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MKSBackup overview



MKSBackup is a **free** front-end for common **backup** tools like MS Windows [ntbackup](#), and it successor [wbadmin](#), Un*x tools like [tar](#), but also popular [ghettoVCB](#) to backup Virtual Machine on *VMware* ESX(i) host.

MKSBackup is developed in [Python](#) and is available for *Microsoft Windows*, *Linux* and other *Un*x* systems.

MKSBackup is driven by a *Command line interface* and jobs are defined in an *INI* file. Its main feature is to send an **email report** including log files and hints that could give the user confidence about the status of the backup.

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Advantages



MKSBackup rely on the most reliable backup tools available, but allows to use the same tool whatever OS or version you are using.
Learn one tools and backup them all !

Installation

Windows

The *.exe* don't require the installation of Python. It works on all *32* and *64* bits architectures, from Windows 2000 up to Server 2008R2. You need to have the *Microsoft Visual C++ 2008 Redistributable Package* on your computer. It is probably already installed, but if when running MKSBackup in a *command prompt* you get this error:

```
C:\TEMP> mksbackup.exe
Generate Activation Context failed for Reference error message: The referenced assembly is
not installed on your system
```

This is because you need to install it ! The [vcredist_x86.exe](#) is freely available from the Microsoft. Even if you run a 64bits OS, you need to install it.

Windows self install procedure

The *.exe* file can install itself. It can create *directories*, provides a default *configuration file* and create a backup task in the *task scheduler*. [Download](#) the file *mksbackup-X.X.X-win32.zip*, extract its content in one directory and double click on *mksbackup.exe*. A DOS box pop up and asks you some questions. Push *ENTER* if you agree with default values. No existing configuration files will be overwritten.

Be careful on Windows Vista and above you could have problems with the **User Account Control** when running installation. Try to disable your (UAC). Windows 2008R2 looks to be more permissive.

```
C:\TEMP>mksbackup.exe
Do you want to install MKSBackup ? (y/n) [y]> <= push ENTER for yes
Installation directory [C:\Magik] > <= push ENTER to validate or enter another directory
Directory C:\Magik\MKSBackup already exists, continue.
Copy mksbackup
config file already exists: C:\Magik\mksbackup.ini don't overwrite existing file.
copy documentation
Do you want to download and install ghettoVCB ? (y/n) [y]> <= push ENTER for yes
Download ghettoVCB.sh (last at http://communities.vmware.com/docs/DOC-8760)
Install ghettoVCB.sh and ghettoVCB.conf in sub directory vmware
create task MKSBackup in scheduler a task will be created, if it don't already exist
Enter your job names separated by spaces [BACKUP_JOB]> Choose the name of your backup job(s)
Please enter the run as password for Administrator: ***** your password is required ...
SUCCESS: The scheduled task "MKSBackup" has successfully been created. to create the task
Open task scheduler Modify task MKSBackup to meet your need
Open config file in notepad Edit your config file to creates job(s) your named above
Update or review your configuration and task
more on http://www.magikmon.com/mksbackup
```



March 6, 2013

Version 1.0.3 is out.

This version has a better support of Windows 2008R2 and support last ghettoVCB

January 4, 2013

Version 1.0.0 is out.

Version 0.9.39b is in use for a long time now and is stable. This version contains little bug fixes.

August 5, 2011

Version 0.9.37 is out.

Version 0.9.37 contains some bug fixes and small improvements for the post ghettoVCB backup FTP and SSH transfer.

March 21, 2011

Version 0.9.30 is out.

The **installation** helper is available for Linux and Windows hosts and includes download and installation of ghettoVCB.sh script and configuration files. **ghettoVCB** front-end provides **FTP upload** to any FTP server or to local host via an automatic built-in FTP server. Now FTP and SSH transfers starts as soon as an image file as been backed-up and run in parallel with the backup. **tar** front-end supports **differential** and **incremental** backups.

[more...](#)

```
Install completed, press ENTER to quit
```

Now you should have this directory tree on your disk:

```
C:
|-- Magik
|   |-- mksbackup.ini
|   |-- mksbackup.log this is where the log will be created
|   |-- MKSBackup
|       |-- mksbackup.exe
|       |-- doc
|       |-- README.txt
|       |-- ...
|-- vmware
|   |-- ghettoVCB.sh
|   |-- ghettoVCB.conf
|   |-- ghettoVCB-vm_backup_configuration_template
```

Modify the *mksbackup.ini* file and the *task* to meet your need.

Even on Windows you can run MKSBackup from the sources using *Python* interpreter. Version 2.6 is recommended. The developer team use [ActivePython 2.6.x](#) from [Activestate](#). This distribution already include the necessary [Win32 Extensions](#). Depending the back-end you want to use, other modules could be required. Read the the *Un*x* section below for more details.

Linux and other Un*x

MKSBackup is a Python package and can be installed like any other packages as soon as *python 2.4 or above* is already installed. *Python 3.X* is not supported. MKSBackup has been registered on [PyPI](#) and can be installed from the Internet using [easy_install](#) or [pip](#) using :

```
# easy_install mksbackup
```

or

```
# pip install mksbackup
```

You can also install it the old way. Download the sources and extract the archive in one directory, jump into it and run :

```
# cd mksbackup-X.X.X
# python setup.py install
```

easy_install is usually part of *setuptools* package on most Linux distributions. If not found, install *setuptools* this way:

```
# wget http://peak.telecommunity.com/dist/ez_setup.py
# python ez_setup.py
```

Python version *2.6* and above can run the *.egg* file directly without installing it ! Anyway you still depend of the dependencies below.

Depending the back-end you want to use, you need to install other python packages. Of course windows *mksbackup.exe* already include all these dependencies !

back-end	modules
tar	don't require any additional packages.
ghettoVCB	paramiko and pycrypto to manage the SSH protocol.
esxmon	PyWBEM 0.6 is now included into MKSBackup and is no more required !
ntbackup and wadmin	pywin32 , ActivePython 2.6.x already include it.

paramiko and *pycrypto* are usually available as standard packages on most popular distributions like [RedHat](#), [CentOS](#), [Fedora](#), [Debian](#) or [ubuntu](#). Use *yum* or *apt-get* to install them. If not, use *easy_install* or *pip* or even the old *python setup.py install* way ! If installed this way, *pycrypto* requires to be compiled and need *gcc* to be installed !

Version 0.6 of *PyWBEM* is now included to limit dependencies.

Linux self install procedure

Linux version can also create */etc/mksbackup* directory, copy sample *.ini* file and download and install *ghettoVCB* part into *vmware* sub-directory. It also create a cron entry into */etc/cron.d/mksbackup*. To start installation use *-i* switch.

```
Do you want to setup config files in /etc/mksbackup ? (y/n) [y]> <= push ENTER for yes
Retrieve sample.ini file from http://www.magikmon.com/download/mksbackup/sample.ini ...
Create sample config file: /etc/mksbackup/mksbackup.ini
Do you want to download and install ghettoVCB ? [y]> <= push ENTER for yes
Download ghettoVCB.sh (last at http://communities.vmware.com/docs/DOC-8760)
Install ghettoVCB.sh and ghettoVCB.conf in sub directory vmware
```

```
More at http://www.magikmon.com/mksbackup
Edit and modify files: /etc/mksbackup/mksbackup.ini and /etc/cron.d/mksbackup
```

```
/etc
|-- mksbackup
|   |-- mksbackup.ini
|   |-- vmware
|       |-- ghettoVCB.sh
|       |-- ghettoVCB.conf
|       |-- ghettoVCB-vm_backup_configuration_template
|-- cron.d
    |-- mksbackup
```

The configuration file

The configuration file is a **.ini** file. Here is a sample.

```
[DEFAULT]
smtp_host=smtp.myprovider.com
smtp_port=25
sender=backup.operator@server01.example.com
recipients=me@example.com

[BACKUP_JOB]
# comment
program=ntbackup
selection=@C:\Magik\data.bks
destination=<full=sun>\\nas01\backup\server01-Full.bkf
               <inc=mon-sat>\\nas01\backup\server01-${nweekdayname}.bkf
verify=off
```

Each section describes a job. Common parameters can be put in the **[DEFAULT]** section. When a parameter is missing in the job definition, MKSBackup search in the **[DEFAULT]** section. If a parameter exists in both sections, then the one in the job section is used. **DEFAULT** is not a valid job name.

The **destination** syntax is described [here](#).

Lines can be continued with leading whitespace, lines beginning with # (preferred) or ; are considered comments. Both keys and values are stripped of leading and trailing whitespace.

For more information about the job parameters, check the [common parameters](#) page and the related **back-end** page.

Start it

MKSBackup must be run from the command line, on **Windows** platforms, users can use **mksbackup.exe**. For other platforms, the usual way is to install the package !

Usually, python install application scripts in the same directory as the **python** interpreter itself and users can run them using their names :

```
# mksbackup -h
```

Option **-h** display the help !

If it is not working, search for the file and use the full path :

```
# /usr/bin/mksbackup -h
```

Users using python **2.6** and above can run the **.egg** without installing it :

```
# python mksbackup-X.X.X.egg -h
```

Usage

```
<mksbackup> [-q] [-v] [-d] [-c <config>] [-e <encoding>] [-s <statusdir>] [-l <log>]
<command> [ <JOB NAME> ... ]
```

All available options can be retrieved using **-h** option ! Most used options are :

- **-q** disable logging on the console.
- **-v** tell MKSBackup to display log on the console. (default)
- **-d** display more debugging messages.
- **-c** allows to select a configuration file, default is **mksbackup.ini**.
- **-e** this is the encoding of the configuration file if MKSBackup cannot guess it.
- **-s** (beta) specify the directory where to write the **status** files for each jobs.
- **-l** specify the log file.

MKSBackup try to guess the encoding of the configuration file depending on the [BOM](#) of the file if any or use

windows-1252 on windows platform and *utf8* on other. You can force an encoding using the *-e* options. Valid encodings can be found [here](#).

The *<command>* can be one of :

- **check** to check the validity of parameters for selected jobs.
- **checkmail** to test the mail configuration for selected jobs.
- **backup** to start the backup.

Troubleshooting

MKSBackup provide some help for troubleshooting. You can display error message on the console (option *[-v]*) and increase verbosity (option *[-d]*). MKSBackup log all operations into *mksbackup.log* file in the current directory or the file defined by option *-l*.

Usage sample

MKSBackup can make a **deep check** of all parameters and report any errors or warnings. It checks also the access right on *destination* directory to avoid any surprises during the backup. This is valuable when setting up a backup for the first time ! To verify the parameters of the *.ini* file above, we are using the *check* command. **When you use *check* or *checkmail*, use the same user as the one that will do the backup to be as close as possible as the real job, to generate the same issues if any.**

```
C:\> c:\magik\mksbackup\mksbackup.exe -c c:\magik\mksbackup.ini check BACKUP_JOB
```

MKSBackup is very verbose ! It first tell you a new version is available and where to download it.

```
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

A new version of MKSBackup is available at
http://www.magikmon.com/mksbackup

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
start version=0.9.21 cmd=['mksbackup.exe', '-c', 'c:\magik\mksbackup.ini', 'check',
'BACKUP_JOB']
Error in section: BACKUP_JOB
    parameter selection='@C:\magik\data.bks'
        file not found: C:\magik\data.bks
    parameter smtp_host='smtp.myprovider.com'
        cannot resolve address
    parameter "destination" : directory not found: \\nas01\backup ([Error 123] The filename,
directory name, or volume label syntax is incorrect: u'\\')
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

When all errors have been corrected, MKSBackup can do more ! Start the same command again !

```
start version=0.9.21 cmd=['mksbackup.exe', '-c', 'c:\magik\mksbackup.ini', 'check',
'BACKUP_JOB']
No error in section: BACKUP_JOB
Destinations day by day:
    Tue 29 Dec 2009 incremental    \\nas01\backup\server01-Tue.bkf
        directory not found !!!
    Wed 30 Dec 2009 incremental    \\nas01\backup\server01-Wed.bkf
        directory not found !!!
    Thu 31 Dec 2009 incremental    \\nas01\backup\server01-Thu.bkf
        directory not found !!!
    Fri 01 Jan 2010 incremental    \\nas01\backup\server01-Fri.bkf
        directory not found !!!
    Sat 02 Jan 2010 incremental    \\nas01\backup\server01-Sat.bkf
        directory not found !!!
    Sun 03 Jan 2010 normal         \\nas01\backup\server01-Full.bkf
        directory not found !!!
    Mon 04 Jan 2010 incremental    \\nas01\backup\server01-Mon.bkf
        directory not found !!!

ntbackup=C:\WINDOWS\system32\ntbackup.exe
cmdline=C:\WINDOWS\system32\ntbackup.exe backup @C:\magik\data.bks /J BACKUP_JOB /M
incremental /F \\nas01\backup\server01-Tue.bkf /rs:no /v:no /r:no /l:s
```

The *destination* parameters can dispatch the backup to different locations and filenames depending of the date of the backup. The *check* command calculates these locations for the next few days. It also check these locations one by one and warn you when one is unreachable or don't exist.

At the end, MKSBackup display the command line it will use to start the back-end.

If you use the *checkmail* command instead, it will sent you these few lines by email, to check the email configuration.

When you are ready, start the backup using *backup* command !

```
c:\magik\mksbackup\mksbackup.exe -c c:\magik\mksbackup.ini backup BACKUP_JOB
```

When the job is done, it send you all related informations by email, check details in the *back-end* page.

Don't forget to check the log file, default is *mksbackup.log* if you have problems.

Schedule a job

MKSBackup don't provide any task scheduler to schedule a daily backup. You must use the one of your OS. Windows users will use the *Task Scheduler*, Unix users will use the *Cron*. The recommended command line for **Windows** host is :

```
"C:\Magik\MKSBackup\mksbackup.exe" -q -l "C:\Magik\mksbackup.log" -c "C:\Magik\mksbackup.ini"
backup JOB_NAME
```

- *C:\Magik\MKSBackup\mksbackup.exe* is where you have installed your *exe* file.
- *-q* make MKSBackup quiet, only the log file is updated.
- *C:\Magik\mksbackup.log* is the place for your log file
- *C:\Magik\mksbackup.ini* is the place for your configuration file.

For testing, you can use command *checkmail* instead of *backup* and set next schedule in a short interval. If you get the mail and no errors or warnings then setup the right time and switch to the *backup* command.

Under **Linux**, the command line is similar to the one above, except for the file location !

```
<mksbackup> -q -l /var/log/mksbackup.log -c /etc/mksbackup/mksbackup.ini backup JOB_NAME
```

<mksbackup>, the way you start MKSBackup is explained in section [Start it](#) above.

Linux

Cron can be configured in two ways. Both are similar, but the second one require to set the username for the cron command.

crontab -e

When logged as root, use command *crontab -e* to open the crontab file for user root. This file is usually in */var/spool/cron/root*. Add the lines :

```
# mksbackup daily backup
45 22 * * * /usr/bin/mksbackup -q -l /var/log/mksbackup.log -c /etc/mksbackup/mksbackup.ini
backup JOB_NAME
```

For more information on the file format, read the crontab [manual](#).

files in /etc/cron.d

You can also modify or add a file in the *system* cron. Create the file */etc/cron.d/mksbackup* with the following content :

```
# backup
45 22 * * * root /usr/bin/mksbackup -q -l /var/log/mksbackup.log -c /etc/mksbackup
/mksbackup.ini backup JOB_NAME
```

Windows

When started without argument, *mksbackup.exe* start a quick install procedure that terminates by the creation of the pre-configured *task* MKSBackup! You are strongly advised to use this procedure ! You can even restart the process, existing configuration will not be overwritten.

Anyway here are hints to create or tune task manually.

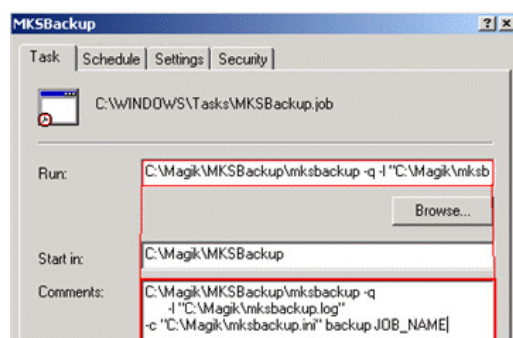
Windows XP and Windows 2003 server

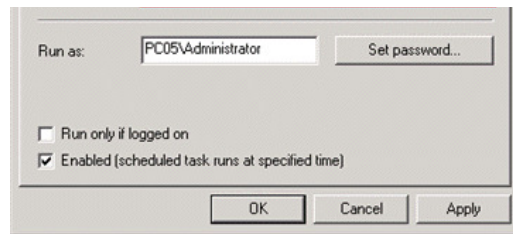
The following command will create the task for you, edit the parameters to meet your need !

```
SCHTASKS /Create /SC DAILY /TN MKSBackup /ST 22:45:00 /RU Administrator /TR "\"C:\Magik
\MKSBackup\mksbackup\" -q -l "\"C:\Magik\mksbackup.log\" -c "\"C:\Magik\mksbackup.ini\" backup
BACKUP_JOB"
```

... and open the *Task Scheduler* to fine tune it.

```
control.exe schedtasks
```





Windows Vista, 7, 2008 and R2

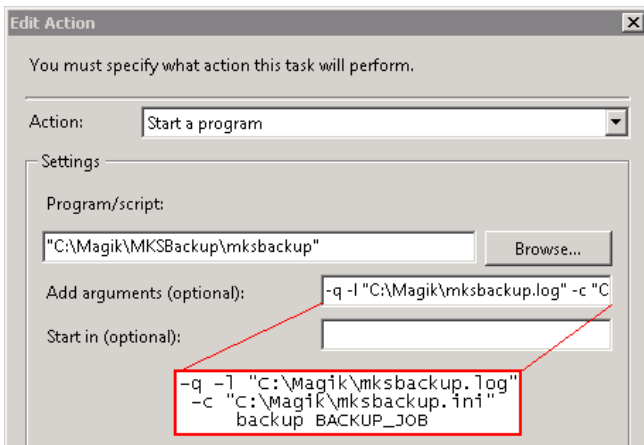
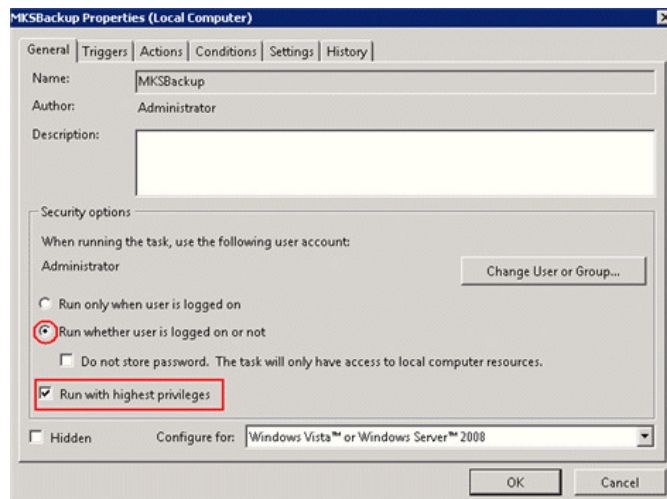
Since *Vista*, *SCHTASKS* command has changed a little :

```
SCHTASKS /Create /RL HIGHEST /SC DAILY /TN MKSBackup /ST 22:45:00 /RU Administrator /RP ""
/TR "\"C:\Magik\MKSBackup\mksbackup.exe\" -q -l \"C:\Magik\mksbackup.log\" -c \"C:\Magik
\mksbackup.ini\" backup BACKUP_JOB"
```

... and open the *Task Scheduler*...

```
control.exe schedtasks
```

Be sure *Run with highest Privilege* is enable and the task will run even if no user are logged on.



Be **careful**, here the command line is in 2 parts: the program and arguments !

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