

Лабораторная работа №4

Работа с программными пакетами

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Цель работы

Получить практические навыки работы с репозиториями и менеджерами пакетов **dnf** и **rpm** в операционной системе Rocky Linux.

Ход выполнения работы

Переход в режим суперпользователя и просмотр репозиториев

```
mlabsi@mlabsi:~$ su
Password:
root@mlabsi:/home/mlabsi# cd /etc/yum.repos.d/
root@mlabsi:/etc/yum.repos.d# ls
rocky-addons.repo  rocky-extras.repo  Rocky-SIG-Core-Common.repo
rocky-devel.repo   rocky.repo          Rocky-SIG-Core-Infra.repo
root@mlabsi:/etc/yum.repos.d# cat rocky-extras.repo
# rocky-extras.repo
#
# The mirrorlist system uses the connecting IP address of the client and the
# update status of each mirror to pick current mirrors that are geographically
# close to the client.  You should use this for Rocky updates unless you are
# manually picking other mirrors.
#
# If the mirrorlist does not work for you, you can try the commented out
# baseurl line instead.

[extras]
name=Rocky Linux $releasever - Extras
mirrorlist=https://mirrors.rockylinux.org/mirrorlist?arch=$basearch&repo=extras-$releasever$rltype
#baseurl=http://dl.rockylinux.org/$contentdir/$releasever/extras/$basearch/os/
gpgcheck=1
enabled=1
countme=1
metadata_expire=6h
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-Rocky-10
```

Рис. 1: Просмотр каталога /etc/yum.repos.d и файла репозитория

Список активных репозиториев

```
root@mlabsi:/etc/yum.repos.d# dnf repolist
repo id                                repo name
appstream                             Rocky Linux 10 - AppStream
baseos                                Rocky Linux 10 - BaseOS
core-common                           Rocky Linux 10 - SIG Core Common
extras                                Rocky Linux 10 - Extras
root@mlabsi:/etc/yum.repos.d# dnf search user
Last metadata expiration check: 4 days, 5:59:20 ago on Mon 08 Dec 2025 01:05:55 PM MSK.
===== Name & Summary Matched: user =====
gnome-user-docs.noarch : GNOME User Documentation
libuser.x86_64 : A user and group account administration library
perl-User-pwent.noarch : By-name interface to Perl built-in user name resolver
samba-usershares.noarch : Provides support for non-root user shares
usermode.x86_64 : Tools for certain user account management tasks
userspace-rcu.x86_64 : RCU (read-copy-update) implementation in user-space
xdg-user-dirs.x86_64 : Handles user special directories
===== Name Matched: user =====
gnome-shell-extension-user-theme.noarch : Support for custom themes in GNOME Shell
xdg-user-dirs-gtk.x86_64 : Gnome integration of special directories
===== Summary Matched: user =====
NetworkManager.x86_64 : Network connection manager and user applications
PackageKit-command-not-found.x86_64 : Ask the user to install command line programs automatically
accountsservice.x86_64 : D-Bus interfaces for querying and manipulating user account information
anaconda-gui.x86_64 : Graphical user interface for the Anaconda installer
anaconda-tui.x86_64 : Textual user interface for the Anaconda installer
audit.x86_64 : User space tools for kernel auditing
cachefilesd.x86_64 : CacheFiles user-space management daemon
cockpit-machines.noarch : Cockpit user interface for virtual machines
cockpit-ostree.noarch : Cockpit user interface for rpm-ostree
cockpit-packagekit.noarch : Cockpit user interface for packages
cockpit-storaged.noarch : Cockpit user interface for storage, using udisks
console-login-helper-messages.noarch : Combines motd, issue, profile features to show system information to the
```

Рис. 2: Список активных репозиториев dnf

Поиск и информация о пакете nmap

```
root@mlabsi:/etc/yum.repos.d# dnf search nmap
===== 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@mlabsi:/etc/yum.repos.d# dnf info nmap
Rocky Linux 10 - SIG Core Common          1.5 kB/s | 2.9 kB    00:01
Rocky Linux 10 - BaseOS                   8.0 kB/s | 4.3 kB    00:00
Rocky Linux 10 - AppStream                12 kB/s | 4.3 kB    00:00
Rocky Linux 10 - Extras                   6.7 kB/s | 3.1 kB    00:00
Available Packages
Name      : nmap
Epoch    : 4
Version   : 7.92
Release   : 3.el10
Architecture: x86_64
Size      : 5.6 M
Source    : nmap-7.92-3.el10.src.rpm
Repository : appstream
Summary   : Network exploration tool and security scanner
URL       : http://nmap.org/
License   : LicenseRef-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@mlabsi:/etc/yum.repos.d# █
```

Рис. 3: Поиск и информация о пакете nmap

Установка пакета nmap

```
Total download size: 5.6 M
Installed size: 24 M
Is this ok [y/N]: y
Downloading Packages:
nmap-7.92-3.el10.x86_64.rpm                                11 MB/s | 5.6 MB    00:00
-----
Total                                                    5.6 MB/s | 5.6 MB    00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Installing     : nmap-4:7.92-3.el10.x86_64      1/1
  Running scriptlet: nmap-4:7.92-3.el10.x86_64      1/1

Installed:
  nmap-4:7.92-3.el10.x86_64

Complete!
root@mlabsi:/etc/yum.repos.d# dnf install nmap\*
Last metadata expiration check: 0:00:41 ago on Fri 12 Dec 2025 07:05:55 PM MSK.
Package nmap-4:7.92-3.el10.x86_64 is already installed.
Package nmap-ncat-4:7.92-3.el10.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
root@mlabsi:/etc/yum.repos.d#
```

Рис. 4: Установка пакета nmap

Удаление пакета nmap

```
Removed:
  nmap-4:7.92-3.el10.x86_64

Complete!
root@mlabsi:/etc/yum.repos.d# dnf remove nmap\*
Dependencies resolved.
=====
Package                Architecture      Version           Repository        Size
=====
Removing:
  nmap-ncat             x86_64            4:7.92-3.el10    @AppStream        470 k
=====
Transaction Summary
=====
Remove 1 Package

Freed space: 470 k
```

Рис. 5: Удаление пакета nmap

Список и информация о группах пакетов

```
root@mlabsi:~# dnf groups list
Last metadata expiration check: 0:01:43 ago on Fri 12 Dec 2025 07:05:55 PM MSK.
Available Environment Groups:
  Server
  Minimal Install
  Workstation
  Custom Operating System
  Virtualization Host
Installed Environment Groups:
  Server with GUI
Installed Groups:
  Container Management
  Development Tools
  Headless Management
Available Groups:
  Legacy UNIX Compatibility
  Smart Card Support
  Console Internet Tools
  .NET Development
  Graphical Administration Tools
  Network Servers
  RPM Development Tools
  Scientific Support
  Security Tools
  System Tools
root@mlabsi:~# dnf groups info "RPM Development Tools"
Last metadata expiration check: 0:02:13 ago on Fri 12 Dec 2025 07:05:55 PM MSK.
Group: RPM Development Tools
Description: Tools used for building RPMs, such as rpmbuild.
Mandatory Packages:
  redhat-rpm-config
  rpm-build
Default Packages:
  rpmddevtools
root@mlabsi:~#
```

Установка и удаление группы RPM Development Tools

```
root@lab1:~# yum groupinstall "RPM Development Tools"
Upgraded:
crypto-policies-20250905-2.gitc7eb7b2.el10.noarch      crypto-policies-scripts-20250905-2.gitc7eb7b2.el10.noarch
openssl-1:3.5.1-4.el10_1.x86_64                        openssl-devel-1:3.5.1-4.el10_1.x86_64
openssl-libs-1:3.5.1-4.el10_1.x86_64                  python3-rpm-4.19.1.1-20.el10.x86_64
redhat-rpm-config-293-1.el10.noarch                    rpm-4.19.1.1-20.el10.x86_64
rpm-build-4.19.1.1-20.el10.x86_64                     rpm-build-libs-4.19.1.1-20.el10.x86_64
rpm-libs-4.19.1.1-20.el10.x86_64                      rpm-plugin-audit-4.19.1.1-20.el10.x86_64
rpm-plugin-selinux-4.19.1.1-20.el10.x86_64             rpm-plugin-systemd-inhibit-4.19.1.1-20.el10.x86_64
rpm-sequotia-1.9.0.3-1.el10_1.x86_64                  rpm-sign-4.19.1.1-20.el10.x86_64
rpm-sign-libs-4.19.1.1-20.el10.x86_64

Installed:
openssl-fips-provider-1:3.5.1-4.el10_1.x86_64  python3-argcomplete-3.2.2-4.el10.noarch  rpmdevtools-9.6-9.el10.noarch

Complete!
root@lab1:~#
```

Рис. 7: Установка и удаление группы пакетов

```
Freed space: 472 k
Is this ok [y/N]: y
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :
  Erasing        : rpmdevtools-9.6-9.el10.noarch
  Erasing        : python3-argcomplete-3.2.2-4.el10.noarch
  Running scriptlet: python3-argcomplete-3.2.2-4.el10.noarch

Removed:
python3-argcomplete-3.2.2-4.el10.noarch                rpmdevtools-9.6-9.el10.noarch

Complete!
root@mlabsi:/etc/yum.repos.d#
```

Рис. 8: Удаление группы пакетов и освобождение места

Просмотр истории операций dnf

```
root@mlabsi:/etc/yum.repos.d#  
root@mlabsi:/etc/yum.repos.d# dnf history
```

ID	Command line	Date and time	Action(s)	Altered
12	groupremove RPM Development Tools	2025-12-12 19:09	Removed	3
11	groupinstall RPM Development Tools	2025-12-12 19:08	I, U	21
10	remove nmap*	2025-12-12 19:07	Removed	1
9	remove nmap	2025-12-12 19:07	Removed	1
8	install nmap	2025-12-12 19:06	Install	1
7	install --enablerepo=core-infra gdisk -y	2025-11-11 14:09	Install	1 <
6	install rocky-release-core -y	2025-11-11 14:08	Install	1 >
5		2025-10-28 09:43	Install	2
4	upgrade --refresh	2025-10-18 13:21	I, U	237 EE
3	-y install httpd lynx	2025-10-14 16:14	Install	1
2	-y install httpd	2025-10-11 11:51	Install	11 <
1		2025-10-11 09:20	Install	1373 >E

```
root@mlabsi:/etc/yum.repos.d# dnf history undo 12  
Last metadata expiration check: 0:03:54 ago on Fri 12 Dec 2025 07:05:55 PM MSK.  
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
Installing group/module packages:				
rpmdevtools	noarch	9.6-9.el10	appstream	87 k
Installing dependencies:				
python3-argcomplete	noarch	3.2.2-4.el10	appstream	88 k
Installing Groups:				
RPM Development Tools				

Рис. 9: История операций dnf

Проверка пакета lynx и загрузка rpm

```
root@mlabsi:/etc/yum.repos.d#  
root@mlabsi:/etc/yum.repos.d# dnf list lynx  
Last metadata expiration check: 0:05:15 ago on Fri 12 Dec 2025 07:05:55 PM MSK.  
Installed Packages  
lynx.x86_64                                2.9.0-6.el10  
root@mlabsi:/etc/yum.repos.d# dnf install lynx --downloadonly  
Last metadata expiration check: 0:05:33 ago on Fri 12 Dec 2025 07:05:55 PM MSK.  
Package lynx-2.9.0-6.el10.x86_64 is already installed.  
Dependencies resolved.  
Nothing to do.  
Complete!
```

Рис. 10: Проверка и загрузка пакета lynx

Расположение исполняемого файла lynx

```
root@mlabsi:/etc/yum.repos.d#  
root@mlabsi:/etc/yum.repos.d# which lynx  
/usr/bin/lynx  
root@mlabsi:/etc/yum.repos.d# rpm -qf $(which lynx)  
lynx-2.9.0-6.el10.x86_64  
root@mlabsi:/etc/yum.repos.d# rpm -qi lynx  
Name           : lynx  
Version        : 2.9.0  
Release        : 6.el10  
Architecture   : x86_64  
Install Date   : Tue 14 Oct 2025 04:14:30 PM MSK  
Group          : Unspecified  
Size           : 6283241  
License        : GPL-2.0-only  
Signature      :  
                RSA/SHA256, Thu 22 May 2025 11:34:29 PM MSK, Key ID 5b106c736fedfc85  
Source RPM     : lynx-2.9.0-6.el10.src.rpm  
Build Date     : Fri 01 Nov 2024 01:03:33 PM MSK  
Build Host     : pb-913aa2bb-e2a2-4928-a48c-b613e15933c9-b-x86-64  
Packager       : Rocky Linux Build System (Peridot) <releng@rockylinux.org>  
Vendor         : Rocky Enterprise Software Foundation  
URL            : https://lynx.invisible-island.net/  
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@mlabsi:/etc/yum.repos.d#
```

Состав пакета lynx

```
root@mlabsi:/etc/yum.repos.d# rpm -ql lynx
/etc/lynx-site.cfg
/etc/lynx.cfg
/etc/lynx.lss
/usr/bin/lynx
/usr/lib/.build-id
/usr/lib/.build-id/69
/usr/lib/.build-id/69/febb96205311acd4b77a65d52b8e6f7eea76c3
/usr/share/doc/lynx
/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/IBMPG-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
```



```
root@mlabsi:/etc/yum.repos.d# rpm -qd lynx
/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/SHR.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
```

```
mlabsi@mlabsi:/etc/yum.repos.d -- man lynx
/etc/yum.repos.d

LYNX(1)                                Lynx - the text web browser                                LYNX(1)

NAME
    lynx - a general purpose distributed information browser for the World Wide Web

SYNOPSIS
    lynx [options] [optional paths or URLs]

    lynx [options] [path or URL] -get_data
    data
    --

    lynx [options] [path or URL] -post_data
    data
    --

    Use "lynx -help" to display a complete list of current options.

DESCRIPTION
    Lynx is a fully-featured World Wide Web (WWW) client for users running cursor-addressable, character-cell display devices (e.g., vt100 terminals, vt100 emulators running on Windows or any POSIX platform, or any other "curses-oriented" display). It will display hypertext markup language (HTML) documents containing links to files residing on the local system, as well as files residing on remote systems running Gopher, HTTP, FTP, WAIS, and NNTP servers.

    Lynx has been ported to many systems, including all variants of Unix, Windows (since Windows 95), DOS DJGPP and OS/2, as well as VMS and OS/390.

    Lynx can be used to access information on the World Wide Web, or to build information systems intended primarily for local access. For example, Lynx has been used to build several Campus Wide Information Systems (CWIS). In addition, Lynx can be used to build systems isolated within a single LAN.

OPTIONS
    At start up, Lynx will load any local file or remote URL specified at the command line. For help with URLs, press "?" or "H" while running Lynx. Then follow the link titled, "Help on URLs."

    If more than one local file or remote URL is listed on the command line, Lynx will open only the last interactively. All of the names (local files and remote URLs) are added to the Goto history.

Manual page lynx(1) line 1 (press h for help or q to quit)
```

Запуск текстового браузера lynx

```
Rocky Linux 10
Welcome to Rocky Linux

A community Enterprise Operating System

-----

Rocky Linux is an Enterprise Linux distribution based on the sources available from the CentOS Project and Red Hat, Inc. used for CentOS Stream and Red Hat Enterprise Linux. Rocky Linux intends to be binary compatible with the upstream distributions. The source code can be found at our Rocky Linux Git Service.

Rocky Linux is developed by a diverse team of core developers, with various backgrounds and skill sets that allow them to build, test, and provide Rocky Linux to the world. The core developers are supported by an active user community as well, which includes many testers from the Rocky Linux Testing Team, system administrators, system engineers, managers, core Linux contributors, and Linux enthusiasts.

Rocky Linux has an active user community with many avenues to talk to, work with, or support other Rocky Linux users, as well as responsive communication with the Rocky Linux core development team. There are many ways to join and take part in the community: Mattermost, IRC/Matrix, Forums, Email Lists, Reddit

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Commands: Use arrow keys to move, '?' for help, 'q' to quit, '<-' to go back.
Arrow keys: Up and Down to move. Right to follow a link; Left to go back.
H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list
```

```
root@mlabsi:/etc/yum.repos.d# man lynx
root@mlabsi:/etc/yum.repos.d#
root@mlabsi:/etc/yum.repos.d# rpm -qc lynx
/etc/lynx-site.cfg
/etc/lynx.cfg
/etc/lynx.lss
root@mlabsi:/etc/yum.repos.d# rpm -q --scripts lynx
root@mlabsi:/etc/yum.repos.d# rpm -e lynx
root@mlabsi:/etc/yum.repos.d#
```

Рис. 16: Удаление пакета lynx

Установка пакета dnsmasq

```
root@mlabsi:/etc/yum.repos.d#  
root@mlabsi:/etc/yum.repos.d# dnf list dnsmasq  
Last metadata expiration check: 0:10:29 ago on Fri 12 Dec 2025 07:05:55 PM MSK.  
Installed Packages  
dnsmasq.x86_64                                2.90-4.el10                                @AppStream  
root@mlabsi:/etc/yum.repos.d# dnf install dnsmasq  
Last metadata expiration check: 0:12:19 ago on Fri 12 Dec 2025 07:05:55 PM MSK.  
Package dnsmasq-2.90-4.el10.x86_64 is already installed.  
Dependencies resolved.  
Nothing to do.  
Complete!  
root@mlabsi:/etc/yum.repos.d# which dnsmasq  
/usr/sbin/dnsmasq  
root@mlabsi:/etc/yum.repos.d# rpm -qf $(which dnsmasq)  
dnsmasq-2.90-4.el10.x86_64
```

Рис. 17: Проверка и установка dnsmasq

Информация о пакете dnsmasq

```
root@mlabsi:/etc/yum.repos.d# rpm -qi dnsmasq
Name       : dnsmasq
Version    : 2.90
Release    : 4.el10
Architecture: x86_64
Install Date: Sat 11 Oct 2025 09:22:42 AM MSK
Group      : Unspecified
Size       : 794976
License    : GPL-2.0-only OR GPL-3.0-only
Signature  :
            RSA/SHA256, Thu 22 May 2025 03:17:11 AM MSK, Key ID 5b106c736fedfc85
Source RPM : dnsmasq-2.90-4.el10.src.rpm
Build Date : Thu 31 Oct 2024 02:46:28 PM MSK
Build Host : pb-6df20f45-04b4-477b-bded-5a041ce1b59d-b-x86-64
Packager   : Rocky Linux Build System (Peridot) <releng@rockylinux.org>
Vendor     : Rocky Enterprise Software Foundation
VCS        : git:git://thekelleys.org.uk/dnsmasq.git
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 disk-less
machines.
```

```
root@mlabsi:/etc/yum.repos.d#
```

Состав и документация пакета dnsmasq

```
root@mlabsi:/etc/yum.repos.d# rpm -ql dnsmasq
/etc/dbus-1/system.d/dnsmasq.conf
/etc/dnsmasq.conf
/etc/dnsmasq.d
/usr/lib/.build-id
/usr/lib/.build-id/c9
/usr/lib/.build-id/c9/a4bb4576977dbef150b40955510f869d246b34
/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@mlabsi:/etc/yum.repos.d# 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@mlabsi:/etc/yum.repos.d#
```

DNSMASQ(8)	System Manager's Manual	DNSMASQ(8)
NAME		
dnsmasq - A lightweight DHCP and caching DNS server.		
SYNOPSIS		
dnsmasq <u>[OPTION]</u> ...		
DESCRIPTION		
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>		
OPTIONS		
<p>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</p>		
Manual page dnsmasq(8) line 1 (press h for help or q to quit)		

Скрипты установки и конфигурация dnsmasq

```
root@mlabsi:/etc/yum.repos.d# rpm -qc dnsmasq
/etc/dbus-1/system.d/dnsmasq.conf
/etc/dnsmasq.conf
root@mlabsi:/etc/yum.repos.d# 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@mlabsi:/etc/yum.repos.d# rpm -e dnsmasq
root@mlabsi:/etc/yum.repos.d#
```

Рис. 21: Скрипты и конфигурационные файлы dnsmasq

Заключение

В ходе лабораторной работы были изучены инструменты управления программными пакетами в системе Rocky Linux.

Освоены операции работы с репозиториями, пакетами и группами пакетов, а также методы анализа содержимого rpm-пакетов и их документации.