# Lab 11: Software Management

Note

All labs rely on previous courseware and lab information.

## Scenario

Mrs. Y has started to take note that you are accomplishing your additional tasks very well. She asks that you ensure that the Linux machine is updated to the most current patches available on the Internet. She also brings up that we require the ability to downgrade specific packages and wants you to find out how to get this done.

## Objectives

In this lab, you will:

* Update the Linux machine using the package manager
* Roll back or downgrade a previously updated package through the package manager

## Exercise 1: Update Linux Machine

Mrs. Y needs you to ensure that the Linux machine is up to date with all the patches. Use the yum package manager to update the machine. Some minor stipulations, though; you must include the relevant security packages in this update.

Helpful Hint

You may have to use **sudo** to complete this exercise if you are not root.

### TODO

1. Use the yum package manager to update and upgrade the machine, including relevant security packages.

### Steps

1. Validate that you are in the **companyA** home folder by typing **pwd** and pressing ENTER.

**cd companyA**

1. Type **sudo yum -y check-update** and press ENTER to query repositories for available updates.
2. To apply security-related updates, type **sudo yum update --security** and press ENTER.
3. Type **sudo yum -y** upgrade and press ENTER to update packages.

Verifying : nss-util-3.36.0-1.el7\_5.x86\_64 127/132

Verifying : 1:findutils-4.5.11-5.el7.x86\_64 128/132

Verifying : glib2-2.54.2-2.el7.x86\_64 129/132

Verifying : 2:tar-1.26-34.el7.x86\_64 130/132

Verifying : rpm-libs-4.11.3-32.el7.x86\_64 131/132

Verifying : libstdc++-4.8.5-28.el7\_5.1.x86\_64 132/132

Dependency Installed:

json-c.x86\_64 0:0.11-4.el7\_0 libsmartcols.x86\_64 0:2.23.2-59.el7\_6.1

Updated:

audit-libs.x86\_64 0:2.8.4-4.el7 bash.x86\_64 0:4.2.46-31.el7

binutils.x86\_64 0:2.27-34.base.el7 centos-release.x86\_64 0:7-6.1810.2.el7.centos

coreutils.x86\_64 0:8.22-23.el7 cryptsetup-libs.x86\_64 0:2.0.3-3.el7

curl.x86\_64 0:7.29.0-51.el7\_6.3 dbus.x86\_64 1:1.10.24-13.el7\_6

dbus-libs.x86\_64 1:1.10.24-13.el7\_6 device-mapper.x86\_64 7:1.02.149-10.el7\_6.8

device-mapper-libs.x86\_64 7:1.02.149-10.el7\_6.8 dracut.x86\_64 0:033-554.el7

elfutils-default-yama-scope.noarch 0:0.172-2.el7 elfutils-libelf.x86\_64 0:0.172-2.el7

elfutils-libs.x86\_64 0:0.172-2.el7 file-libs.x86\_64 0:5.11-35.el7

findutils.x86\_64 1:4.5.11-6.el7 glib2.x86\_64 0:2.56.1-4.el7\_6

glibc.x86\_64 0:2.17-260.el7\_6.6 glibc-common.x86\_64 0:2.17-260.el7\_6.6

gnupg2.x86\_64 0:2.0.22-5.el7\_5 gobject-introspection.x86\_64 0:1.56.1-1.el7

kmod.x86\_64 0:20-23.el7 kmod-libs.x86\_64 0:20-23.el7

kpartx.x86\_64 0:0.4.9-123.el7 krb5-libs.x86\_64 0:1.15.1-37.el7\_6

libblkid.x86\_64 0:2.23.2-59.el7\_6.1 libcom\_err.x86\_64 0:1.42.9-13.el7

libcurl.x86\_64 0:7.29.0-51.el7\_6.3 libgcc.x86\_64 0:4.8.5-36.el7\_6.2

libmount.x86\_64 0:2.23.2-59.el7\_6.1 libselinux.x86\_64 0:2.5-14.1.el7

libsemanage.x86\_64 0:2.5-14.el7 libsepol.x86\_64 0:2.5-10.el7

libssh2.x86\_64 0:1.4.3-12.el7\_6.3 libstdc++.x86\_64 0:4.8.5-36.el7\_6.2

libuuid.x86\_64 0:2.23.2-59.el7\_6.1 nss.x86\_64 0:3.36.0-7.1.el7\_6

nss-pem.x86\_64 0:1.0.3-5.el7\_6.1 nss-sysinit.x86\_64 0:3.36.0-7.1.el7\_6

nss-tools.x86\_64 0:3.36.0-7.1.el7\_6 nss-util.x86\_64 0:3.36.0-1.1.el7\_6

openldap.x86\_64 0:2.4.44-21.el7\_6 openssl-libs.x86\_64 1:1.0.2k-16.el7\_6.1

procps-ng.x86\_64 0:3.3.10-23.el7 python.x86\_64 0:2.7.5-80.el7\_6

python-libs.x86\_64 0:2.7.5-80.el7\_6 python-urlgrabber.noarch 0:3.10-9.el7

rpm.x86\_64 0:4.11.3-35.el7 rpm-build-libs.x86\_64 0:4.11.3-35.el7

rpm-libs.x86\_64 0:4.11.3-35.el7 rpm-python.x86\_64 0:4.11.3-35.el7

setup.noarch 0:2.8.71-10.el7 shadow-utils.x86\_64 2:4.1.5.1-25.el7\_6.1

systemd.x86\_64 0:219-62.el7\_6.9 systemd-libs.x86\_64 0:219-62.el7\_6.9

tar.x86\_64 2:1.26-35.el7 tzdata.noarch 0:2019b-1.el7

util-linux.x86\_64 0:2.23.2-59.el7\_6.1 vim-minimal.x86\_64 2:7.4.160-6.el7\_6

yum.noarch 0:3.4.3-161.el7.centos yum-plugin-fastestmirror.noarch 0:1.1.31-50.el7

yum-plugin-ovl.noarch 0:1.1.31-50.el7 yum-utils.noarch 0:1.1.31-50.el7

zlib.x86\_64 0:1.2.7-18.el7

Complete!

1. View the history of updates by typing **sudo yum install httpd -y** and pressing ENTER.

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Package Arch Version Repository Size

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Installing:

httpd x86\_64 2.4.6-89.el7.centos.1 updates 2.7 M

Installing for dependencies:

apr x86\_64 1.4.8-3.el7\_4.1 base 103 k

apr-util x86\_64 1.5.2-6.el7 base 92 k

centos-logos noarch 70.0.6-3.el7.centos base 21 M

httpd-tools x86\_64 2.4.6-89.el7.centos.1 updates 91 k

mailcap noarch 2.1.41-2.el7 base 31 k

Transaction Summary

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Install 1 Package (+5 Dependent packages)

Total download size: 24 M

Installed size: 31 M

Downloading packages:

(1/6): apr-util-1.5.2-6.el7.x86\_64.rpm | 92 kB 00:00:00

(2/6): httpd-tools-2.4.6-89.el7.centos.1.x86\_64.rpm | 91 kB 00:00:00

(3/6): mailcap-2.1.41-2.el7.noarch.rpm | 31 kB 00:00:00

(4/6): apr-1.4.8-3.el7\_4.1.x86\_64.rpm | 103 kB 00:00:00

(5/6): httpd-2.4.6-89.el7.centos.1.x86\_64.rpm | 2.7 MB 00:00:00

(6/6): centos-logos-70.0.6-3.el7.centos.noarch.rpm | 21 MB 00:00:00

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Total 35 MB/s | 24 MB 00:00:00

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : apr-1.4.8-3.el7\_4.1.x86\_64 1/6

Installing : apr-util-1.5.2-6.el7.x86\_64 2/6

Installing : httpd-tools-2.4.6-89.el7.centos.1.x86\_64 3/6

Installing : centos-logos-70.0.6-3.el7.centos.noarch 4/6

Installing : mailcap-2.1.41-2.el7.noarch 5/6

Installing : httpd-2.4.6-89.el7.centos.1.x86\_64 6/6

Verifying : httpd-2.4.6-89.el7.centos.1.x86\_64 1/6

Verifying : httpd-tools-2.4.6-89.el7.centos.1.x86\_64 2/6

Verifying : mailcap-2.1.41-2.el7.noarch 3/6

Verifying : apr-util-1.5.2-6.el7.x86\_64 4/6

Verifying : apr-1.4.8-3.el7\_4.1.x86\_64 5/6

Verifying : centos-logos-70.0.6-3.el7.centos.noarch 6/6

Installed:

httpd.x86\_64 0:2.4.6-89.el7.centos.1

## Exercise 2: Roll Back a Package

In your Monday briefing, Mrs. Y wants you to figure out how to downgrade a package that has been updated through the yum package manager.

Helpful Hint

You may have to use **sudo** to complete this exercise if you are not root.

### TODO

1. Use yum history to list what has been installed and updated and by whom.
2. Roll back the most recent updates in the history list.

### Steps

1. Validate that you are in the **companyA** home folder by typing **pwd** and pressing ENTER.

**cd companyA**

1. View the history of updates by typing **sudo yum history list** and pressing ENTER.

[labsuser@centos companyA]$ sudo yum history list

Loaded plugins: fastestmirror, ovl

ID | Login user | Date and time | Action(s) | Altered

-------------------------------------------------------------------------------

7 | <labsuser> | 2019-08-25 06:33 | Install | 6

6 | <labsuser> | 2019-08-25 05:27 | I, U | 67 EE

5 | System <unset> | 2019-08-21 22:24 | Reinstall | 133

4 | System <unset> | 2019-08-21 22:23 | I, U | 47 EE

3 | System <unset> | 2019-08-21 22:23 | Install | 6

2 | <labsadmin> | 2018-05-31 18:03 | Erase | 24 E<

1 | <labsadmin> | 2018-05-31 18:01 | Install | 169 >

history list

1. To view the most recent set of updates, type **sudo yum history info #** and pressing ENTER.

Helpful Hint

The number is found at the top of the history list from step 2.

1. Type **sudo yum -y history undo #** (same number from step 3)*,* and press ENTER.

[labsuser@centos ~]$ sudo yum history undo 7 -y

Loaded plugins: fastestmirror, ovl

Undoing transaction 7, from Sun Aug 25 06:33:41 2019

Dep-Install apr-1.4.8-3.el7\_4.1.x86\_64 @base

Dep-Install apr-util-1.5.2-6.el7.x86\_64 @base

Dep-Install centos-logos-70.0.6-3.el7.centos.noarch @base

Install httpd-2.4.6-89.el7.centos.1.x86\_64 @updates

Dep-Install httpd-tools-2.4.6-89.el7.centos.1.x86\_64 @updates

Dep-Install mailcap-2.1.41-2.el7.noarch @base

Resolving Dependencies

--> Running transaction check

---> Package apr.x86\_64 0:1.4.8-3.el7\_4.1 will be erased

---> Package apr-util.x86\_64 0:1.5.2-6.el7 will be erased

---> Package centos-logos.noarch 0:70.0.6-3.el7.centos will be erased

---> Package httpd.x86\_64 0:2.4.6-89.el7.centos.1 will be erased

---> Package httpd-tools.x86\_64 0:2.4.6-89.el7.centos.1 will be erased

---> Package mailcap.noarch 0:2.1.41-2.el7 will be erased

--> Finished Dependency Resolution

Dependencies Resolved

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Package Arch Version Repository Size

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Removing:

apr x86\_64 1.4.8-3.el7\_4.1 @base 221 k

apr-util x86\_64 1.5.2-6.el7 @base 194 k

centos-logos noarch 70.0.6-3.el7.centos @base 22 M

httpd x86\_64 2.4.6-89.el7.centos.1 @updates 9.4 M

httpd-tools x86\_64 2.4.6-89.el7.centos.1 @updates 169 k

mailcap noarch 2.1.41-2.el7 @base 62 k

Transaction Summary

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Remove 6 Packages

Installed size: 31 M

Downloading packages:

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Erasing : httpd-2.4.6-89.el7.centos.1.x86\_64 1/6

Erasing : httpd-tools-2.4.6-89.el7.centos.1.x86\_64 2/6

Erasing : mailcap-2.1.41-2.el7.noarch 3/6

Erasing : centos-logos-70.0.6-3.el7.centos.noarch 4/6

Erasing : apr-util-1.5.2-6.el7.x86\_64 5/6

Erasing : apr-1.4.8-3.el7\_4.1.x86\_64 6/6

Verifying : httpd-2.4.6-89.el7.centos.1.x86\_64 1/6

Verifying : httpd-tools-2.4.6-89.el7.centos.1.x86\_64 2/6

Verifying : httpd-tools-2.4.6-89.el7.centos.1.x86\_64 2/6

Verifying : mailcap-2.1.41-2.el7.noarch 3/6

Verifying : apr-util-1.5.2-6.el7.x86\_64 4/6

Verifying : apr-1.4.8-3.el7\_4.1.x86\_64 5/6

Verifying : centos-logos-70.0.6-3.el7.centos.noarch 6/6

Removed:

apr.x86\_64 0:1.4.8-3.el7\_4.1 apr-util.x86\_64 0:1.5.2-6.el7

centos-logos.noarch 0:70.0.6-3.el7.centos httpd.x86\_64 0:2.4.6-89.el7.centos.1

httpd-tools.x86\_64 0:2.4.6-89.el7.centos.1 mailcap.noarch 0:2.1.41-2.el7

Complete!

STOP

You have successfully completed this lab.