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## 102.5 - Gérer les paquets sous Red Hat avec RPM et YUM (3/60)

### La commande rpm



**A faire** - Placez-vous dans le répertoire personnel de **root** grâce à la commande **cd ~**.

Afin de faciliter l'installation, la désinstallation et la gestion des logiciels (appelés paquets), CentOS et Red Hat utilisent un format de fichier de logiciels installables spécifique. Celui-ci s'appelle **RPM** pour Red Hat Package Manager. La commande utilisée pour manipuler ses paquets s'appelle aussi **rpm**.

Les options de la commande rpm sont :

```
[root@centos7 hello-2.1.1]# cd ~
[root@centos7 ~]# rpm --help
Usage: rpm [OPTION...]
```

Query/Verify package selection options:

-a, --all	query/verify all packages
-f, --file	query/verify package(s) owning file
-g, --group	query/verify package(s) in group
-p, --package	query/verify a package file
--pkgid	query/verify package(s) with package identifier
--hdrid	query/verify package(s) with header identifier
--triggeredby	query the package(s) triggered by the package
--whatrequires	query/verify the package(s) which require a

```
dependency
--whatprovides    query/verify the package(s) which provide a
                  dependency
--nomanifest      do not process non-package files as
                  manifests
```

Query options (with -q or --query):

```
-c, --configfiles  list all configuration files
-d, --docfiles     list all documentation files
-L, --licensefiles list all license files
--dump            dump basic file information
-l, --list         list files in package
--queryformat=QUERYFORMAT use the following query format
-s, --state       display the states of the listed files
```

Verify options (with -V or --verify):

```
--nofiledigest    don't verify digest of files
--nofiles         don't verify files in package
--nodeps         don't verify package dependencies
--noscript       don't execute verify script(s)
```

Install/Upgrade/Erase options:

```
--allfiles        install all files, even configurations
                  which might otherwise be skipped
--allmatches      remove all packages which match <package>
                  (normally an error is generated if
                  <package> specified multiple packages)
--badreloc        relocate files in non-relocatable package
-e, --erase=<package>+ erase (uninstall) package
--excludedocs     do not install documentation
--excludepath=<path> skip files with leading component <path>
--force          short hand for --replacepkgs --replacefiles
-F, --freshen=<packagefile>+ upgrade package(s) if already installed
-h, --hash        print hash marks as package installs (good
```

```
with -v)
--ignorearch    don't verify package architecture
--ignoreos     don't verify package operating system
--ignoresize   don't check disk space before installing
-i, --install  install package(s)
--justdb       update the database, but do not modify the
               filesystem
--nodeps       do not verify package dependencies
--nofiledigest don't verify digest of files
--nocontexts   don't install file security contexts
--noorder      do not reorder package installation to
               satisfy dependencies
--noscripts    do not execute package scriptlet(s)
--notriggers   do not execute any scriptlet(s) triggered
               by this package
--nocollections do not perform any collection actions
--oldpackage   upgrade to an old version of the package
               (--force on upgrades does this
               automatically)
--percent      print percentages as package installs
--prefix=<dir> relocate the package to <dir>, if
               relocatable
--relocate=<old>=<new> relocate files from path <old> to <new>
--replacefiles ignore file conflicts between packages
--replacepkgs  reinstall if the package is already present
--test        don't install, but tell if it would work or
               not
-U, --upgrade=<packagefile>+ upgrade package(s)
```

Common options for all rpm modes and executables:

```
-D, --define='MACRO EXPR'  define MACRO with value EXPR
--undefine=MACRO           undefine MACRO
-E, --eval='EXPR'         print macro expansion of EXPR
--macros=<FILE:...>       read <FILE:...> instead of default file(s)
```

```
--nodigest          don't verify package digest(s)
--nosignature       don't verify package signature(s)
--rcfile=<FILE:...> read <FILE:...> instead of default file(s)
-r, --root=ROOT     use ROOT as top level directory (default:
                    "/")
--dbpath=DIRECTORY  use database in DIRECTORY
--querytags         display known query tags
--showrc           display final rpmrc and macro configuration
--quiet            provide less detailed output
-v, --verbose       provide more detailed output
--version          print the version of rpm being used
```

#### Options implemented via popt alias/exec:

```
--scripts          list install/erase scriptlets from
                    package(s)
--setperms         set permissions of files in a package
--setugids        set user/group ownership of files in a
                    package
--conflicts       list capabilities this package conflicts
                    with
--obsoletes       list other packages removed by installing
                    this package
--provides        list capabilities that this package provides
--requires       list capabilities required by package(s)
--info           list descriptive information from package(s)
--changelog      list change logs for this package
--xml           list metadata in xml
--triggers       list trigger scriptlets from package(s)
--last          list package(s) by install time, most
                    recent first
--dupes         list duplicated packages
--filesbypkg    list all files from each package
--fileclass     list file names with classes
--filecolor     list file names with colors
```

```
--fscontext          list file names with security context from
                    file system
--fileprovide        list file names with provides
--filerequire        list file names with requires
--filecaps           list file names with POSIX1.e capabilities

Help options:
-?, --help           Show this help message
--usage             Display brief usage message
```

## Configuration

Le fichier de configuration principal de la commande rpm est **/usr/lib/rpm/rpmrc** :

```
[root@centos7 ~]# more /usr/lib/rpm/rpmrc
#/*! \page config_rpmrc Default configuration: /usr/lib/rpm/rpmrc
# \verbatim
#
# This is a global RPM configuration file. All changes made here will
# be lost when the rpm package is upgraded. Any per-system configuration
# should be added to /etc/rpmrc, while per-user configuration should
# be added to ~/.rpmrc.
#
#####
# Values for RPM_OPT_FLAGS for various platforms

# "fat" binary with both archs, for Darwin
optflags: fat -O2 -g -arch i386 -arch ppc

optflags: i386 -O2 -g -march=i386 -mtune=i686
optflags: i486 -O2 -g -march=i486
optflags: i586 -O2 -g -march=i586
optflags: i686 -O2 -g -march=i686
```

```
optflags: pentium3 -O2 -g -march=pentium3
optflags: pentium4 -O2 -g -march=pentium4
optflags: athlon -O2 -g -march=athlon
optflags: geode -Os -g -m32 -march=geode
optflags: ia64 -O2 -g
--More-- (5%)
```

Ces directives indiquent comment optimiser la construction d'un rpm en fonction du type de processeur retourné par la commande **uname -p**. Par exemple, la directive **buildarchtranslate: athlon: i386** indique que le processus doit utiliser les optimisations **i386** lors de la construction d'un src.rpm sur une architecture **athlon**. Si au contraire il est souhaité que les optimisations **athlon** soient utilisées, il convient d'inclure la ligne **buildarchtranslate: athlon: athlon** dans le fichier **/etc/rpmrc**. En effet lors de la mise à jour du paquet rpm, le fichier **/usr/lib/rpm/rpmrc** est écrasé. Toute modification des directives de ce fichier doivent être inscrites dans **/etc/rpmrc** ou dans un fichier **~/.rpmrc** spécifique à un utilisateur.

## Utilisation

Afin de connaître la liste des paquets installés sur la machine, il convient de saisir la commande suivante dans une console en tant que root :

```
[root@centos7 ~]# rpm -qa | more
gjs-1.36.1-2.el7.x86_64
mesa-libxatracker-9.2.5-5.20131218.el7.x86_64
gvfs-mtp-1.16.4-7.el7.x86_64
policycoreutils-2.2.5-11.el7.x86_64
setup-2.8.71-4.el7.noarch
libXmu-1.1.1-5.1.el7.x86_64
gettext-libs-0.18.2.1-4.el7.x86_64
mousetweaks-3.8.0-3.el7.x86_64
libquvi-0.4.1-5.el7.x86_64
langtable-0.0.13-4.el7.noarch
jline-1.0-8.el7.noarch
perl-Encode-2.51-7.el7.x86_64
gnome-system-log-3.8.1-5.el7.x86_64
libreport-plugin-ureport-2.1.11-10.el7.centos.x86_64
basesystem-10.0-7.el7.centos.noarch
```

```
festvox-slt-arctic-hts-0.20061229-28.el7.noarch
perl-threads-shared-1.43-6.el7.x86_64
firefox-24.5.0-1.el7.centos.x86_64
sbc-1.0-5.el7.x86_64
tigervnc-license-1.2.80-0.30.20130314svn5065.el7.noarch
poppler-utils-0.22.5-6.el7.x86_64
perl-Pod-Simple-3.28-4.el7.noarch
systemtap-runtime-2.4-14.el7.x86_64
--More--
```

Afin de connaître le nombre total de paquets installés sur la machine, utilisez la commande suivante :

```
[root@centos7 ~]# rpm -qa | wc -l
1194
```

Imaginons maintenant que vous souhaitez vérifier si un paquet contenant la chaîne de caractères **setup** soit déjà installé sur la machine. Dans ce cas, il convient d'utiliser une commande telle la suivante :

```
[root@centos7 ~]# rpm -qa | grep setup
setup-2.8.71-4.el7.noarch
cryptsetup-libs-1.6.3-2.el7.x86_64
cryptsetup-python-1.6.3-2.el7.x86_64
ibus-setup-1.5.3-11.el7.noarch
gnome-initial-setup-0.13.1-4.el7.x86_64
cryptsetup-1.6.3-2.el7.x86_64
initial-setup-0.3.9.12-1.el7.x86_64
setuptools-1.19.11-8.el7.x86_64
python-setuptools-0.9.8-3.el7.noarch
```

Afin de connaître les détails du paquet **setup-2.8.14-10.el6.noarch**, il convient de saisir la commande suivante :

```
[root@centos7 ~]# rpm -qi setup
Name      : setup
Version   : 2.8.71
```

```
Release      : 4.el7
Architecture: noarch
Install Date: Sun 08 Mar 2015 01:41:33 PM CET
Group        : System Environment/Base
Size         : 696310
License      : Public Domain
Signature    : RSA/SHA256, Fri 04 Jul 2014 06:59:13 AM CEST, Key ID 24c6a8a7f4a80eb5
Source RPM   : setup-2.8.71-4.el7.src.rpm
Build Date   : Tue 10 Jun 2014 04:04:36 AM CEST
Build Host   : worker1.bsys.centos.org
Relocations  : (not relocatable)
Packager     : CentOS BuildSystem <http://bugs.centos.org>
Vendor       : CentOS
URL          : https://fedorahosted.org/setup/
Summary      : A set of system configuration and setup files
Description  :
The setup package contains a set of important system configuration and
setup files, such as passwd, group, and profile.
```

Afin de lister tous les fichiers installés par le paquet concerné, utilisez la commande suivante :

```
[root@centos7 ~]# rpm -ql setup
/etc/aliases
/etc/bashrc
/etc/csh.cshrc
/etc/csh.login
/etc/environment
/etc/exports
/etc/filesystems
/etc/fstab
/etc/group
/etc/gshadow
/etc/host.conf
/etc/hosts
```

```
/etc/hosts.allow
/etc/hosts.deny
/etc/inputrc
/etc/motd
/etc/passwd
/etc/printcap
/etc/profile
/etc/profile.d
/etc/protocols
/etc/securetty
/etc/services
/etc/shadow
/etc/shells
/usr/share/doc/setup-2.8.71
/usr/share/doc/setup-2.8.71/COPYING
/usr/share/doc/setup-2.8.71/uidgid
/var/log/lastlog
```

A l'inverse, si vous connaissez le nom d'un fichier et vous souhaitez savoir quel paquet l'a installé, utilisez la commande suivante :

```
[root@centos7 ~]# rpm -qf /etc/exports
setup-2.8.71-4.el7.noarch
```

Pour connaître les fichiers modifiés depuis l'installation d'un paquet, utilisez la commande suivante :

```
# rpm -qV setup [Entrée]
```

Dans le cas où aucun fichier n'a été modifié, la console n'affiche rien. Dans le cas où les fichiers ont été modifiés, le système vous indique, fichier par fichier, les modifications apportées selon le tableau ci-dessous. Pour plus d'informations utilisez les commandes man et info :

Lettre ou mot Clé	Description
5	Contrôle MD5
S	Taille du fichier

Lettre ou mot Clé	Description
L	Lien symbolique
T	Date de modification
D	Périphérique
U	Utilisateur propriétaire
G	Groupe propriétaire
M	Droits d'accès
?	Fichier illisible
Manquant	Fichier manquant



**Important** : Un paquet rpm est un fichier cpio modifié. Pour pouvoir extraire le contenu d'un src.rpm et explorer l'arborescence utilisé pour construire le paquet, utilisez la commande **rpm2cpio paquet.src.rpm | cpio -i -make-directories**

## La commande yum

**Y**ellow dog **U**pdater, **M**odified (Yum) est le nom d'un programme utilitaire de gestion de paquets pour le système d'exploitation Linux, créé par Yellow Dog Linux et utilisé par **CentOS**, **Redhat** et **Fedora**. Il est à noter qu'il existe plusieurs interfaces graphiques pour yum, notamment **yumex** et **kyum**

Il permet de gérer l'installation et la mise à jour des logiciels installés. C'est une surcouche à RPM gérant les téléchargements et les dépendances, de la même manière que **APT** pour Debian, **urpmi** pour Mandriva et **zypper** pour SLES/openSUSE.

La commande yum prend la forme suivante :

```
# yum <options> <commande> <paquet(s)> [Entrée]
```

Les options et commandes de yum sont :

```
[root@centos7 ~]# yum --help
Loaded plugins: fastestmirror, langpacks
```

## Usage: yum [options] COMMAND

### List of Commands:

check	Check for problems in the rpmdb
check-update	Check for available package updates
clean	Remove cached data
deplist	List a package's dependencies
distribution-synchronization	Synchronize installed packages to the latest available versions
downgrade	downgrade a package
erase	Remove a package or packages from your system
fs	Creates filesystem snapshots, or lists/deletes current snapshots.
fssnapshot	Creates filesystem snapshots, or lists/deletes current snapshots.
groups	Display, or use, the groups information
help	Display a helpful usage message
history	Display, or use, the transaction history
info	Display details about a package or group of packages
install	Install a package or packages on your system
langavailable	Check available languages
langinfo	List languages information
langinstall	Install appropriate language packs for a language
langlist	List installed languages
langremove	Remove installed language packs for a language
list	List a package or groups of packages
load-transaction	load a saved transaction from filename
makecache	Generate the metadata cache
provides	Find what package provides the given value
reinstall	reinstall a package
repo-pkgs	Treat a repo. as a group of packages, so we can install/remove all of them
repolist	Display the configured software repositories
search	Search package details for the given string
shell	Run an interactive yum shell
swap	Simple way to swap packages, instead of using shell
update	Update a package or packages on your system

```
update-minimal Works like upgrade, but goes to the 'newest' package match which fixes a problem that affects your system
updateinfo     Acts on repository update information
upgrade        Update packages taking obsoletes into account
version        Display a version for the machine and/or available repos.
```

#### Options:

```
-h, --help          show this help message and exit
-t, --tolerant      be tolerant of errors
-C, --cacheonly     run entirely from system cache, don't update cache
-c [config file], --config=[config file]
                    config file location
-R [minutes], --randomwait=[minutes]
                    maximum command wait time
-d [debug level], --debuglevel=[debug level]
                    debugging output level
--showduplicates    show duplicates, in repos, in list/search commands
-e [error level], --errorlevel=[error level]
                    error output level
--rpmverbosity=[debug level name]
                    debugging output level for rpm
-q, --quiet         quiet operation
-v, --verbose       verbose operation
-y, --assumeyes     answer yes for all questions
--assumeno         answer no for all questions
--version          show Yum version and exit
--installroot=[path] set install root
--enablerepo=[repo] enable one or more repositories (wildcards allowed)
--disablerepo=[repo] disable one or more repositories (wildcards allowed)
-x [package], --exclude=[package]
                    exclude package(s) by name or glob
--disableexcludes=[repo]
                    disable exclude from main, for a repo or for
```

```
                everything
--disableincludes=[repo]    disable includepkgs for a repo or for everything
--obsoletes                 enable obsoletes processing during updates
--noplugins                 disable Yum plugins
--nogpgcheck                disable gpg signature checking
--disableplugin=[plugin]   disable plugins by name
--enableplugin=[plugin]    enable plugins by name
--skip-broken               skip packages with depsolving problems
--color=COLOR               control whether color is used
--releasever=RELEASEVER    set value of $releasever in yum config and repo files
--downloadonly              don't update, just download
--downloaddir=DLDIR        specifies an alternate directory to store packages
--setopt=SETOPTS            set arbitrary config and repo options
--bugfix                    Include bugfix relevant packages, in updates
--security                  Include security relevant packages, in updates
--advisory=ADVS, --advisories=ADVS
                             Include packages needed to fix the given advisory, in
                             updates
--bzs=BZS                   Include packages needed to fix the given BZ, in
                             updates
--cves=CVES                 Include packages needed to fix the given CVE, in
                             updates
--sec-severity=SEVS, --secseverity=SEVS
                             Include security relevant packages matching the
                             severity, in updates
```

Plugin Options:

## Configuration

La configuration principale de yum est effectuée en éditant le fichier **/etc/yum.conf** :

```
[root@centos7 ~]# cat /etc/yum.conf
[main]
cachedir=/var/cache/yum/$basearch/$releasever
keepcache=0
debuglevel=2
logfile=/var/log/yum.log
exactarch=1
obsoletes=1
gpgcheck=1
plugins=1
installonly_limit=5
bugtracker_url=http://bugs.centos.org/set_project.php?project_id=23&ref=http://bugs.centos.org/bug_report_page.php?category=yum
distroverpkg=centos-release

# This is the default, if you make this bigger yum won't see if the metadata
# is newer on the remote and so you'll "gain" the bandwidth of not having to
# download the new metadata and "pay" for it by yum not having correct
# information.
# It is esp. important, to have correct metadata, for distributions like
# Fedora which don't keep old packages around. If you don't like this checking
# interrupting your command line usage, it's much better to have something
# manually check the metadata once an hour (yum-updatesd will do this).
# metadata_expire=90m

# PUT YOUR REPOS HERE OR IN separate files named file.repo
# in /etc/yum.repos.d
# exclude=httpd php mysql
```

## Dépôts



**Important** : Un dépôt est un lieu de stockage de paquets binaires prêts à installer. Un dépôt peut être le DVD d'installation de la distribution, un dossier sur disque dur ou bien des serveurs distants accessibles par Internet.

Les dépôts de paquets sont spécifiés soit dans le fichier `/etc/yum.conf`, soit dans un fichier *par dépôt* stocké dans le répertoire `/etc/yum.repos.d` :

```
[root@centos7 ~]# ls /etc/yum.repos.d/  
CentOS-Base.repo  CentOS-Debuginfo.repo  CentOS-Sources.repo  CentOS-Vault.repo
```

Par exemple :

```
[root@centos7 ~]# cat /etc/yum.repos.d/CentOS-Base.repo  
# CentOS-Base.repo  
#  
# The mirror system uses the connecting IP address of the client and the  
# update status of each mirror to pick mirrors that are updated to and  
# geographically close to the client. You should use this for CentOS updates  
# unless you are manually picking other mirrors.  
#  
# If the mirrorlist= does not work for you, as a fall back you can try the  
# remarked out baseurl= line instead.  
#  
#  
  
[base]  
name=CentOS-$releasever - Base  
mirrorlist=http://mirrorlist.centos.org/?release=$releasever&arch=$basearch&repo=os  
#baseurl=http://mirror.centos.org/centos/$releasever/os/$basearch/  
gpgcheck=1  
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
```

```
#released updates
[updates]
name=CentOS-$releasever - Updates
mirrorlist=http://mirrorlist.centos.org/?release=$releasever&arch=$basearch&repo=updates
#baseurl=http://mirror.centos.org/centos/$releasever/updates/$basearch/
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7

#additional packages that may be useful
[extras]
name=CentOS-$releasever - Extras
mirrorlist=http://mirrorlist.centos.org/?release=$releasever&arch=$basearch&repo=extras
#baseurl=http://mirror.centos.org/centos/$releasever/extras/$basearch/
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7

#additional packages that extend functionality of existing packages
[centosplus]
name=CentOS-$releasever - Plus
mirrorlist=http://mirrorlist.centos.org/?release=$releasever&arch=$basearch&repo=centosplus
#baseurl=http://mirror.centos.org/centos/$releasever/centosplus/$basearch/
gpgcheck=1
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
```

## Utilisation

Les **options** les plus utilisées de yum sont :

Option	Description
-y	Réponse automatique de <i>oui</i> à toute question posée par yum.
-t	Rend yum tolérant de certaines erreurs. Par exemple si deux paquets sont installés en même temps, une erreur de l'installation du premier paquet ne va pas arrêter l'installation du deuxième.

Option	Description
- -exclude=<nom paquet>	Exclue le paquet indiqué de la transaction en cours

Les **commandes** les plus utilisées de yum sont :

Commande	Description
install	Installer un ou plusieurs paquets.
update	Mettre à jour un ou plusieurs paquets. Sans nom(s) de paquet(s), tous les paquets sont mis à jour.
check-update	Visualiser une liste de mise à jour disponibles pour les paquets installés.
remove	Supprimer un paquet
provides	Visualiser une liste de paquets qui fournissent le fichier ou caractéristique spécifié.
search	Trouver un paquet qui a la chaîne recherchée dans sa <i>description</i> .
list	Trouver un paquet qui a la chaîne recherchée dans son <i>nom</i> .
localinstall	Installer un ou plusieurs paquets stockés localement sur disque.

## La Commande yumdownloader

La commande **yumdownloader** est utilisée pour télécharger un paquet à partir d'un dépôt **sans l'installer**.

Cette commande prend la forme :

```
# yumdownloader --destdir /chemin paquet
```

### Options de la Commande

Les options de la commande sont :

```
[root@centos7 ~]# yumdownloader --help
Loaded plugins: fastestmirror, langpacks
Usage: "yumdownloader [options] package1 [package2] [package..]"
```

**Options:****Plugin Options:****Yum Base Options:**

```
-h, --help          show this help message and exit
-t, --tolerant      be tolerant of errors
-C, --cacheonly     run entirely from system cache, don't update cache
-c [config file], --config=[config file]
                   config file location
-R [minutes], --randomwait=[minutes]
                   maximum command wait time
-d [debug level], --debuglevel=[debug level]
                   debugging output level
--showduplicates   show duplicates, in repos, in list/search commands
-e [error level], --errorlevel=[error level]
                   error output level
--rpmverbosity=[debug level name]
                   debugging output level for rpm
-q, --quiet         quiet operation
-v, --verbose       verbose operation
-y, --assumeyes     answer yes for all questions
--assumeno         answer no for all questions
--version          show Yum version and exit
--installroot=[path]
                   set install root
--enablerepo=[repo]
                   enable one or more repositories (wildcards allowed)
--disablerepo=[repo]
                   disable one or more repositories (wildcards allowed)
-x [package], --exclude=[package]
                   exclude package(s) by name or glob
--disableexcludes=[repo]
                   disable exclude from main, for a repo or for
                   everything
```

```
--disableincludes=[repo]
    disable includepkgs for a repo or for everything
--obsoletes
    enable obsoletes processing during updates
--noplugins
    disable Yum plugins
--nogpgcheck
    disable gpg signature checking
--disableplugin=[plugin]
    disable plugins by name
--enableplugin=[plugin]
    enable plugins by name
--skip-broken
    skip packages with depsolving problems
--color=COLOR
    control whether color is used
--releasever=RELEASEVER
    set value of $releasever in yum config and repo files
--downloadonly
    don't update, just download
--downloadaddir=DLDIR
    specifies an alternate directory to store packages
--setopt=SETOPTS
    set arbitrary config and repo options
--bugfix
    Include bugfix relevant packages, in updates
--security
    Include security relevant packages, in updates
--advisory=ADVS, --advisories=ADVS
    Include packages needed to fix the given advisory, in
    updates
--bzs=BZS
    Include packages needed to fix the given BZ, in
    updates
--cves=CVES
    Include packages needed to fix the given CVE, in
    updates
--sec-severity=SEVS, --secseverity=SEVS
    Include security relevant packages matching the
    severity, in updates

yumdownloader options:
--destdir=DESTDIR
    destination directory (defaults to current directory)
--urls
    just list the urls it would download instead of
    downloading
```

```
--resolve      resolve dependencies and download required packages
--source      operate on source packages
--archlist=ARCHLIST
                only download packages of certain architecture(s)
```

## LAB #1 - Utiliser la commande yum

Commencer par installer le paquet **mc** :

```
[root@centos7 ~]# yum install mc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: fr2.rpmfind.net
 * extras: mirror.ibcp.fr
 * updates: mirror.ibcp.fr
Resolving Dependencies
--> Running transaction check
---> Package mc.x86_64 1:4.8.7-8.el7 will be installed
--> Finished Dependency Resolution
```

Dependencies Resolved

```
=====
Package      Arch          Version      Repository    Size
=====
Installing:
mc           x86_64       1:4.8.7-8.el7  base         1.7 M
```

Transaction Summary

```
=====
Install 1 Package
```

```
Total download size: 1.7 M
Installed size: 5.6 M
Is this ok [y/d/N]: y
Downloading packages:
mc-4.8.7-8.el7.x86_64.rpm          | 1.7 MB    00:15
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 1:mc-4.8.7-8.el7.x86_64                1/1
  Verifying  : 1:mc-4.8.7-8.el7.x86_64                1/1

Installed:
  mc.x86_64 1:4.8.7-8.el7

Complete!
```



**Important :** **mc** est un gestionnaire de fichiers utile en mode ligne de commande. Tapez la commande **mc** et expérimentez avec l'interface.

Supprimez maintenant le paquet **mc** :

```
[root@centos7 ~]# yum remove mc
Loaded plugins: fastestmirror, langpacks
Resolving Dependencies
--> Running transaction check
---> Package mc.x86_64 1:4.8.7-8.el7 will be erased
--> Finished Dependency Resolution

Dependencies Resolved
```

```
=====
Package      Arch          Version      Repository    Size
=====
Removing:
mc           x86_64        1:4.8.7-8.el7 @base         5.6 M

Transaction Summary
=====
Remove 1 Package

Installed size: 5.6 M
Is this ok [y/N]: y
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Erasing      : 1:mc-4.8.7-8.el7.x86_64           1/1
  Verifying    : 1:mc-4.8.7-8.el7.x86_64           1/1

Removed:
mc.x86_64 1:4.8.7-8.el7

Complete!
```

Recherchez le paquet **mc** :

```
[root@centos7 ~]# yum list mc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: fr2.rpmfind.net
* extras: mirror.ibcp.fr
* updates: mirror.ibcp.fr
Available Packages
```

```
mc.x86_64                1:4.8.7-8.el7                base
```

Recherchez tout paquet commençant par **kerne** :

```
[root@centos7 ~]# yum list kerne\*
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: fr2.rpmfind.net
 * extras: mirror.ibcp.fr
 * updates: mirror.ibcp.fr
Installed Packages
kernel.x86_64                3.10.0-123.el7                @anaconda
kernel-devel.x86_64         3.10.0-229.14.1.el7          @updates
kernel-headers.x86_64      3.10.0-229.14.1.el7          @updates
kernel-tools.x86_64        3.10.0-123.el7                @anaconda
kernel-tools-libs.x86_64   3.10.0-123.el7                @anaconda
Available Packages
kernel.x86_64                3.10.0-229.14.1.el7          updates
kernel-abi-whitelists.noarch 3.10.0-229.14.1.el7          updates
kernel-debug.x86_64        3.10.0-229.14.1.el7          updates
kernel-debug-devel.x86_64  3.10.0-229.14.1.el7          updates
kernel-doc.noarch          3.10.0-229.14.1.el7          updates
kernel-tools.x86_64        3.10.0-229.14.1.el7          updates
kernel-tools-libs.x86_64   3.10.0-229.14.1.el7          updates
kernel-tools-libs-devel.x86_64 3.10.0-229.14.1.el7          updates
```

Recherchez la chaîne **mc** :

```
[root@centos7 ~]# yum search mc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: fr2.rpmfind.net
 * extras: mirror.ibcp.fr
 * updates: mirror.ibcp.fr
```

```
===== N/S matched: mc =====
abrt-addon-vmcore.x86_64 : abrt's vmcore addon
bmc-snmp-proxy.noarch : Reconfigure SNMP to include host SNMP agent within BMC
exchange-bmc-os-info.noarch : Let OS and BMC exchange info
freeipmi-bmc-watchdog.x86_64 : IPMI BMC watchdog
hamcrest-demo.noarch : Demos for hamcrest
hamcrest-javadoc.noarch : Javadoc for hamcrest
libXdmcp-devel.i686 : Development files for libXdmcp
libXdmcp-devel.x86_64 : Development files for libXdmcp
libXvMC.i686 : X.Org X11 libXvMC runtime library
libXvMC.x86_64 : X.Org X11 libXvMC runtime library
libXvMC-devel.i686 : X.Org X11 libXvMC development package
libXvMC-devel.x86_64 : X.Org X11 libXvMC development package
libmemcached.i686 : Client library and command line tools for memcached server
libmemcached.x86_64 : Client library and command line tools for memcached server
libmemcached-devel.i686 : Header files and development libraries for
                          : libmemcached
libmemcached-devel.x86_64 : Header files and development libraries for
                          : libmemcached
memcached-devel.i686 : Files needed for development using memcached protocol
memcached-devel.x86_64 : Files needed for development using memcached protocol
php-pecl-memcache.x86_64 : Extension to work with the Memcached caching daemon
python-memcached.noarch : A Python memcached client library
smc-fonts-common.noarch : Common files for smc-fonts
tomcat-admin-webapps.noarch : The host-manager and manager web applications for
                             : Apache Tomcat
tomcat-docs-webapp.noarch : The docs web application for Apache Tomcat
tomcat-javadoc.noarch : Javadoc generated documentation for Apache Tomcat
tomcat-jsp-2.2-api.noarch : Apache Tomcat JSP API implementation classes
tomcat-jsvc.noarch : Apache jsvc wrapper for Apache Tomcat as separate service
tomcat-lib.noarch : Libraries needed to run the Tomcat Web container
tomcat-servlet-3.0-api.noarch : Apache Tomcat Servlet API implementation classes
tomcat-webapps.noarch : The ROOT and examples web applications for Apache Tomcat
tomcatjss.noarch : JSSE implementation using JSS for Tomcat
```



Name and summary matches only, use "search all" for everything.

Recherchez quel paquet fournit **mc** :

```
[root@centos7 ~]# yum provides mc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: fr2.rpmfind.net
* extras: mirror.ibcp.fr
* updates: mirror.ibcp.fr
1:mc-4.8.7-8.el7.x86_64 : User-friendly text console file manager and visual
                        : shell
Repo                : base
```

Contrôlez maintenant les dépôts configurés dans votre système :

```
[root@centos7 ~]# yum repolist
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: fr2.rpmfind.net
* extras: mirror.ibcp.fr
* updates: mirror.ibcp.fr
repo id              repo name              status
base/7/x86_64        CentOS-7 - Base        8,652
extras/7/x86_64      CentOS-7 - Extras      214
updates/7/x86_64     CentOS-7 - Updates     1,505
repolist: 10,371
```

Vérifiez la disponibilité de mises à jour :

```
[root@centos7 ~]# yum check-update
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: fr2.rpmfind.net
```

```
* extras: mirror.ibcp.fr
* updates: mirror.ibcp.fr

NetworkManager.x86_64          1:1.0.0-16.git20150121.b4ea599c.el7_1 updates
NetworkManager-glib.x86_64    1:1.0.0-16.git20150121.b4ea599c.el7_1 updates
NetworkManager-tui.x86_64     1:1.0.0-16.git20150121.b4ea599c.el7_1 updates
abrt.x86_64                    2.1.11-22.el7.centos.0.1      updates
abrt-addon-ccpp.x86_64        2.1.11-22.el7.centos.0.1      updates
abrt-addon-kerneloops.x86_64  2.1.11-22.el7.centos.0.1      updates
abrt-addon-pstoreoops.x86_64  2.1.11-22.el7.centos.0.1      updates
abrt-addon-python.x86_64      2.1.11-22.el7.centos.0.1      updates
abrt-addon-vmcore.x86_64      2.1.11-22.el7.centos.0.1      updates
abrt-addon-xorg.x86_64        2.1.11-22.el7.centos.0.1      updates
abrt-cli.x86_64               2.1.11-22.el7.centos.0.1      updates
abrt-console-notification.x86_64 2.1.11-22.el7.centos.0.1      updates
abrt-dbus.x86_64              2.1.11-22.el7.centos.0.1      updates
abrt-desktop.x86_64           2.1.11-22.el7.centos.0.1      updates
abrt-gui.x86_64               2.1.11-22.el7.centos.0.1      updates
abrt-gui-libs.x86_64          2.1.11-22.el7.centos.0.1      updates
abrt-libs.x86_64              2.1.11-22.el7.centos.0.1      updates
abrt-python.x86_64            2.1.11-22.el7.centos.0.1      updates
abrt-tui.x86_64               2.1.11-22.el7.centos.0.1      updates
alsa-firmware.noarch          1.0.28-2.el7                  base
alsa-lib.x86_64                1.0.28-2.el7                  base
alsa-utils.x86_64              1.0.28-4.el7                  base
anaconda.x86_64                19.31.123-1.el7.centos.2      base
anaconda-widgets.x86_64        19.31.123-1.el7.centos.2      base
at.x86_64                       3.1.13-17.el7_0.1             base
audit.x86_64                   2.4.1-5.el7                   base
audit-libs.x86_64              2.4.1-5.el7                   base
audit-libs-python.x86_64       2.4.1-5.el7                   base
...
```

Appliquez les mises-à-jour :

```
[root@centos7 ~]# yum update
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: fr2.rpmfind.net
 * extras: mirror.ibcp.fr
 * updates: mirror.ibcp.fr
Resolving Dependencies
...
Dependencies Resolved
```

```
=====
=====
Package                               Arch          Version
Repository                             Size
=====
=====
Installing:
NetworkManager                        x86_64        1:1.0.0-16.git20150121.b4ea599c.el7_1
updates                               1.9 M
  replacing NetworkManager.x86_64 1:0.9.9.1-13.git20140326.4dba720.el7
NetworkManager-adsl                   x86_64        1:1.0.0-16.git20150121.b4ea599c.el7_1
updates                               122 k
  replacing NetworkManager.x86_64 1:0.9.9.1-13.git20140326.4dba720.el7
NetworkManager-bluetooth              x86_64        1:1.0.0-16.git20150121.b4ea599c.el7_1
updates                               141 k
  replacing NetworkManager.x86_64 1:0.9.9.1-13.git20140326.4dba720.el7
NetworkManager-team                   x86_64        1:1.0.0-16.git20150121.b4ea599c.el7_1
updates                               122 k
  replacing NetworkManager.x86_64 1:0.9.9.1-13.git20140326.4dba720.el7
NetworkManager-wifi                   x86_64        1:1.0.0-16.git20150121.b4ea599c.el7_1
updates                               151 k
  replacing NetworkManager.x86_64 1:0.9.9.1-13.git20140326.4dba720.el7
NetworkManager-wwan                   x86_64        1:1.0.0-16.git20150121.b4ea599c.el7_1
updates                               142 k
```

```
replacing NetworkManager.x86_64 1:0.9.9.1-13.git20140326.4dba720.el7
kernel x86_64 3.10.0-229.14.1.el7
updates 31 M
Updating:
  NetworkManager-glib x86_64 1:1.0.0-16.git20150121.b4ea599c.el7_1
updates 376 k
  NetworkManager-tui x86_64 1:1.0.0-16.git20150121.b4ea599c.el7_1
updates 203 k
  abrt x86_64 2.1.11-22.el7.centos.0.1
updates 511 k
  abrt-addon-ccpp x86_64 2.1.11-22.el7.centos.0.1
updates 183 k
  abrt-addon-kernelevents x86_64 2.1.11-22.el7.centos.0.1
updates 100 k
  abrt-addon-pstoreoops x86_64 2.1.11-22.el7.centos.0.1
updates 91 k
  abrt-addon-python x86_64 2.1.11-22.el7.centos.0.1
updates 97 k
  abrt-addon-vmcore x86_64 2.1.11-22.el7.centos.0.1
updates 101 k
  abrt-addon-xorg x86_64 2.1.11-22.el7.centos.0.1
updates 92 k
  abrt-cli x86_64 2.1.11-22.el7.centos.0.1
updates 82 k
  abrt-console-notification x86_64 2.1.11-22.el7.centos.0.1
updates 83 k
  abrt-dbus x86_64 2.1.11-22.el7.centos.0.1
updates 115 k
...
  python-dmidecode x86_64 3.10.13-11.el7
base 82 k
  python-ethtool x86_64 0.8-5.el7
base 33 k
  python-meh-gui noarch 0.25.2-1.el7
```

```
base                15 k
python-six          noarch          1.3.0-4.el7
base                18 k
rdma                noarch          7.1_3.17-5.el7
base                28 k
tagsoup             noarch          1.2.1-8.el7
base                112 k
trousers            x86_64          0.3.11.2-4.el7_1
updates            286 k
```

#### Transaction Summary

```
=====
Install    7 Packages (+37 Dependent packages)
Upgrade   462 Packages
```

```
Total size: 510 M
Is this ok [y/d/N]: y
```



**A faire** - Répondez **y** à la question **Is this ok [y/d/N]: y**. Pendant la mise à jour de votre système, consultez le manuel de yum pour vous renseigner sur les autres commandes et options.

<html>

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