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# Guide for Solving Problems in apt

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Following the step-by-step lab materials, some students may still face problems with apt updating and installing, this guide provides some possible solutions to these problems.

- Important Notes
- Problems in **apt update** and possible solutions
  - 404 not found or no address
  - Hashsum mismatch
  - No release file
- Problems in **apt install** and possible solutions
  - Unmet dependencies
  - Additional errors



## Important Notes

- It's better to use the **apt** command rather than **apt-get** command (e.g. **apt update** instead of **apt-get update**)
- It's better to the eduroam network
- It's better to disable to host machine's VPN, as it may cause errors sometimes
- Current kali system has a lot of unupgraded packages, avoid updating packages randomly, as it may cause dependency issues.





# Problems in apt update and possible solutions

Following the step-by-step lab materials, **apt update** may cause some problems:

- **404 not found or no address**
- **Hashsum mismatch**
- **No release file**

```
root@kali:~# apt update
Get:1 http://old.kali.org/kali moto InRelease [20.3 kB]
Get:2 http://old.kali.org/kali moto/main amd64 Packages [10.9 MB]
Err:2 http://old.kali.org/kali moto/main amd64 Packages
  Hash Sum mismatch
  Hashes of expected file:
    - Filesize:10869497 [weak]
    - SHA256:24c39498fb150b3f29a5a009104b1801163c70e3ca4f90dddecc01be6dbc3981
    - SHA1:1d8f66e496b39aca3f46c2a8680c07f87a5b200d [weak]
    - MD5Sum:3b002f43f9293b01c093e132710f8287 [weak]
  Hashes of received file:
    - SHA256:a9a9e1669b4009eb285cbdaf19c9f39625df5910ff73bc573dbdd534ad370fc1
    - SHA1:b58916c35ac91fb4233147eef34098a0751e01a0 [weak]
    - MD5Sum:3b002f43f9293b01c093e132710f8287 [weak]
    - Filesize:10869497 [weak]
  Last modification reported: Thu, 10 Sep 2015 18:52:58 +0000
  Release file created at: Thu, 10 Sep 2015 18:54:02 +0000
Get:3 http://old.kali.org/kali moto/non-free amd64 Packages [169 kB]
Get:4 http://old.kali.org/kali moto/contrib amd64 Packages [78.6 kB]
Ign:6 http://http.kali.org/kali sana InRelease
Get:5 http://mirrors.neusoft.edu.cn/kali kali-rolling InRelease [41.5 kB]
Err:7 http://http.kali.org/kali sana Release
  404 Not Found [IP: 18.211.24.19 80]
Get:8 http://mirrors.neusoft.edu.cn/kali kali-rolling/main amd64 Packages [20.4 MB]
Err:9 http://security.kali.org/kali-security sana/updates InRelease
  Something wicked happened resolving 'security.kali.org:http' (-5 - No address associated with hostname)
Err:8 http://mirrors.neusoft.edu.cn/kali kali-rolling/main amd64 Packages
  Hash Sum mismatch
  Hashes of expected file:
    - Filesize:20407002 [weak]
    - SHA256:d4f227990d1df2400a598f235cfb5b7fd4a10f6ec8d3479d0091f07043ea0d3d
    - SHA1:ecb30176960e3e6d273c23f494ef705db7a88df1 [weak]
    - MD5Sum:465889e3202291f263436277a66e4bd3 [weak]
  Hashes of received file:
    - SHA256:c2871a09f12006a7e133bc7dfe719a986e595eb4ab654c3caf09a34d6704e537
    - SHA1:e50bb486bf1bc713a896718a6726b8c23289ca87 [weak]
    - MD5Sum:465889e3202291f263436277a66e4bd3 [weak]
    - Filesize:20407002 [weak]
  Last modification reported: Tue, 18 Feb 2025 00:04:59 +0000
  Release file created at: Tue, 18 Feb 2025 00:06:11 +0000
Get:10 http://mirrors.neusoft.edu.cn/kali kali-rolling/contrib amd64 Packages [112 kB]
Get:11 http://mirrors.neusoft.edu.cn/kali kali-rolling/non-free amd64 Packages [194 kB]
Reading package lists... Done
E: The repository 'http://http.kali.org/kali sana Release' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
root@kali:~#
```



# 404 not found or no address

This is possibly due to older Kali versions like sana being removed from the repositories. The solution is to remove the corresponding sources from the source list.

In **/etc/apt/sources.list**, delete or comment  
**deb http://http.kali.org/kali sana main non-free contrib** and  
**http://security.kali.org/kali-security sana/updates main contrib non-free**

Final sources.list:

```
sec@kali: ~  
File /home/sec Actions Edit View Help  
GNU nano 4.9.3 /etc/apt/sources.list  
See https://www.kali.org/docs/general-use/kali-linux-sources-list-repositories/  
# deb http://http.kali.org/kali kali-rolling main contrib non-free  
  
deb http://http.kali.org/kali kali-rolling main contrib non-free  
# deb http://http.kali.org/kali sana main non-free contrib  
# deb http://security.kali.org/kali-security sana/updates main contrib non-free  
deb http://old.kali.org/kali moto main non-free contrib  
  
# Additional line for source packages  
# deb-src http://http.kali.org/kali kali-rolling main contrib non-free
```



# Hashsum Mismatch

This usually occurs due to a corrupted download, outdated package repository, or mismatched file integrity. To solve this problem, firstly try to clean the apt cache and update again

```
rm -rf /var/lib/apt/lists/*  
apt clean  
apt update
```

If the mismatch continues, with same MD5SUM values or SHA1 values, try:

```
mkdir /etc/gcrypt  
echo all >> /etc/gcrypt/hwf.deny
```

Sometimes the mismatch persists with different MD5SUM values, try to remove the gcrypt folder and update again

```
rm -rf /etc/gcrypt
```



## No release file

This may happen due to old repositories (e.g. old.kali.org), which does not have a valid Release file for secure verification. To solve this problem, you can add **--allow-insecure-repositories** after **apt update**, which is

```
apt update --allow-insecure-repositories
```

Notice: If you cannot guarantee that dependency conflicts and other issues will be resolved, do not run commands like **apt upgrade**.





# Final Output

Final Output should be something like this:

```
sec@kali:~$ sudo -i
[sudo] password for sec:
root@kali:~# nano /etc/apt/sources.list
root@kali:~# rm -rf /var/lib/apt/lists/*
root@kali:~# apt clean
root@kali:~# mkdir /etc/gcrypt
mkdir: cannot create directory '/etc/gcrypt': File exists
root@kali:~# rm -rf /etc/gcrypt
root@kali:~# mkdir /etc/gcrypt
root@kali:~# echo all >> /etc/gcrypt/hwf.deny
root@kali:~# apt update --allow-insecure-repositories
Get:1 http://old.kali.org/kali moto InRelease [20.3 kB]
Get:3 http://old.kali.org/kali moto/main amd64 Packages [10.9 MB]
Get:2 http://kali.download/kali kali-rolling InRelease [41.5 kB]
Get:4 http://kali.download/kali kali-rolling/main amd64 Packages [20.4 MB]
Get:5 http://kali.download/kali kali-rolling/contrib amd64 Packages [112 kB]
Get:6 http://kali.download/kali kali-rolling/non-free amd64 Packages [194 kB]
Get:7 http://old.kali.org/kali moto/non-free amd64 Packages [169 kB]
Get:8 http://old.kali.org/kali moto/contrib amd64 Packages [78.6 kB]
Fetched 31.9 MB in 19s (1,690 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
1738 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@kali:~#
```





# Problems in apt install and possible solutions

Installing libpam-cracklib may face problems like this

```
root@kali:~# apt install libpam-cracklib
Reading package lists... Done
Building dependency tree
Reading state information... Done
Some packages could not be installed. This may mean that you have
requested an impossible situation or if you are using the unstable
distribution that some required packages have not yet been created
or been moved out of Incoming.
The following information may help to resolve the situation:

The following packages have unmet dependencies:
 libc6 : Breaks: firefox-esr (< 91~) but 68.10.0esr-1 is to be installed
E: Unable to correct problems, you have held broken packages.
root@kali:~#
```

To solve this problem, the simplest solution is to remove this package

**apt remove firefox-esr**



# Removal of firefox-esr

```
root@kali:~# apt remove firefox-esr
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
  libjsoncpp1
Use 'apt autoremove' to remove it.
The following packages will be REMOVED:
  firefox-esr kali-desktop-core kali-desktop-xfce
0 upgraded, 0 newly installed, 3 to remove and 1735 not upgraded.
After this operation, 184 MB disk space will be freed.
Do you want to continue? [Y/n] y
(Reading database ... 276175 files and directories currently installed.)
Removing kali-desktop-xfce (2020.3.9) ...
Removing kali-desktop-core (2020.3.9) ...
Removing firefox-esr (68.10.0esr-1) ...
Removing 'diversion of /usr/bin/firefox to /usr/bin/firefox.real by firefox-esr'
Processing triggers for desktop-file-utils (0.26-1) ...
Processing triggers for mime-support (3.64) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for man-db (2.9.3-2) ...
Processing triggers for kali-menu (2020.3.2) ...
```

After the removal of firefox-esr, try to install the libpam-cracklib again

**apt install libpam-cracklib**



## Install libpam-crack

It is possible that this step could raise some additional errors, try to follow the output instructions to solve it, including

```
dpkg --configure -a  
apt --fix-broken install
```

...

Sometimes “Failed to connect to system scope bus via local transport: Connection refused” may occur, try to reboot the system

**reboot**

Try to install the libpam-cracklib again

```
apt install libpam-cracklib
```

If you have successfully installed libpam-cracklib, the contents of **/etc/pam.d/common-password** will be the same as in the step-by-step lab material.



**If you encounter other problems or have better solutions, please share with us.**