

Automatic restart Tomcat on Windows script via TaskScheduler daily - A command line to add / remove new Windows "Cron" like job

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I'm responsible for a project environment made up of 3 components which is occasionally dying. Here is a short raw overview of environment

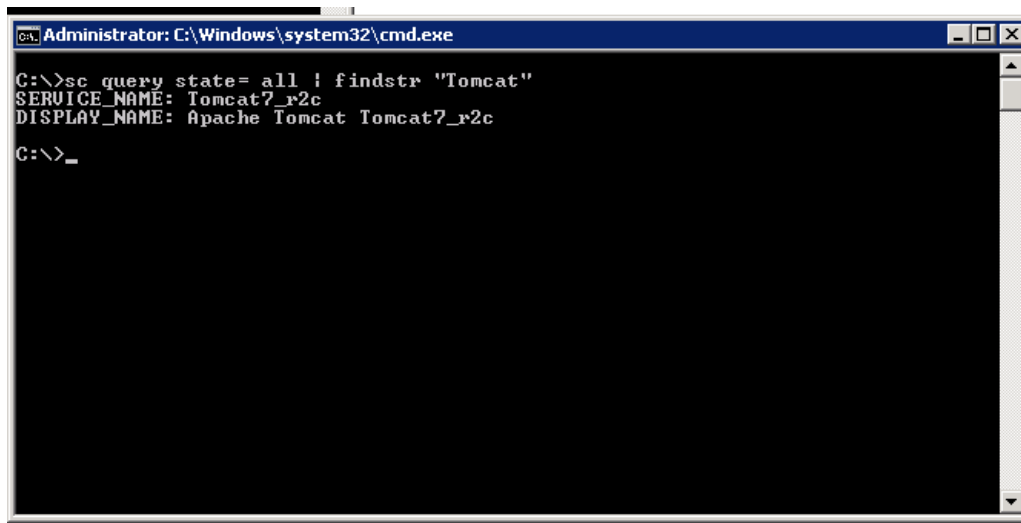
- **Apache Reverse Proxy (entry door to app server)**
- **Tomcat Server with an Application enabling web access**
- **A Java Standalone application using SQLite database**

The Tomcat and Java Standalone application is running on top of Windows 2008 RC2 Standard, the overall environment is becoming inaccessible periodically and in order to solve that the customer decided to implement a daily Windows server reboot in my opinion this is very bad approach as it is much better to just set an auto reboot of each of components using few tiny batch scripts and Windows Taskmgr, however as the customer is king and decided to implement the reboot its their own thing. However even after the daily server reboot was set once a week or so the application was becoming inaccessible and a Tomcat server restart was necessary as a fix.

Finally as a work-around to the issue, I've proposed the logical thing to automatically restart Tomcat once a day early in morning, here is how Tomcat auto Restart was implemented on the Win server:

1. Check out the name of running Tomcat service

First thing is to use the **sc** command to find out the Tomcat application name:



```
Administrator: C:\Windows\system32\cmd.exe

C:\>sc query state= all ! findstr "Tomcat"
SERVICE_NAME: Tomcat7_r2c
DISPLAY_NAME: Apache Tomcat Tomcat7_r2c
C:\>_
```

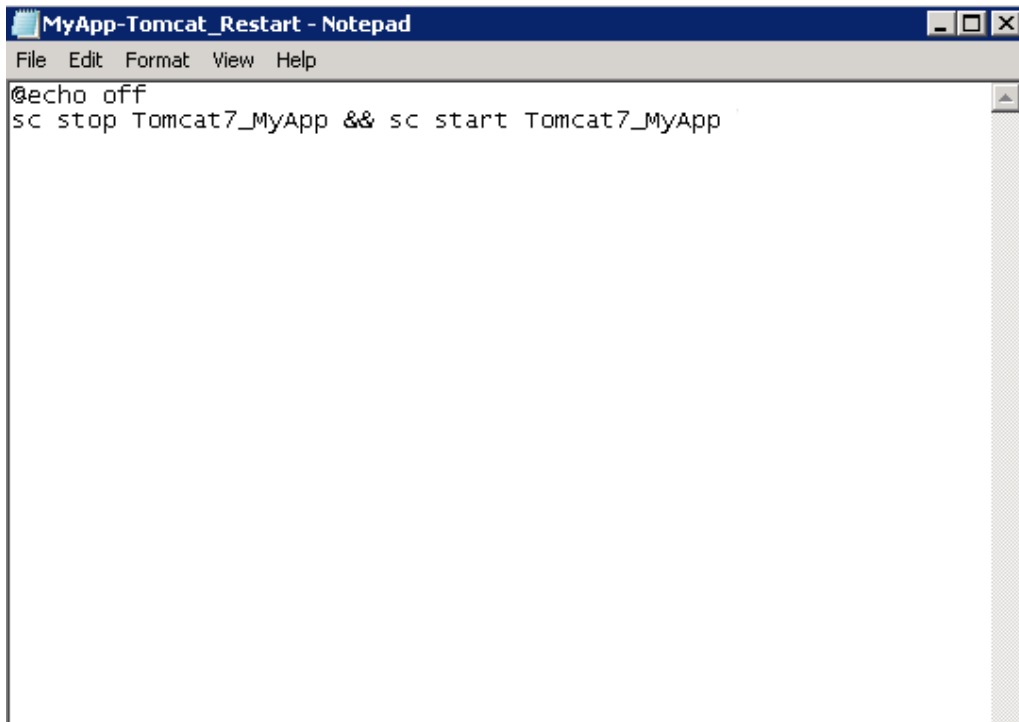
```
C:\Users\Georgi>sc query state= all| findstr "Tomcat"
SERVICE_NAME: Tomcat7_r2c
DISPLAY_NAME: Apache Tomcat Tomcat7_r2c
C:\Users\Georgi>
```

2. Create bat script to stop and start Tomcat service

Press keyboard **Win-button** + **R**, start **notepad** type inside:

```
@echo off
sc stop Tomcat7_r2c && sc start Tomcat7_r2c
```

(



```
MyApp-Tomcat_Restart - Notepad
File Edit Format View Help
@echo off
sc stop Tomcat7_MyApp && sc start Tomcat7_MyApp
```

Don't be confused from screenshot that I have Tomcat7_MyApp instead of Tomcat7_r2c, but I made screenshot in hurry for another app.

Save the file, somewhere (preferably) in *application folder/bin/* it is best to save it once with bat extension **MyApp-Tomcat_Restart.bat** and once as **MyApp-Tomcat_Restart.xml** (XML format file is later needed for import to Task Scheduler which understands .XMLs). The .bat file is good to have because it is useful to **sometimes restart Tomcat manually by running it (in case of some sudden Tomcat Appserver occurs even though the auto-restart script).**

3. Create new Task using command line (cmd.exe)

Task can be created also from command line using following syntax:

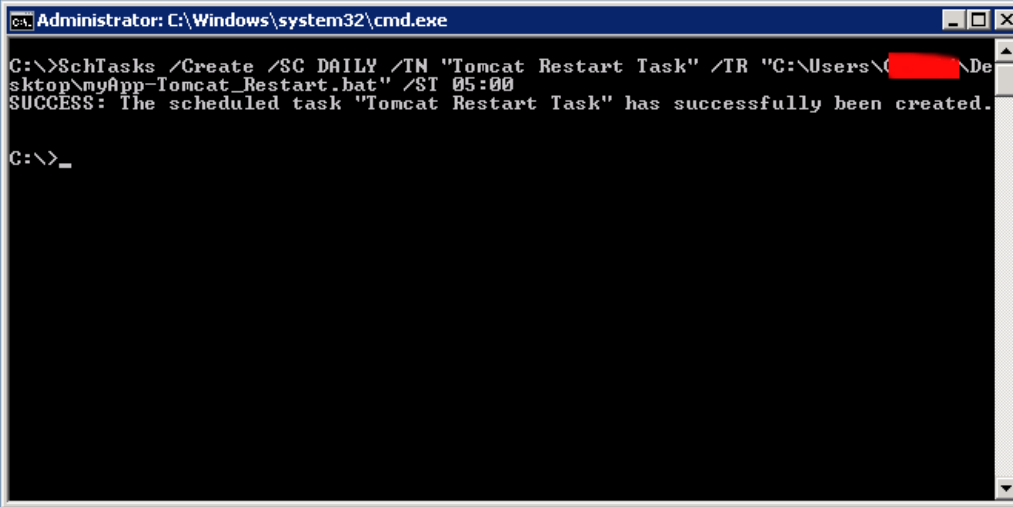
```
schtasks /Create [/S [/U [/P [ ]]]]
```

```
/XML /TN
```

Simple way to create a new Windows task is shown in below command, it will set my Tomcat Restart script to run everyday in 05:00 early morning when no employees are using the system:

```
schTasks /Create /SC DAILY /TN "My Task" /TR "C:UsersGeorgiDesktopmyApp-Tomcat_Restart.bat" /ST 05:00
```

SUCCESS: The scheduled task "Tomcat Restart Task" has successfully been created.



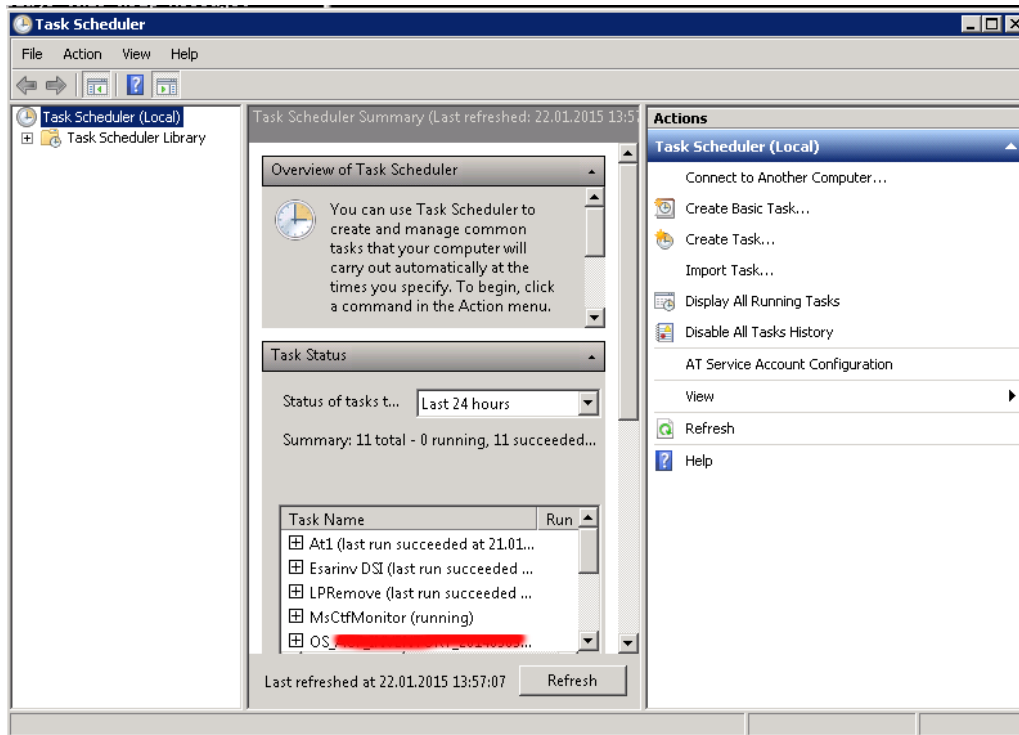
```
C:\>Administrator: C:\Windows\system32\cmd.exe
C:\>SchTasks /Create /SC DAILY /TN "Tomcat Restart Task" /TR "C:\Users\sktop\myApp-Tomcat_Restart.bat" /ST 05:00
SUCCESS: The scheduled task "Tomcat Restart Task" has successfully been created.
C:\>_
```

4. Create / Import new Windows "Cron" job

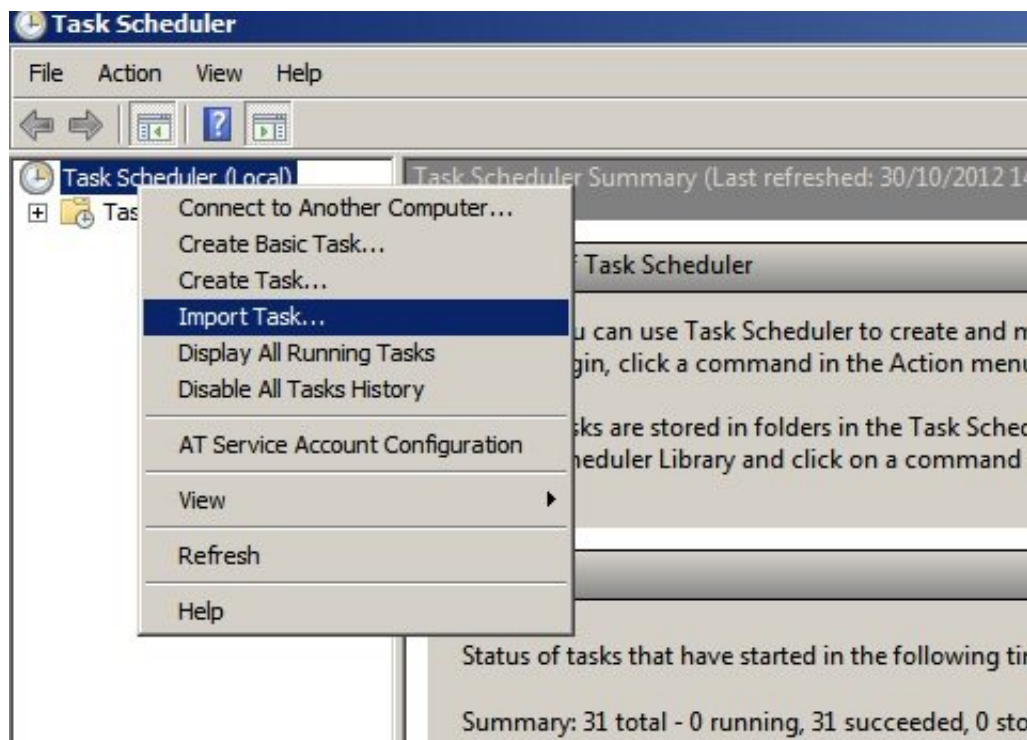
Alternative way is to use Task Scheduler GUI frontend and create new (Basic Task) or import just created script

To run Windows Task Scheduler from comamnd line :

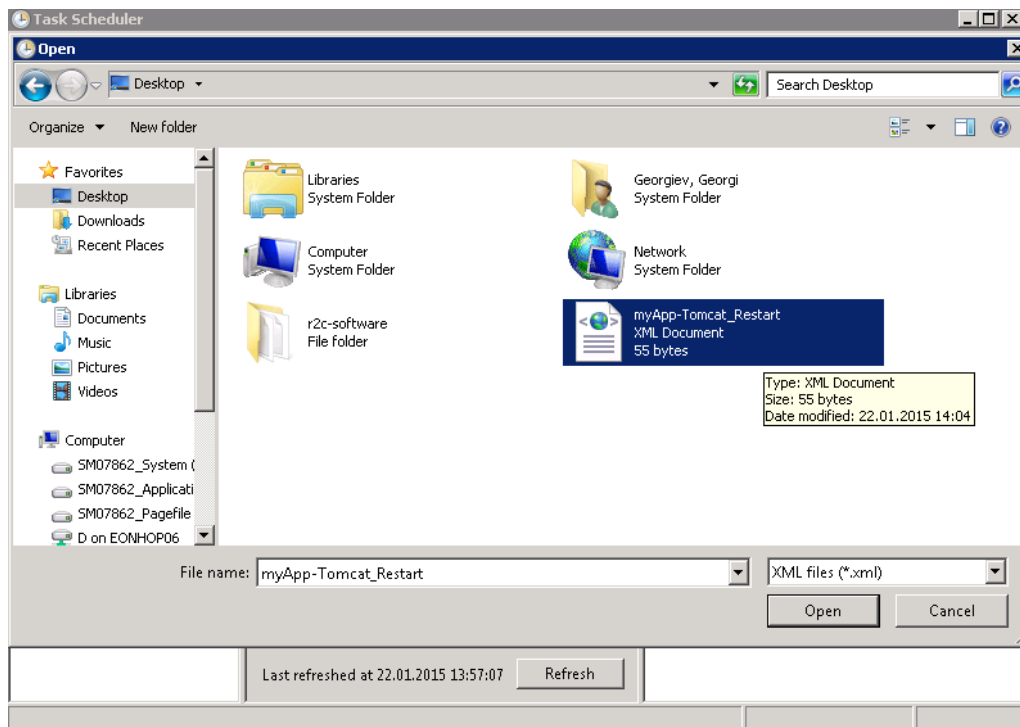
Taskschd.msc



To import already existing .XML formatted file for Task scheduler, right click on the Task Scheduler (Local) and select Import task

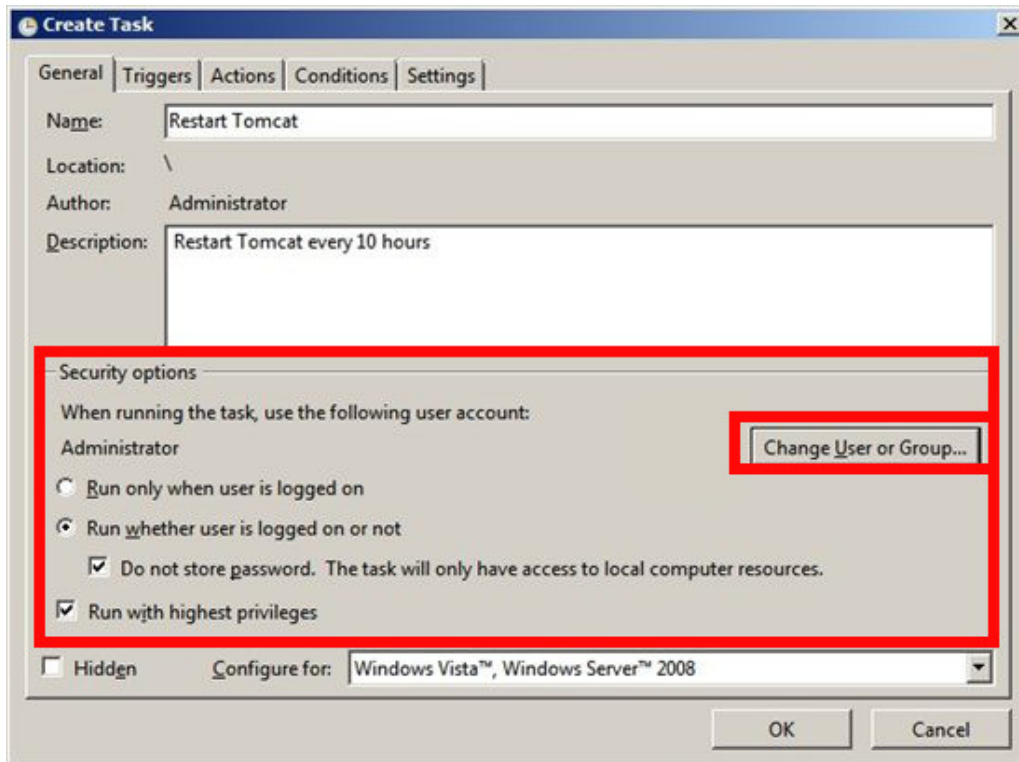


Import the **myApp-Tomcat_Restart.XML** previously created file



Adjust settings to suit your needs, but what change atleast:

- the path to the **myApp-Tomcat_Restart.bat** file in Actions tab
- the **Local User account** with which script will be running (administrator) in General tab



After making all changes you will be prompted for server **Administrator** account password

5. check existing Win Cron job from command line

To see the configured (Scheduled Tasks) in command line mode with a command:

Schtasks.exe


```
Administrator: C:\Windows\system32\cmd.exe
C:\>schtasks

Folder: \
TaskName
=====
At1
Esarinv DSI
OS_ACE_INVENTORY_2014030906325211220.job
OS_ACE_SANITY_2014030906330115900.job
VolSpace DSI
=====
Next Run Time
22.01.2015 23:00:00
22.01.2015 23:00:00
22.01.2015 21:00:00
25.01.2015 22:00:00
23.01.2015 09:00:00
=====
Status
Ready
Ready
Ready
Ready
Ready
=====

Folder: \Microsoft
TaskName
=====
INFO: There are no scheduled tasks presently available at your access level.

Folder: \Microsoft\Windows
TaskName
=====
INFO: There are no scheduled tasks presently available at your access level.

Folder: \Microsoft\Windows\Active Directory Rights Management Services Client
TaskName
=====
AD RMS Rights Policy Template Management Disabled
AD RMS Rights Policy Template Management N/A
=====
Status
Ready
=====

Folder: \Microsoft\Windows\AppID
TaskName
=====
PolicyConverter
VerifiedPublisherCertStoreCheck
=====
Status
Disabled
Disabled
=====

Folder: \Microsoft\Windows\Application Experience
TaskName
=====
AitAgent
ProgramDataUpdater
=====
Status
Disabled
Disabled
=====

Folder: \Microsoft\Windows\Autochk
TaskName
=====
Proxy
=====
Status
Disabled
=====

Folder: \Microsoft\Windows\CertificateServicesClient
TaskName
=====
SystemTask
=====
Status
N/A
Ready
=====
```

The command is Windows equivalent to UNIX / Linux's crontab, e.g.:

crontab -u root -l

6. Delete existing Windows Task Job from Command line

If you happen to need to delete just created task or any other task from command line (Assuming that you

know the previously created task name), use cmd:

```
C:>schtasks /Delete /TN "Tomcat Restart Task"
```

```
WARNING: Are you sure you want to remove the task "Tomcat Restart Task" (Y/N)? y
```

```
SUCCESS: The scheduled task "Tomcat Restart Task" was successfully deleted.
```

Task completed, Tomcat will auto-restart on Windows host at your scheduled time. Feedback is mostly welcome :)

Enjoy