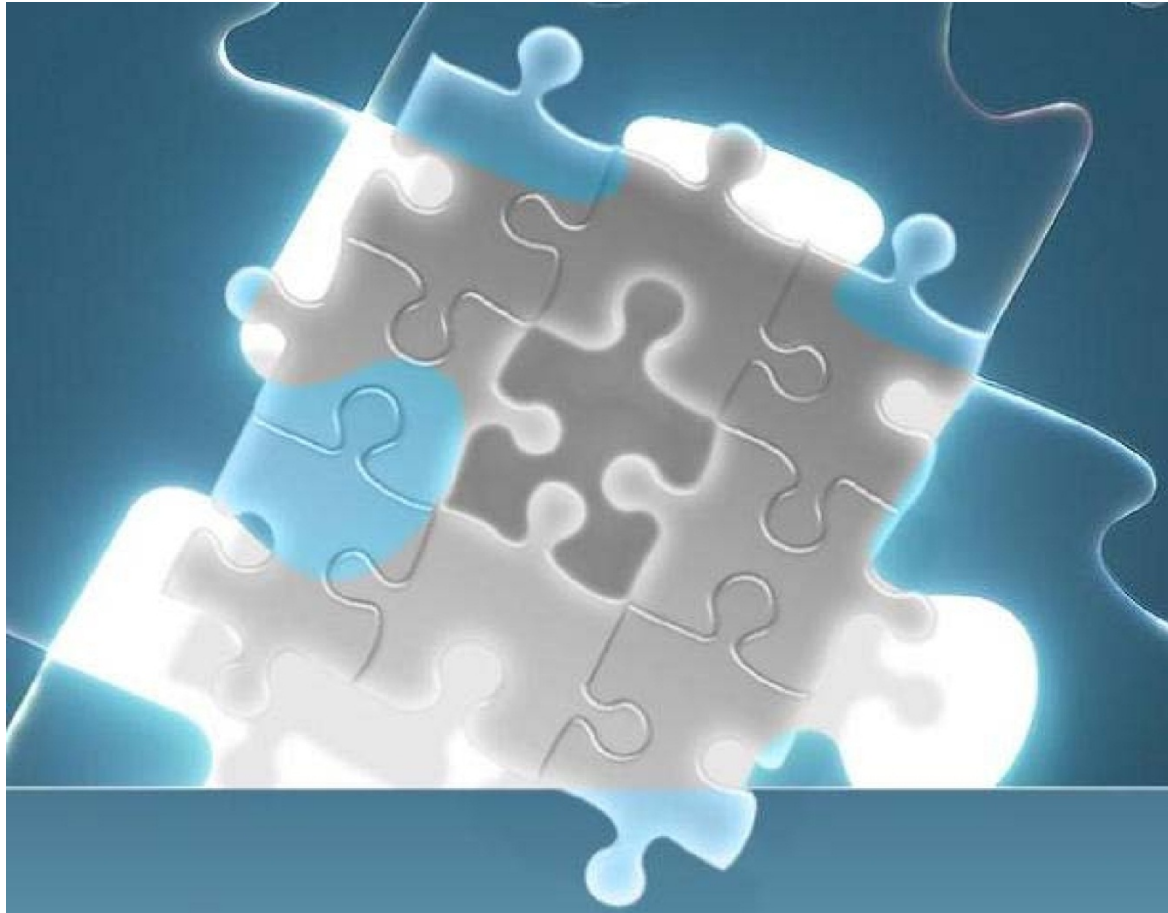


Application Note



Automating License Asset Manager (LAM) Backups



This document will guide you through the process of instituting an automated License Asset Manager (LAM) database backup system using our supplied scripts under the Linux and Microsoft Windows family of Operating Systems. In this document we utilize the supplied backup scripts and the built in task scheduling functions of both Operating Systems to achieve automation.

Abstract:

This document will guide you through the process of instituting an automated License Asset Manager (LAM) database backup system using our supplied scripts under the Linux and Microsoft Windows family of Operating Systems. In this document we utilize the supplied backup scripts and the built in task scheduling functions of both Operating Systems to achieve automation.

Automating Backup(s) in Linux:

Before you begin check to

- * Copy of the LAM Backup BASH
- * Working configuration of the LAM/



make sure of the following:

- script “backup.linux”
- LM System.

- * The ability to schedule jobs via crontab.

Now we can begin the process...

Note: The LAM system is not to be shutdown during automated backups. Our script will attempt to start the LAM system if it detects that it is not running!

Locate the “backup.linux” script located in the /<LAMLMLM Installation Root>/lamlm_bundle/apache-tomcat-x.x.x/webapps/lam/scripts/ directory and make a copy of it into your desired location on the system.

You will need to edit the circled lines to reflect the correct values for your system.

Now open the file for editing, in this document we will use ‘Vi’.

```
[sysadmin@localhost shellScript]$ vi backup.linux
```

(Screenshot of opening ‘backup.linux’ script for editing)

After striking return you will be presented with the following screen, locate the circled lines in the screenshot on the following page.

```
#!/bin/bash
#####
#
# Team EDA Inc. License Asset Manager Backup Script      #
# support@teameda.com                                  #
# By: Dustin F.                                        #
#
# Instructions: Edit the below lines to reflect your paths! #
#
#####
#Change to reflect your *TOP LEVEL* LAM(LM) install path below:
path=/home/sysadmin/lamlm

#Change to reflect desired location of the Backup and Log files!:
dumpPath=/home/sysadmin/LAMBackups/

#LAM mysql database user name: (Leave default in most cases!)
userName=lamuser

#LAM mysql database password: (Leave default in most cases!)
pass=lampassword
##### NO EDITING BELOW THIS LINE!!!!#####
```

(Screenshot of 'backup.linux' file in VI editor)

After editing the lines to reflect the proper paths and database information (if needed) save the file.

You will probably want to create a new folder to house the LAM backup and log files.

(Screenshot of example 'mkdir' command)

```
[sysadmin@localhost ~]$ mkdir ./LAMBackups
```

Now we will schedule the script to run with crontab; this will allow the script to run automatically.

From the account of the user who will be running the backup script type 'crontab -e' into a terminal window. This will bring up the crontab file for editing.

An example crontab entry to run the script might be:

(Screenshot of example crontab backup entry)

```
crontab: installing new crontab
This [sysadmin@localhost LAMBackups]$ crontab -l
30 0 * * * /home/sysadmin/lamBackup/backup.linux > /dev/null
[sysadmin@localhost LAMBackups]$
```

example will cause the script to back up the LAM database at 12:30AM every night; this is our recommended interval.

It is a good idea to test that your crontab entries command is working by setting crontab a few minutes into the future and checking the folder where the LAM backup logs are stored. The folder should contain a valid .sql backup file and log once the script executes.

(Screenshot of example backup .SQL file and log)



You should now have working automated backups under Linux! If you need help with crontab or the script is having issues please contact us for help.

Automating Backup(s) in Windows:

This document will guide you through the process of instituting an automated License Asset Manager (LAM) database backup system using our supplied scripts under the Microsoft Windows family of Operating Systems. In this document we utilize the Windows Task Scheduler program to automate the system.

Before you begin check to

- * Windows XP or later Windows
- * Working configuration of the LAM
- * Proper rights on the system to



make sure of the following:

- Operating System.
- LM System.
- schedule tasks.

Now we can begin the process...

Locate your local installation of the LAMLM system.

(The default for an installation of LAM/LM is “C:\LAMLM\” or “C:\LAM”)

Navigate to the “C:\LMLM\apache-tomcat-7.0.2\webapps\lam\scripts\backup.bat” folder. You should see the “backup.bat” script.

Copy this script into a location of your choosing; the location you choose will be the location that the task scheduler runs them; so be sure you have appropriate permissions on the system. You may also leave the script in its current location if you like.

However, whether you decide to leave the files in the default folder or not you should create a folder in which the backup files will be stored.

* i.e. “C:\backupLAM”

Once the script is copied into your desired location; open up the “backup.bat” file for editing. We will be making two edits to this file (“backup.bat”).

Look immediately below the creation comments line and you will see the two lines we will be modifying. They are emphasized in the screenshot below. **Log files from each backup will also be stored in the same location as your backups.**

```

:: #-----#
:: #
:: #   Auto LAM Database Backup Batch Script (windows)
:: #   2010, Team EDA Inc. http://www.teameda.com
:: #   Created by Dustin F. dustin@teameda.com
:: #
:: # Administrator Modify variables directly BELOW this line
:: #-----#
:: #Edit the path on the line below to match where you would like the backups stored...
::   @set dumpDir=c:\backupLAM\
:: #Edit the path on the line below to point to your mysql\bin directory...
::   @set myPath=c:\LMLM\mysql-5.1.49\bin\
:: #
:: #
:: #-----DO NOT EDIT BELOW THIS LINE-----#
:: # (Screenshot of lines to modify in "backup.bat")

```

Just as the remarks in the file say edit the first line to reflect where you would like the database backups saved. The script defaults to “C:\backupLAM”; this can be any location on any drive you would like as long as you have the permissions! **Make this match the folder you created on the previous page.**

The second line deals with the “mysql-x.x.xx\bin” directory. If necessary change this path to reflect your configuration. **The mysql folder will be located directly under your installation directory in all cases.**

Once both edits are completed you should save the changes to the file.



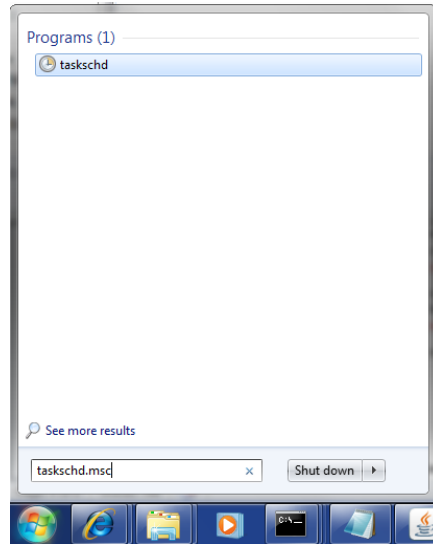
Checkpoint:

At this point you should have completed:

- * Creating a folder for your backups
- * Editing the “backup.bat” to reflect your backup folder, and mysql-x.x.xx/bin
- * Moved the script to a folder of your choosing or left it in its default location.

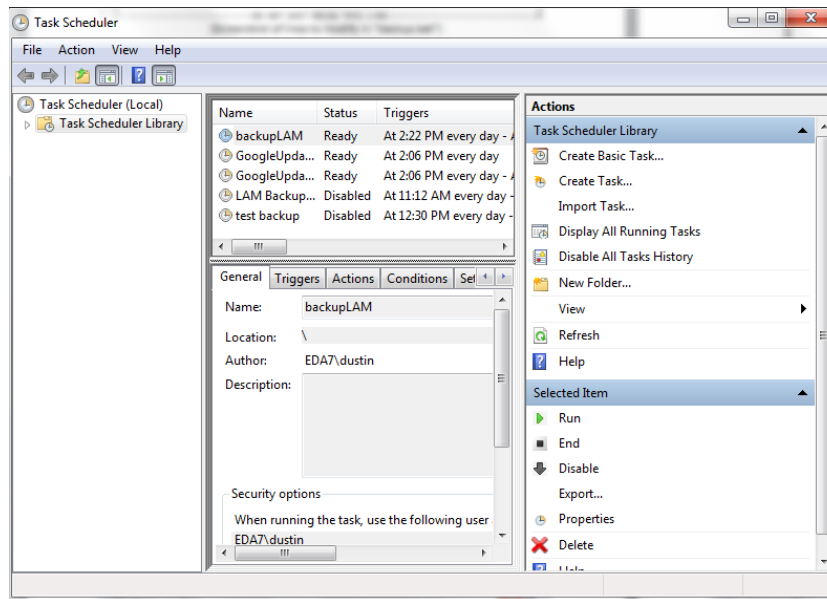
All that is left is to automate the process:

Press the start button on the taskbar. Press “Run” and type “tasksched.msc” then press enter. **Note if you are using Windows Server 2003 or Windows XP you will need to open “Scheduled Tasks” from the Control Panel.**



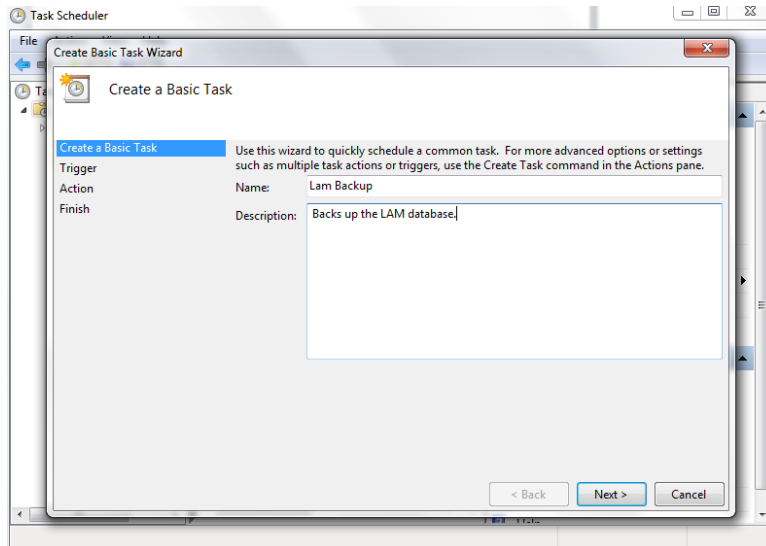
(Screenshot of opening Task Scheduler)

You will now be presented with the Windows Task Scheduler as seen below.



(Screenshot of Task Scheduler upon opening)

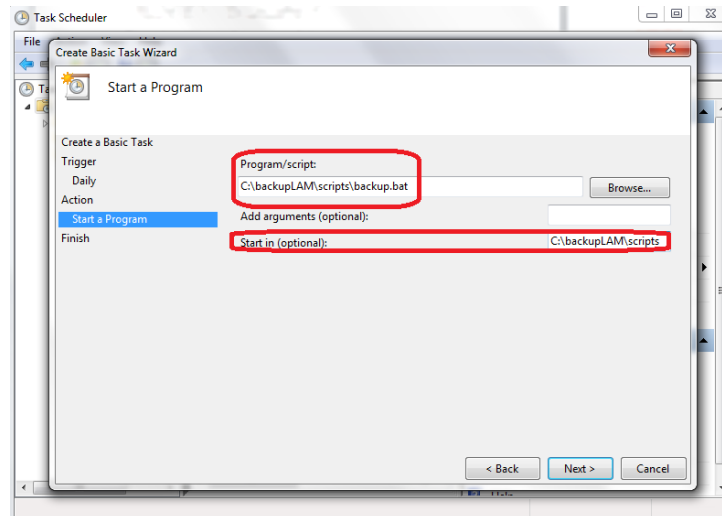
Using the “Action Menu” select “Create Basic Task”..



(Screenshot of Basic Task Wizard)

Continue through the next screens specifying when you would like the script to run. ***A nightly backup is recommended.**

When you reach the **“Start A Program”** section of the wizard make sure you browse to the script **“backup.bat”**.



(Screenshot of “Start a Program” step in Create Basic Task Wizard)

Do not click next until you have specified the “Start In Location”; this location is where the two scripts are stored on your system and will be different than the screenshot.

After this is complete you should press next and then finish.

If you would like to set more triggers to start the backup script you can choose the to open the **“Properties”** of the newly created task and click on the **“Triggers”** tab.

backup	1/4/2011 4:32 PM	Windows Batch File	2 KB
backupLAM.2011-04-01.16.32.sql	1/4/2011 4:32 PM	SQL File	561 KB
LAMBackup_log.2011-04-01.16.32	1/4/2011 4:32 PM	Text Document	1 KB

(Screenshot of LAM Backup Folder)

Automated Backups should now be in place; be sure to check that they are created properly!

IMPORTANT NOTE:

The LAM (or LAMLM) system must be running for the automated backups to work. It is best to schedule them late at night when no one will be using the system. The database system LAM uses prevents problems by applying an automatic lock to prevent changes to the database tables during backups.

For Technical Support call TeamEDA Inc. at 978-251-7510 or email support@teameda.com