

## Managing Software

Here are some simple exercises focused on software management in Linux, using dnf (suitable for Rocky Linux and other RHEL-based distributions).

**!!! Almost everything you do in this lab needs root access...so run sudo bash first !!!**

### ### Part 1: Software Management with dnf

#### ##### Exercise 1: Checking dnf Version

Objective: Verify the version of dnf installed on your system.

1. Open your terminal.
2. Check the version of dnf:

```
dnf --version
```

(what is the dnf version?)

#### ##### Exercise 2: Updating dnf

Objective: Update the package manager itself.

1. Update the dnf package manager to ensure it's the latest version:

```
sudo dnf update dnf
```

#### ##### Exercise 3: Searching for Packages

Objective: Search for a specific package.

1. Search for a package (e.g., nano):

```
dnf search nano
```

#### ##### Exercise 4: Installing a Package

Objective: Install a package using dnf.

1. Install the nano text editor:

```
sudo dnf install nano
```

#### ##### Exercise 5: Listing Installed Packages

Objective: List all installed packages.

1. List all installed packages:

```
dnf list installed
```

#### #### Exercise 6: Removing a Package

Objective: Remove an installed package.

1. Remove the nano package:

```
sudo dnf remove nano
```

#### #### Exercise 7: Updating Packages

Objective: Update installed packages to the latest versions.

1. Update all installed packages:

```
sudo dnf upgrade
```

#### #### Exercise 8: Cleaning Up

Objective: Clean the package cache.

1. Clean up the package cache to free up space:

```
sudo dnf clean all
```

#### #### Exercise 9: RPM

1. Download the ksh package:

This will download the package to the current working directory

```
yum install -y ksh --downloadonly --downloadaddr .
```

2. Install the ksh package.

List the contents of the current working directory. The packagename should be something like **ksh-1.0.6-4.el9\_5.x86\_64.rpm**

Install the package.

```
rpm -ivh ksh-1.0.6-4.el9_5.x86_64.rpm
```

3. List which files are part of the ksh package.

With **ql** (query list) you can list all files.

```
rpm -ql ksh
```

4. List in which package the **ls** command can be found.

```
rpm -qf /usr/bin/ls
```

5. Remove the ksh package.

```
rpm -e ksh
```

6. The elinks package has a text based browser. This package is available from the extra packages for enterprise linux. (**epel**).

First install **epel-release** if it is not installed yet, then install **elinks**.

```
rpm -qa |grep epel-release
```

(if it is not installed...run the following command)

```
dnf install -y epel-release
```

Then install elinks.

```
dnf install -y elinks
```

**(You will need the elinks browser in another lab.)**