

Лабораторная работа №4

Работа с программными пакетами

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Получить навыки работы с репозиториями и менеджерами пакетов.

Выполнение лабораторной работы

Работа с репозиториями

```
[irkolontyrskiy@irkolontyrskiy ~]$ cd /etc/yum.repos.d
[irkolontyrskiy@irkolontyrskiy yum.repos.d]$ ls
epel-cisco-openh264.repo  epel-testing.repo  rocky-devel.repo  rocky.repo
epel.repo                 rocky-addons.repo  rocky-extras.repo
```

содержимое файла репозитория

```
[irkolontyrskiy@irkolontyrskiy yum.repos.d]$ cat epel.repo
[epel]
name=Extra Packages for Enterprise Linux $releasever - $basearch
# It is much more secure to use the metalink, but if you wish to use a local mirror
# place its address here.
#baseurl=https://download.example/pub/epel/$releasever/Everything/$basearch/
metalink=https://mirrors.fedoraproject.org/metalink?repo=epel-$releasever&arch=$basearch&infra=$infra&content=$content
dir
enabled=1
gpgcheck=1
countme=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-$releasever

[epel-debuginfo]
name=Extra Packages for Enterprise Linux $releasever - $basearch - Debug
# It is much more secure to use the metalink, but if you wish to use a local mirror
# place its address here.
#baseurl=https://download.example/pub/epel/$releasever/Everything/$basearch/debug/
metalink=https://mirrors.fedoraproject.org/metalink?repo=epel-debug-$releasever&arch=$basearch&infra=$infra&content=$content
contentdir
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-$releasever
gpgcheck=1

[epel-source]
name=Extra Packages for Enterprise Linux $releasever - $basearch - Source
# It is much more secure to use the metalink, but if you wish to use a local mirror
# place its address here.
#baseurl=https://download.example/pub/epel/$releasever/Everything/source/tree/
metalink=https://mirrors.fedoraproject.org/metalink?repo=epel-source-$releasever&arch=$basearch&infra=$infra&content=$content
contentdir
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-$releasever
gpgcheck=1
[irkolontyrskiy@irkolontyrskiy yum.repos.d]$
```

список репозиториев

```
[irkolontyrskiy@irkolontyrskiy yum.repos.d]$ dnf repolist
repo id                repo name
appstream              Rocky Linux 9 - AppStream
baseos                 Rocky Linux 9 - BaseOS
epel                   Extra Packages for Enterprise Linux 9 - x86_64
epel-cisco-openh264    Extra Packages for Enterprise Linux 9 openh264 (From Cisco) - x86_64
extras                 Rocky Linux 9 - Extras
[irkolontyrskiy@irkolontyrskiy yum.repos.d]$
```

установка nmap

```
[irkolontyrskiy@irkolontyrskiy yum.repos.d]$ su -
Password:
[root@irkolontyrskiy ~]# dnf search nmap
Last metadata expiration check: 7 days, 22:57:24 ago on Fri 20 Sep 2024 09:11:31 PM MSK.
===== Name Exactly Matched: nmap =====
nmap.x86_64 : Network exploration tool and security scanner
===== Name & Summary Matched: nmap =====
nmap-ncat.x86_64 : Nmap's Netcat replacement
[root@irkolontyrskiy ~]# dnf info nmap
Extra Packages for Enterprise Linux 9 - x86_64                46 kB/s | 41 kB    00:00
Extra Packages for Enterprise Linux 9 - x86_64                7.4 MB/s | 23 MB    00:03
Rocky Linux 9 - BaseOS                                         9.6 kB/s | 4.1 kB    00:00
Rocky Linux 9 - BaseOS                                         2.8 MB/s | 2.3 MB    00:00
Rocky Linux 9 - AppStream                                       11 kB/s | 4.5 kB    00:00
Rocky Linux 9 - AppStream                                      11 MB/s | 8.0 MB    00:00
Rocky Linux 9 - Extras                                         7.2 kB/s | 2.9 kB    00:00
Available Packages
Name      : nmap
Epoch    : 3
Version   : 7.92
Release   : 1.el9
Architecture: x86_64
Size      : 5.4 M
Source    : nmap-7.92-1.el9.src.rpm
Repository : appstream
Summary   : Network exploration tool and security scanner
URL       : http://nmap.org/
License   : Nmap
Description: Nmap is a utility for network exploration or security auditing. It supports
: ping scanning (determine which hosts are up), many port scanning techniques
: (determine what services the hosts are offering), and TCP/IP fingerprinting
: (remote host operating system identification). Nmap also offers flexible target
: and port specification, decoy scanning, determination of TCP sequence
: predictability characteristics, reverse-identd scanning, and more. In addition
: to the classic command-line nmap executable, the Nmap suite includes a flexible
: data transfer, redirection, and debugging tool (netcat utility ncat), a utility
: for comparing scan results (ndiff), and a packet generation and response
: analysis tool (nping).

[root@irkolontyrskiy ~]# dnf install nmap
Last metadata expiration check: 0:00:05 ago on Sat 28 Sep 2024 08:09:15 PM MSK.
Dependencies resolved.
=====
Package            Architecture      Version           Repository        Size
=====
Installing:
nmap                x86_64            3:7.92-1.el9      appstream         5.4 M
=====
Transaction Summary
=====
Install 1 Package
```


Удаление nmap

```
[root@irkolontyrskiy ~]# dnf remove nmap
Dependencies resolved.
=====
Package                Architecture          Version               Repository            Size
=====
Removing:
nmap                    x86_64                3:7.92-1.el9         @appstream            24 M

Transaction Summary
=====
Remove 1 Package

Freed space: 24 M
Is this ok [y/N]: y
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Erasing        : nmap-3:7.92-1.el9.x86_64      1/1
  Running scriptlet: nmap-3:7.92-1.el9.x86_64      1/1
  Verifying      : nmap-3:7.92-1.el9.x86_64      1/1

Removed:
  nmap-3:7.92-1.el9.x86_64

Complete!
[root@irkolontyrskiy ~]# dnf remove nmap\*
Dependencies resolved.
=====
Package                Architecture          Version               Repository            Size
=====
Removing:
nmap-ncat              x86_64                3:7.92-1.el9         @AppStream            469 k

Transaction Summary
=====
Remove 1 Package

Freed space: 469 k
Is this ok [y/N]: y
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Running scriptlet: nmap-ncat-3:7.92-1.el9.x86_64 1/1
  Erasing        : nmap-ncat-3:7.92-1.el9.x86_64 1/1
```

Список групп пакетов

Список групп пакетов

```
[root@irkolontyrskiy ~]# dnf groups list
Last metadata expiration check: 0:02:04 ago on Sat 28 Sep 2024 08:09:15 PM MSK.
Available Environment Groups:
  Server
  Minimal Install
  Workstation
  KDE Plasma Workspaces
  Custom Operating System
  Virtualization Host
Installed Environment Groups:
  Server with GUI
Installed Groups:
  Container Management
  Development Tools
  Headless Management
Available Groups:
  Fedora Packager
  VideoLAN Client
  Xfce
  Legacy UNIX Compatibility
  Console Internet Tools
  .NET Development
  Graphical Administration Tools
  Network Servers
  RPM Development Tools
  Scientific Support
  Security Tools
  Smart Card Support
  System Tools
```

```
[root@irkolontyrskiy ~]# LANG=C dnf groups list
Last metadata expiration check: 0:02:15 ago on Sat Sep 28 20:09:15 2024.
Available Environment Groups:
  Server
  Minimal Install
  Workstation
  KDE Plasma Workspaces
  Custom Operating System
  Virtualization Host
Installed Environment Groups:
  Server with GUI
Installed Groups:
  Container Management
  Development Tools
  Headless Management
Available Groups:
  Fedora Packager
  VideoLAN Client
  Xfce
  Legacy UNIX Compatibility
  Console Internet Tools
```

установка RPM Development Tools

```
root@irkolontyrskiy:~  
[root@irkolontyrskiy ~]# dnf groups info "RPM Development Tools"  
Last metadata expiration check: 0:02:53 ago on Sat 28 Sep 2024 08:09:15 PM MSK.  
Group: RPM Development Tools  
Description: Tools used for building RPMs, such as rpmbuild.  
Mandatory Packages:  
  redhat-rpm-config  
  rpm-build  
Default Packages:  
  rpmdevtools  
Optional Packages:  
  rpmlint  
[root@irkolontyrskiy ~]# dnf groupinstall "RPM Development Tools"  
Last metadata expiration check: 0:03:20 ago on Sat 28 Sep 2024 08:09:15 PM MSK.  
Dependencies resolved.  
=====
```

Package	Architecture	Version	Repository	Size
---------	--------------	---------	------------	------

```
=====
```

Installing group/module packages:

rpmdevtools	noarch	9.5-1.el9	appstream	75 k
-------------	--------	-----------	-----------	------

Installing dependencies:

python3-argcomplete	noarch	1.12.0-5.el9	appstream	61 k
---------------------	--------	--------------	-----------	------

Installing Groups:
RPM Development Tools

Transaction Summary

```
=====
```

Install 2 Packages

Total download size: 135 k
Installed size: 414 k
Is this ok [y/N]: y
Downloading Packages:
(1/2): rpmdevtools-9.5-1.el9.noarch.rpm 530 kB/s | 75 kB 00:00
(2/2): python3-argcomplete-1.12.0-5.el9.noar 55% [=====] 530 kB/s | 75 kB 00:00 ETA

Просмотр истории и отмена действия

```
root@irkolontyrskiy:~  
8 | groupinstall RPM Development Tools | 2024-09-28 20:12 | Install | 3  
7 | remove nmap | 2024-09-28 20:10 | Removed | 1  
6 | remove nmap | 2024-09-28 20:10 | Removed | 1  
5 | install nmap | 2024-09-28 20:10 | Install | 1  
4 | | 2024-09-14 19:35 | I, U | 11  
3 | -y update | 2024-09-12 17:55 | I, U | 169 E<  
2 | -y install epel-release | 2024-09-12 17:53 | Install | 1 ><  
1 | | 2024-09-12 17:14 | Install | 1293 >E  
[root@irkolontyrskiy ~]# dnf history undo 9  
Last metadata expiration check: 0:04:44 ago on Sat 28 Sep 2024 08:09:15 PM MSK.  
Dependencies resolved.  
=====
```

Package	Architecture	Version	Repository	Size
Installing group/module packages:				
rpmdevtools	noarch	9.5-1.el9	appstream	75 k
Installing dependencies:				
python3-argcomplete	noarch	1.12.0-5.el9	appstream	61 k
Installing Groups:				
RPM Development Tools				

```
Transaction Summary  
=====
```

Install 2 Packages			
Total download size: 135 k			
Installed size: 414 k			
Is this ok [y/N]: y			
Downloading Packages:			
(1/2): rpmdevtools-9.5-1.el9.noarch.rpm	491 kB/s 75 kB	00:00	
(2/2): python3-argcomplete-1.12.0-5.el9.noarch.rpm	390 kB/s 61 kB	00:00	
Total		266 kB/s 135 kB	00:00

```
Running transaction check  
Transaction check succeeded.  
Running transaction test  
Transaction test succeeded.  
Running transaction  
  Preparing      :  
  Installing     : python3-argcomplete-1.12.0-5.el9.noarch 1/1  
  Installing     : rpmdevtools-9.5-1.el9.noarch 2/2  
  Running scriptlet: rpmdevtools-9.5-1.el9.noarch 2/2  
  Verifying      : rpmdevtools-9.5-1.el9.noarch 1/2  
  Verifying      : python3-argcomplete-1.12.0-5.el9.noarch 2/2  
  
Installed:  
python3-argcomplete-1.12.0-5.el9.noarch rpmdevtools-9.5-1.el9.noarch  
  
Complete!
```

Использование grt

**Предположим, что требуется
установить текстовый браузер
lynx из rpm-пакета**

установка lynx из rpm-пакета

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages

[root@irkolontyrskiy ~]# dnf list lynx
Last metadata expiration check: 0:05:17 ago on Sat 28 Sep 2024 08:09:15 PM MSK.
Available Packages
lynx.x86_64                                2.8.9-20.el9                                appstream

[root@irkolontyrskiy ~]# dnf install lynx --downloadonly
Last metadata expiration check: 0:05:25 ago on Sat 28 Sep 2024 08:09:15 PM MSK.
Dependencies resolved.
=====
Package                Architecture      Version           Repository        Size
=====
Installing:
lynx                   x86_64            2.8.9-20.el9      appstream          1.5 M

Transaction Summary
=====
Install 1 Package

Total download size: 1.5 M
Installed size: 6.1 M
DNF will only download packages for the transaction.
Is this ok [y/N]: y
Downloading Packages:
lynx-2.8.9-20.el9.x86_64.rpm                8.5 MB/s | 1.5 MB    00:00
-----
Total                                        3.1 MB/s | 1.5 MB    00:00
Complete!

The downloaded packages were saved in cache until the next successful transaction.
You can remove cached packages by executing 'dnf clean packages'.
[root@irkolontyrskiy ~]# find /var/cache/dnf/ -name lynx*
/var/cache/dnf/appstream-25485261a76941d3/packages/lynx-2.8.9-20.el9.x86_64.rpm
[root@irkolontyrskiy ~]# cd /var/cache/dnf/appstream-25485261a76941d3/packages/
[root@irkolontyrskiy packages]# rpm -Uhv lynx-2.8.9-20.el9.x86_64.rpm
Verifying...                               ##### [100%]
Preparing...                               ##### [100%]
Updating / installing...
 1:lynx-2.8.9-20.el9                        ##### [100%]
[root@irkolontyrskiy packages]# which lynx
/usr/bin/lynx
[root@irkolontyrskiy packages]# rpm -qf $(which lynx)
lynx-2.8.9-20.el9.x86_64
[root@irkolontyrskiy packages]#
```


доп информация об lynx

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages

[root@irkolontyrskiy packages]# rpm -qi lynx
Name       : lynx
Version    : 2.8.9
Release    : 20.el9
Architecture: x86_64
Install Date: Sat 28 Sep 2024 08:15:35 PM MSK
Group      : Unspecified
Size       : 6356615
License    : GPLv2
Signature  : RSA/SHA256, Tue 16 Apr 2024 02:13:04 AM MSK, Key ID 702d426d350d275d
Source RPM : lynx-2.8.9-20.el9.src.rpm
Build Date : Tue 16 Apr 2024 02:10:31 AM MSK
Build Host : pb-abd37acc-ala8-4064-a86c-09fcc75626b8-b-x86-64
Packager   : Rocky Linux Build System (Peridot) <releng@rockylinux.org>
Vendor     : Rocky Enterprise Software Foundation
URL        : http://lynx.browser.org/
Summary    : A text-based Web browser
Description:
Lynx is a text-based Web browser. Lynx does not display any images,
but it does support frames, tables, and most other HTML tags. One
advantage Lynx has over graphical browsers is speed; Lynx starts and
exits quickly and swiftly displays web pages.
[root@irkolontyrskiy packages]#
```


список файлов пакета

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/pa

[root@irkolontyrskiy packages]# rpm -ql lynx
/etc/lynx-site.cfg
/etc/lynx.cfg
/etc/lynx.lss
/usr/bin/lynx
/usr/lib/.build-id
/usr/lib/.build-id/5a
/usr/lib/.build-id/5a/06d3c4e1a8f4e4a2a1a5305737084bab728b85
/usr/share/doc/lynx
/usr/share/doc/lynx/INSTALLATION
/usr/share/doc/lynx/README
/usr/share/doc/lynx/docs
/usr/share/doc/lynx/docs/CHANGES2.3
/usr/share/doc/lynx/docs/CHANGES2.4
/usr/share/doc/lynx/docs/CHANGES2.5
/usr/share/doc/lynx/docs/CHANGES2.6
/usr/share/doc/lynx/docs/CHANGES2.7
/usr/share/doc/lynx/docs/CHANGES2.8
/usr/share/doc/lynx/docs/CRAWL.announce
/usr/share/doc/lynx/docs/FM.announce
/usr/share/doc/lynx/docs/IBMPC-charsets.announce
/usr/share/doc/lynx/docs/README.TRST
/usr/share/doc/lynx/docs/README.chartrans
/usr/share/doc/lynx/docs/README.cookies
/usr/share/doc/lynx/docs/README.defines
/usr/share/doc/lynx/docs/README.metrics
/usr/share/doc/lynx/docs/README.options
/usr/share/doc/lynx/docs/README.release
/usr/share/doc/lynx/docs/README.rootcerts
/usr/share/doc/lynx/docs/README.ssl
/usr/share/doc/lynx/docs/README.sslcerts
/usr/share/doc/lynx/docs/SOCKETSHR.announce
/usr/share/doc/lynx/docs/TCPWARE.announce
/usr/share/doc/lynx/docs/VMSWAIS.announce
/usr/share/doc/lynx/docs/djgpp.key
/usr/share/doc/lynx/docs/pdcurses.key
/usr/share/doc/lynx/docs/slang.key
/usr/share/doc/lynx/docs/win-386.announce
/usr/share/doc/lynx/lynx.hlp
/usr/share/doc/lynx/lynx_help
/usr/share/doc/lynx/lynx_help/Lynx_users_guide.html
/usr/share/doc/lynx/lynx_help/about_lynx.html
/usr/share/doc/lynx/lynx_help/help_files.txt
```

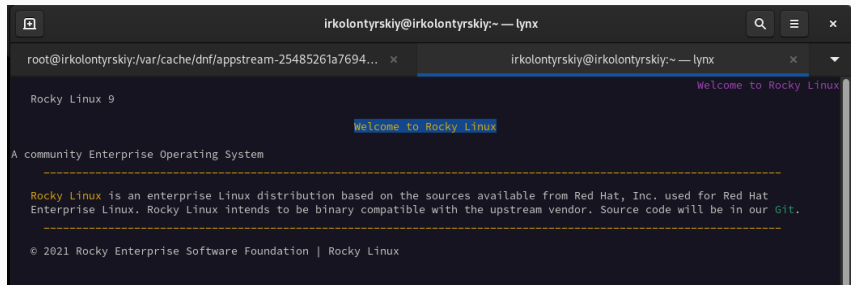
файлы документации пакета

```
[root@irkolontyrskiy packages]# rpm -qd lynx
/usr/share/doc/lynx/INSTALLATION
/usr/share/doc/lynx/README
/usr/share/doc/lynx/docs/CHANGES2.3
/usr/share/doc/lynx/docs/CHANGES2.4
/usr/share/doc/lynx/docs/CHANGES2.5
/usr/share/doc/lynx/docs/CHANGES2.6
/usr/share/doc/lynx/docs/CHANGES2.7
/usr/share/doc/lynx/docs/CHANGES2.8
/usr/share/doc/lynx/docs/CRAWL.announce
/usr/share/doc/lynx/docs/FM.announce
/usr/share/doc/lynx/docs/IBMPC-charsets.announce
/usr/share/doc/lynx/docs/README.TRST
/usr/share/doc/lynx/docs/README.chartrans
/usr/share/doc/lynx/docs/README.cookies
/usr/share/doc/lynx/docs/README.defines
/usr/share/doc/lynx/docs/README.metrics
/usr/share/doc/lynx/docs/README.options
/usr/share/doc/lynx/docs/README.release
/usr/share/doc/lynx/docs/README.rootcerts
/usr/share/doc/lynx/docs/README.ssl
/usr/share/doc/lynx/docs/README.sslcerts
/usr/share/doc/lynx/docs/SOCKETSHR.announce
/usr/share/doc/lynx/docs/TCPWARE.announce
/usr/share/doc/lynx/docs/VMSWAIS.announce
/usr/share/doc/lynx/docs/djgpp.key
/usr/share/doc/lynx/docs/pdcurses.key
/usr/share/doc/lynx/docs/slang.key
/usr/share/doc/lynx/docs/win-386.announce
/usr/share/doc/lynx/lynx.hlp
/usr/share/doc/lynx/lynx_help/Lynx_users_guide.html
/usr/share/doc/lynx/lynx_help/about_lynx.html
/usr/share/doc/lynx/lynx_help/help_files.txt
/usr/share/doc/lynx/lynx_help/keystrokes/alt_edit_help.html
/usr/share/doc/lynx/lynx_help/keystrokes/bashlike_edit_help.html
/usr/share/doc/lynx/lynx_help/keystrokes/bookmark_help.html
/usr/share/doc/lynx/lynx_help/keystrokes/cookie_help.html
/usr/share/doc/lynx/lynx_help/keystrokes/dired_help.html
/usr/share/doc/lynx/lynx_help/keystrokes/edit_help.html
/usr/share/doc/lynx/lynx_help/keystrokes/environments.html
```

 root@irkolontyrskiy:/var/cache/dnf/

```
[root@irkolontyrskiy packages]# rpm -qc lynx
/etc/lynx-site.cfg
/etc/lynx.cfg
/etc/lynx.lss
[root@irkolontyrskiy packages]# rpm -q --scripts lynx
[root@irkolontyrskiy packages]#
```

пробный запуск



A terminal window titled "irkolontyrskiy@irkolontyrskiy:~ — lynx" is shown. The window has a dark background and a light-colored text. The terminal output displays the Rocky Linux 9 welcome message, which includes the text "Welcome to Rocky Linux" in a light blue color. The message also describes Rocky Linux as a community enterprise operating system based on Red Hat sources. The terminal window has a standard Linux desktop environment interface with a title bar and window controls.

```
irkolontyrskiy@irkolontyrskiy:~ — lynx
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a7694... x irkolontyrskiy@irkolontyrskiy:~ — lynx x
Rocky Linux 9
Welcome to Rocky Linux
A community Enterprise Operating System
-----
Rocky Linux is an enterprise Linux distribution based on the sources available from Red Hat, Inc. used for Red Hat
Enterprise Linux. Rocky Linux intends to be binary compatible with the upstream vendor. Source code will be in our Git.
-----
© 2021 Rocky Enterprise Software Foundation | Rocky Linux
```

**Предположим, что требуется из
rpm-пакетов установить dnsmasq**

установка dnsmasq

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages
[root@irkolontyrskiy packages]# dnf list dnsmasq
Last metadata expiration check: 0:01:50 ago on Sat 28 Sep 2024 08:17:36 PM MSK.
Installed Packages
dnsmasq.x86_64                                2.85-16.el9_4                                @AppStream
[root@irkolontyrskiy packages]# dnf install dnsmasq
Last metadata expiration check: 0:01:55 ago on Sat 28 Sep 2024 08:17:36 PM MSK.
Package dnsmasq-2.85-16.el9_4.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@irkolontyrskiy packages]#
```

информация о dnsmasq

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages

[root@irkolontyrskiy packages]# which dnsmasq
/usr/sbin/dnsmasq
[root@irkolontyrskiy packages]# rpm -qf $(which dnsmasq)
dnsmasq-2.85-16.el9_4.x86_64
[root@irkolontyrskiy packages]# rpm -qi dnsmasq
Name       : dnsmasq
Version    : 2.85
Release    : 16.el9_4
Architecture: x86_64
Install Date: Thu 12 Sep 2024 05:18:10 PM MSK
Group      : Unspecified
Size       : 718654
License    : GPLv2 or GPLv3
Signature  : RSA/SHA256, Wed 24 Apr 2024 08:07:47 AM MSK, Key ID 702d426d350d275d
Source RPM : dnsmasq-2.85-16.el9_4.src.rpm
Build Date : Wed 24 Apr 2024 08:06:41 AM MSK
Build Host : pb-2b53df02-b46e-4235-9c27-8fc7c2aded81-b-x86-64
Packager   : Rocky Linux Build System (Peridot) <releng@rockylinux.org>
Vendor     : Rocky Enterprise Software Foundation
URL        : http://www.thekelleys.org.uk/dnsmasq/
Summary    : A lightweight DHCP/caching DNS server
Description:
Dnsmasq is lightweight, easy to configure DNS forwarder and DHCP server.
It is designed to provide DNS and, optionally, DHCP, to a small network.
It can serve the names of local machines which are not in the global
DNS. The DHCP server integrates with the DNS server and allows machines
with DHCP-allocated addresses to appear in the DNS with names configured
either in each host or in a central configuration file. Dnsmasq supports
static and dynamic DHCP leases and BOOTP for network booting of diskless
machines.
[root@irkolontyrskiy packages]#
```


список файлов в пакете



root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages

```
[root@irkolontyrskiy packages]# rpm -ql dnsmasq
/etc/dbus-1/system.d/dnsmasq.conf
/etc/dnsmasq.conf
/etc/dnsmasq.d
/usr/lib/.build-id
/usr/lib/.build-id/f0
/usr/lib/.build-id/f0/9a26532944eaa77f523aeaa8b091bbb7c5ae7
/usr/lib/systemd/system/dnsmasq.service
/usr/lib/sysusers.d/dnsmasq.conf
/usr/sbin/dnsmasq
/usr/share/dnsmasq
/usr/share/dnsmasq/trust-anchors.conf
/usr/share/doc/dnsmasq
/usr/share/doc/dnsmasq/CHANGELOG
/usr/share/doc/dnsmasq/DBus-interface
/usr/share/doc/dnsmasq/FAQ
/usr/share/doc/dnsmasq/doc.html
/usr/share/doc/dnsmasq/setup.html
/usr/share/licenses/dnsmasq
/usr/share/licenses/dnsmasq/COPYING
/usr/share/licenses/dnsmasq/COPYING-v3
/usr/share/man/man8/dnsmasq.8.gz
/var/lib/dnsmasq
[root@irkolontyrskiy packages]# rpm -qd dnsmasq
/usr/share/doc/dnsmasq/CHANGELOG
/usr/share/doc/dnsmasq/DBus-interface
/usr/share/doc/dnsmasq/FAQ
/usr/share/doc/dnsmasq/doc.html
/usr/share/doc/dnsmasq/setup.html
/usr/share/man/man8/dnsmasq.8.gz
[root@irkolontyrskiy packages]#
```

документация пакета

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages

DNSMASQ(8)                                System Manager's Manual                                DNSMASQ(8)

NAME
  dnsmasq - A lightweight DHCP and caching DNS server.

SYNOPSIS
  dnsmasq [OPTION]...

DESCRIPTION
  dnsmasq is a lightweight DNS, TFTP, PXE, router advertisement and DHCP server. It is intended to provide coupled DNS and DHCP service to a LAN.

  Dnsmasq accepts DNS queries and either answers them from a small, local, cache or forwards them to a real, recursive, DNS server. It loads the contents of /etc/hosts so that local hostnames which do not appear in the global DNS can be resolved and also answers DNS queries for DHCP configured hosts. It can also act as the authoritative DNS server for one or more domains, allowing local names to appear in the global DNS. It can be configured to do DNSSEC validation.

  The dnsmasq DHCP server supports static address assignments and multiple networks. It automatically sends a sensible default set of DHCP options, and can be configured to send any desired set of DHCP options, including vendor-encapsulated options. It includes a secure, read-only, TFTP server to allow net/PXE boot of DHCP hosts and also supports BOOTP. The PXE support is full featured, and includes a proxy mode which supplies PXE information to clients whilst DHCP address allocation is done by another server.

  The dnsmasq DHCPv6 server provides the same set of features as the DHCPv4 server, and in addition, it includes router advertisements and a neat feature which allows naming for clients which use DHCPv4 and stateless autoconfiguration only for IPv6 configuration. There is support for doing address allocation (both DHCPv6 and RA) from subnets which are dynamically delegated via DHCPv6 prefix delegation.

  Dnsmasq is coded with small embedded systems in mind. It aims for the smallest possible memory footprint compatible with the supported functions, and allows unneeded functions to be omitted from the compiled binary.

OPTIONS
  Note that in general missing parameters are allowed and switch off functions, for instance "--pid-file" disables writing a PID file. On BSD, unless the GNU getopt library is linked, the long form of the options does not work on the command line; it is still recognised in the configuration file.

  --test Read and syntax check configuration file(s). Exit with code 0 if all is OK, or a non-zero code otherwise. Do not start up dnsmasq.

  -w, --help
```

конфигурационные файлы, скрипт

```
root@irkolontyrskiy:/var/cache/dnf/appstream-25485261a76941d3/packages

[root@irkolontyrskiy packages]# man dnsmasq
[root@irkolontyrskiy packages]# rpm -qc dnsmasq
/etc/dbus-1/system.d/dnsmasq.conf
/etc/dnsmasq.conf
[root@irkolontyrskiy packages]# rpm -q --scripts dnsmasq
preinstall scriptlet (using /bin/sh):
#precreate users so that rpm can install files owned by that user

# generated from dnsmasq-systemd-sysusers.conf
getent group 'dnsmasq' >/dev/null || groupadd -r 'dnsmasq' || :
getent passwd 'dnsmasq' >/dev/null || \
    useradd -r -g 'dnsmasq' -d '/var/lib/dnsmasq' -s '/usr/sbin/nologin' -c 'Dnsmasq DHCP and DNS server' 'dnsmasq' || :
postinstall scriptlet (using /bin/sh):

if [ $1 -eq 1 ] && [ -x "/usr/lib/systemd/systemd-update-helper" ]; then
    # Initial installation
    /usr/lib/systemd/systemd-update-helper install-system-units dnsmasq.service || :
fi
preuninstall scriptlet (using /bin/sh):

if [ $1 -eq 0 ] && [ -x "/usr/lib/systemd/systemd-update-helper" ]; then
    # Package removal, not upgrade
    /usr/lib/systemd/systemd-update-helper remove-system-units dnsmasq.service || :
fi
postuninstall scriptlet (using /bin/sh):

if [ $1 -ge 1 ] && [ -x "/usr/lib/systemd/systemd-update-helper" ]; then
    # Package upgrade, not uninstall
    /usr/lib/systemd/systemd-update-helper mark-restart-system-units dnsmasq.service || :
fi
[root@irkolontyrskiy packages]#
```

Контрольные вопросы

1. Какая команда позволяет вам искать пакет rpm, содержащий файл useradd?

rpm -qf \$(which useradd)

2. Какие команды вам нужно использовать, чтобы показать имя группы `dnf`, которая содержит инструменты безопасности и показывает, что находится в этой группе?

`dnf group list` `dnf group info` “Имя группы”

3. Какая команда позволяет вам установить rpm, который вы загрузили из Интернета и который не находится в репозиториях?

`rpm -ivh имя_пакета.rpm`

4. Вы хотите убедиться, что пакет rpm, который вы загрузили, не содержит никакого опасного кода сценария. Какая команда позволяет это сделать?

`rpm -K имя_пакета.rpm`

5. Какая команда показывает всю документацию в rpm?

`rpm -qd имя_пакета`

6. Какая команда показывает, какому пакету rpm принадлежит файл?

rpm -qf /путь/к/файлу

Вывод

В ходе выполнения лабораторной работы я получил навыки работы с репозиториями и менеджерами пакетов.