Console	XMPDBTRACKING	*uProduce Machine	
uStore	uStore	*uProduce Machine	

\* uProduce machine refers to Solo \ Director

\*\* Web server refers to Proxy server (located in the DMZ)

## 4.1 Backing up the XMPie Database with the XMPie Backup Utility

To assist customers in backing up the XMPie Database, XMPie provides an application called “XMPie Backup Utility” that can be found here: <https://xmpiecs.box.com/shared/o79j23f649> .

This application should be extracted onto your base XMPie server. Before running it for the first time, you may want to open “XMPie Backup Utility.exe.config” in a text editor and check that the following keys are correct:

- `<add key="SQLInstance" value="localhost\xmpie" />`

This is the location of your SQL instance. By default the Backup Utility assumes it is on the same server, but this can be changed to point to a different server.

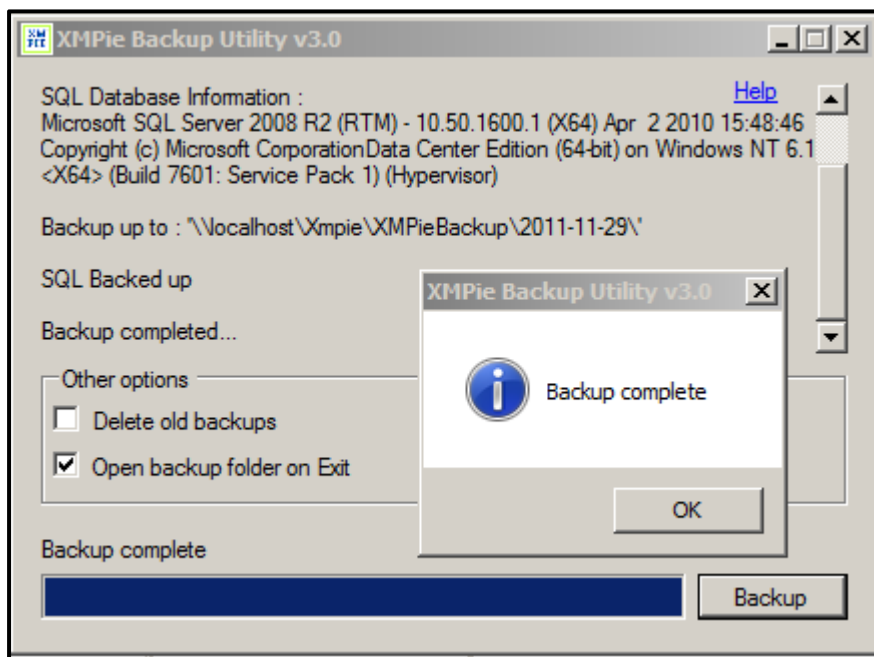
- `<add key="BackupPath" value="\\localhost\Xmpie\XMPieBackup" />`

This is the destination of your backup files. This can be changed to point to an external share or alternate drive.

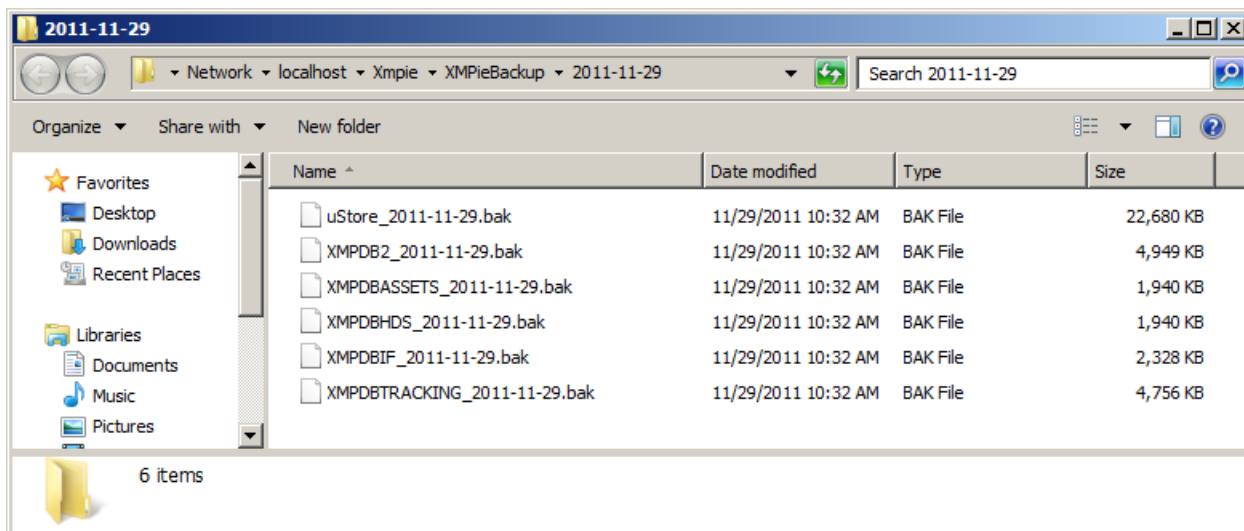
- `<add key="DeletePrevious" value="True" />`

This key tells the XMPie Backup Utility to delete previous backups when creating a new one. This will help keep hard drive space usage to a minimum but means that only the most recent backup will be kept. If set to “False” , it will not delete existing backups.

Once these values are set, you can simply run the XMPie Backup Utility.exe and press the **Backup** button. Once the backup is complete, it will prompt you with a “Backup Complete” message box.



If you now browse to your backup directory, you should see a file for each Database that has been backed up.



It is also possible to run this application with no user interaction, as a scheduled task in Task Scheduler or from a Command Prompt by executing it with the "auto" switch as shown below:

```
"XMPie Backup Utility.exe" auto
```

**IMPORTANT:** If using the "auto" switch please make sure the "XMPie Backup Utility.exe.config" file is configured correctly and the backups are being created, as you will not be prompted if the configuration is incorrect.



## 5 Installing Windows Updates

Windows updates should be set to "Check for updates but let me choose whether to download and install them" to ensure resources and bandwidth are not used during peak periods and also to ensure the server is not automatically restarted while an XMPie campaign is running.

This can be set by going to: **Windows Updates > Change Settings > Important updates.**

To ensure a secure, up-to-date system, it is recommended to check Windows Updates at least once a week. If updates are found, make sure you have a current backup before applying them, in case there are any conflicts with the XMPie PersonalEffect system. Updates should be applied when there is no activity on the server.

If running multiple servers, make sure the same Windows Update settings are defined for all servers and that all server are running the same updates.

## 6 Checking Windows Time

If the Windows time is set incorrectly on your servers, emails sent through XMPie e-Mail Service or ExactTarget might not actually be sent and instead return an error. The time settings of most servers will be automatically synchronized with an "NTP server", to set time automatically, which normally works as expected. However, in some cases (for example when running in a virtualised environment), it is possible for the time to drift out by a few minutes, which will cause email send failure. If you notice that your Windows time is drifting and you are running in a virtualised environment, refer to your virtualisation provider for information on how to correct this issue. For example:

VMWare - <http://kb.vmware.com/kb/1318>

VirtualBox - <http://www.virtualbox.org/manual/ch09.html#idp13756960>

## 7 Defragmenting the File System

Through time, the computer's hard disk may become damaged or fragmented (unavailable in a large contiguous block). If there is not enough contiguous space for the system to save a file, it saves segments of that file on different locations of the disk. This increases the time needed for an application to read a fragmented file.

Windows has a built-in defragmentation tool "Defrag" that can be used. For more information on this tool, please refer to:

- Windows 2008 Server - [http://technet.microsoft.com/en-us/library/cc731650\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc731650(WS.10).aspx)

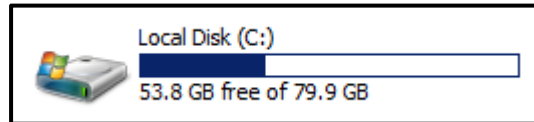
Or

- Windows 2003 Server - [http://technet.microsoft.com/en-us/library/cc772772\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc772772(WS.10).aspx)

Please note that during defragmentation disk usage will be very high and therefore system responsiveness will be impacted. We highly recommend only running/scheduling a Defrag only when your uProduce server is not in use.

## 8 Checking Disk Usage

XMPie PersonalEffect will store temporary files on both your OS drive and the XMPie data partition. It is important to make sure there is enough available space for your software to operate correctly. If all disk space is used the server will cease to produce any output. You can check the available disk space on each drive by pressing Win+E and confirming the available disk space on each drive. You should never let your available hard disk space on each partition get below 10GB.



If the drives are getting full, it would be wise to make sure the Recycle Bin is empty, and remove uProduce Temporary Files and Old Jobs as described in sections [9](#) and [10](#). Purchasing a larger drive should be considered in order to make sure the system runs without interruption when processing very large jobs.

## 9 Deleting uProduce Temporary Files

It is important to remove unused temporary files, as they are by default located on the primary OS drive which often has limited space.

To remove these files, you can run the following command from a Command Prompt.

```
forfiles /P %tmp% /M "*" /S -C "CMD /C DEL /F /Q @file" /d -7
```

This will remove any files from your Temp folder that are older than seven days. On servers that have less than 4GB free space in the system drive (C:), this should be run on a daily basis.

Advanced users may want to add this command to a batch file and set it to run at a scheduled interval in "Task Scheduler".

Please note, when running the above command within a Windows 2008 Remote Desktop Connection, you may find it only removes temporary files that have been created within your Remote Desktop session. In this case you can either manually delete your temporary files from Windows Explorer or modify the command above to point directly to your Temporary Files location. For example:

```
forfiles /P "C:\Users\%USERNAME%\AppData\Local\Temp" /M "*" /S -C "CMD /C DEL /F /Q @file" /d -7
```

Note: The variable `%USERNAME%` will automatically be replaced with the logged in user,

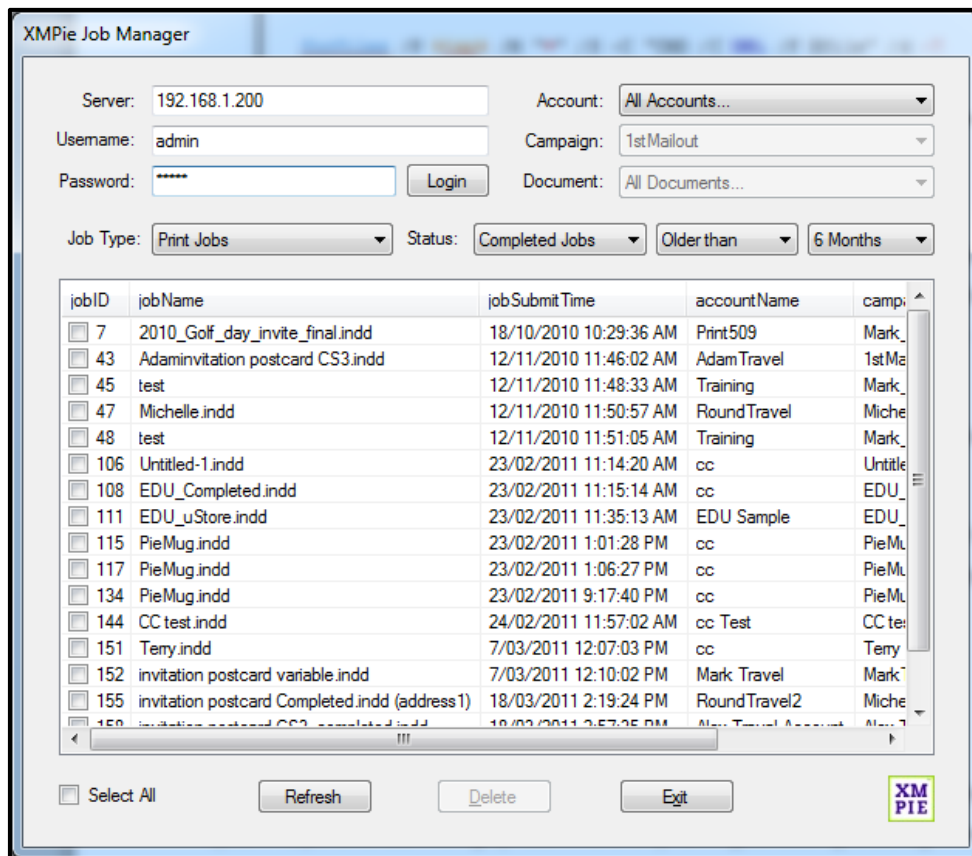
## 10 Removing Old Jobs from the Job Center

To maximise performance of the XMPie PersonalEffect server and to minimise disk usage, it is recommended to remove old jobs from the Job Center once the job is completed and the output is no longer required on the server.

Unused jobs can be deleted from the Job Center, as described in Chapter 6 of the *uProduce User Guide*.

Alternatively, XMPie has created an application called the “XMPie Job Manager” that can be used to delete in bulk jobs matching a certain criterion (for example, completed jobs older than 7 days.)

This tool can be downloaded from <https://xmpiecs.box.net/shared/8h3ehg5tvs/1/36442446/500340994> . You can extract this tool either to a computer that can browse to the uProduce server or directly to the uProduce server and then run it.



After running the XMPie Job Manager, fill in the server information, filter your selections by choosing the **Account**, **Campaign**, **Document**, **Job Type** and **Status**. Select the checkboxes next to the JobID that you would like to delete and then, hit the **Delete** button. Alternatively click the **Select All** checkbox to select all the currently filtered jobs and click **Delete**.

**IMPORTANT:** Please use this tool with caution as any deleted jobs cannot be retrieved.

# 11 Checking SQL Database File Size

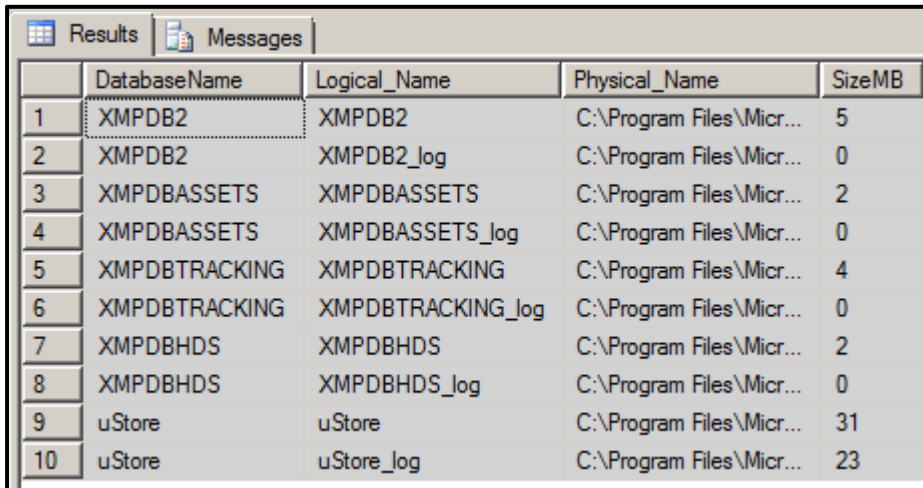
XMPie PersonalEffect uses Microsoft SQL for all of its database storage. Depending on the version of Microsoft SQL you have installed, there is a limitation on the maximum file size of each SQL Database as shown in the table below:

Microsoft SQL Version	Maximum Database Size
SQL Server 2005 Express Edition	4 GB
SQL Server 2005 Standard Edition	16 TB
SQL Server 2008 R2 Express Edition	10 GB
SQL Server 2008 R2 Standard Edition	524 PB

You can check the size of your XMPie databases by running the following SQL command on your SQL Server.

```
SELECT DB_NAME(database_id) AS DatabaseName,
Name AS Logical_Name,
Physical_Name, (size*8)/1024 SizeMB
FROM sys.master_files
WHERE DB_NAME(database_id) in ('XMPDB2'
, 'uStore', 'XMPDBASSETS', 'XMPDBTRACKING', 'XMPDBHDS')
GO
```

This will give you a list of the XMPie databases and their file size:



	DatabaseName	Logical_Name	Physical_Name	SizeMB
1	XMPDB2	XMPDB2	C:\Program Files\Micr...	5
2	XMPDB2	XMPDB2_log	C:\Program Files\Micr...	0
3	XMPDBASSETS	XMPDBASSETS	C:\Program Files\Micr...	2
4	XMPDBASSETS	XMPDBASSETS_log	C:\Program Files\Micr...	0
5	XMPDBTRACKING	XMPDBTRACKING	C:\Program Files\Micr...	4
6	XMPDBTRACKING	XMPDBTRACKING_log	C:\Program Files\Micr...	0
7	XMPDBHDS	XMPDBHDS	C:\Program Files\Micr...	2
8	XMPDBHDS	XMPDBHDS_log	C:\Program Files\Micr...	0
9	uStore	uStore	C:\Program Files\Micr...	31
10	uStore	uStore_log	C:\Program Files\Micr...	23

If any of these databases are approaching the maximum database size for your version of Microsoft SQL, it would be wise to consider an upgrade to Microsoft SQL Server 2008 R2 Standard Edition, which has an upper limit of 525 Petabytes, considered unlimited for our uses.

If the XMPDBTracking database is too large, consider removing tracking data for campaigns that are no longer required, as described in section [12](#) of this Technote.

If any of your databases are approaching the file size limit for your version of SQL Server, it's strongly suggested to monitor these databases before and during a campaign, as if they do hit their size limit during a campaign your campaign may go offline.

## 12 Removing old Events from the Tracking Database

When a campaign has tracking turned on, these tracking events are recorded in the XMPDBTracking database. Over time this database can grow very large in size and depending on the version of SQL that is installed on your server, it is possible to hit a maximum database size which will stop events from being tracked. If this occurs mid-campaign you may lose tracking information related to that campaign. Therefore it is very important not only to monitor the size of this database as described in section [11](#), but to also remove tracking from campaigns that are no longer required. Not only will this decrease the size of the Database but it will also improve performance within Marketing Console.

For instructions on how to remove unused tracking events, please refer to Database Maintenance Section on Page 67 of the *Marketing Console Administrator Guide* which can be downloaded from <https://xmpiecs.box.com/shared/8rmcdqxxm8/1/87081823/892959218>

## 13 Rebuilding SQL Database Indexes

It is recommended to perform database reorganization on your SQL database monthly. This will rebuild the indexes so that the data is no longer fragmented. Fragmented data can cause SQL Server to perform unnecessary data reads, slowing down SQL Server's performance.

**IMPORTANT:** Before running any SQL Commands please make sure a backup of your database has been taken.

The following SQL command can be run on your SQL Server to reindex the required XMPie databases.

```
-- This will reindex all tables in the 'uStore', 'XMPDB2' and 'XMPDBASSETS'  
databases if there is sufficient space.  
USE uStore  
GO  
EXEC sp_MSforeachtable 'dbcc dbreindex(''?'')'  
  
USE XMPDB2  
GO  
EXEC sp_MSforeachtable 'dbcc dbreindex(''?'')'  
  
USE XMPDBASSETS  
GO  
EXEC sp_MSforeachtable 'dbcc dbreindex(''?'')'
```

**IMPORTANT:** Reindexing will temporarily take your database offline. Only reindex when the server is not in use.