

## Exercises Package Manager Basics

### Exercise 1: Query an installed package

1. List all installed packages using RPM:

```
rpm -qa
```

2. Find the full package name for `bash`:

```
rpm -q bash
```

3. Get detailed info about the `bash` package:

```
rpm -qi bash
```

4. List all files installed by the `bash` package:

```
rpm -ql bash
```

### Exercise 2: Install and remove using `dnf` and `rpm`

Use an RPM package (like `ksh`)—download it from a repo or manually.

1. Download an RPM:

```
sudo dnf download ksh
```

2. Download the RPM to a specific directory.

```
sudo dnf download ksh --downloadonly /tmp
```

3. Install the RPM file:

```
sudo rpm -ivh /tmp/ksh-1.0.6-7.el9_6.1.x86_64.rpm
```

4. using RPM to install if it does not exist and to update if it exists:

```
sudo rpm -Uvh /tmp/ksh-*.rpm
```

### Exercise 3: Searching and showing package info

1. Search for a package containing "editor":

```
dnf search nano
```

2. Get detailed info about the a package:

```
yum whatprovides vim  
dnf whatprovides nano
```

3. List dependencies of nano:
4. `dnf deplist nano`

### Exercise 4: Working with groups

1. List available package groups:

```
dnf group list
```

2. Install a group (e.g., "Development Tools"):

```
sudo dnf groupinstall "System Tools"
```

3. Remove a group:

```
sudo dnf groupremove "System Tools"
```

### Exercise 5: Update system (and remove obsoleted packages)

1. Update all packages:
2. `sudo dnf upgrade`

### Exercise 6: Clean DNF cache

1. Clear all cached files:

```
sudo dnf clean all
```

2. Download ksh and store it in the default cache:

```
dnf install -y ksh --downloadonly
```

```
cd /var/cache/dnf  
find . -name "ksh*"
```

```
./appstream-25485261a76941d3/packages/ksh-1.0.6-7.el9_6.1.x86_64.rpm
```

3. rpm -ivh ./appstream-25485261a76941d3/packages/ksh\*