Лабораторная работа №1

Установка и конфигурация операционной системы на виртуальную машину. Управления версиями. Markdown

Ким М. А.

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Информация

Докладчик

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- https://github.com/exmanka

Вводная часть

Актуальность

- Необходимость навыков работы с различными ОС, git, Markdown.

Объект и предмет исследования

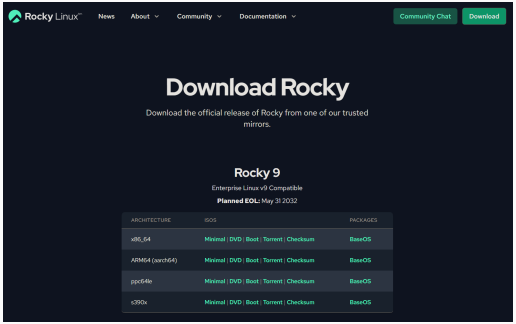
- Операционная система Rocky Linux
- Распределенная система управления версиями Git.
- Веб-сервис GitHub
- Язык разметки Markdown

Цели и задачи

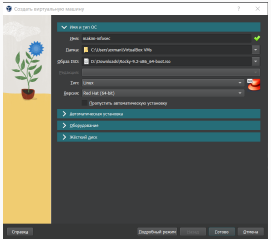
- Начать знакомство с ОС Rocky Linux, вспомнить основы работы с GitHub, создать репозитрий. Вспомнить основы работ с Markdown.

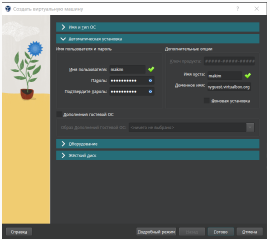
Процесс выполнения работы

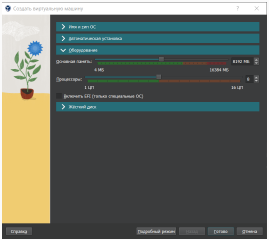
Установка Rocky Linux. 1

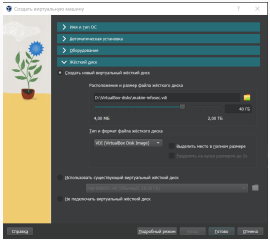


Установка Rocky Linux. 2

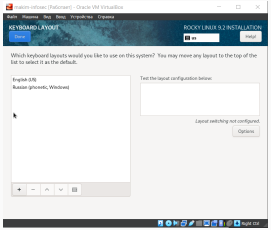


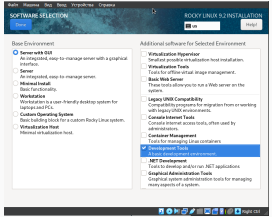


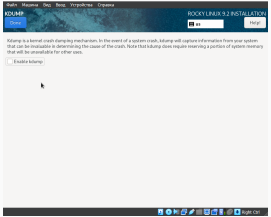


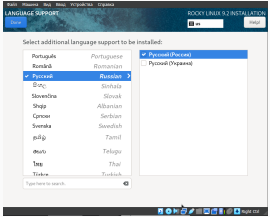


Настройка Rocky Linux. 1

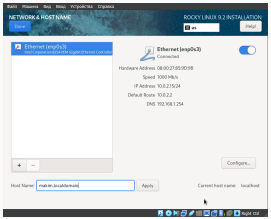


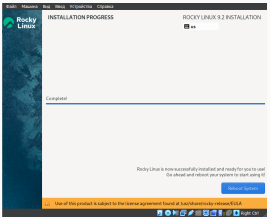


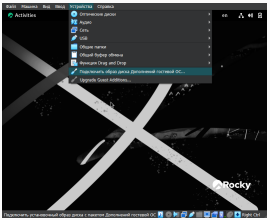


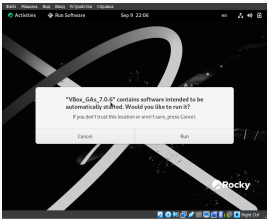


Настройка Rocky Linux. 2

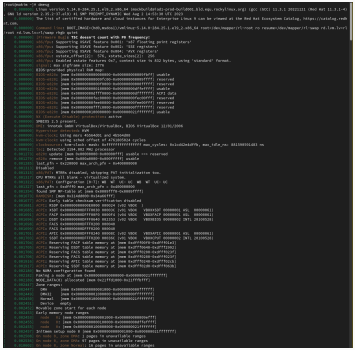


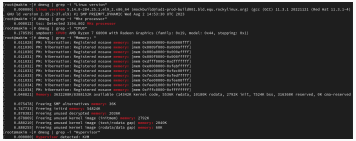


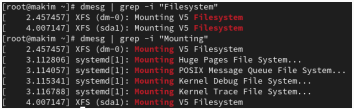




Получение информации о загрузке системы







Конфигурация ключей и установа gh для подключения к GitHub. 1

```
[makimmakim ~]$ git config --global user.name "Michael Kip"
[makimmakim ~]$ git config --global user.email "101221044@fac.ru"
[makimmakim ~]$ mkdir -p ~/work/study/2023-2024/"Информационная безопасность"
[makimmakim ~]$ cd ~/work/study/2023-2024/"Информационная безопасность"
[makimmakim Информационная безопасность]$ git config --global core.quotepath false
git: 'config' is not a git command. See 'git --help'.

The most similar command is
       config
[makimmakim Информационная безопасность]$ git config --global core.quotepath false
[makimmakim Информационная безопасность]$ git config --global init.defaultBranch master
[makimmakim Информационная безопасность]$ git config --global core.autocrlf input
[makimmakim Информационная безопасность]$ git config --global core.safecrlf warn
```

```
[makimmakim Информационная безопасность]$ ssh-keygen -t rsa -b 4096
Generating public/private rsa key pair.
Enter file in which to save the key (/home/makim/.ssh/id_rsa):
Created directory '/home/makim/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Passphrases do not match.  Try again.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/makim/.ssh/id_rsa
Your public key has been saved in /home/makim/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:xoKVvMZwLaWmK9OWmjjyX2DMtOLm7BpyBQyK08+STo makimmakim.localdomain
The key's randomart image is:
+---[RSA 4096]----+
|     .o.o.       |
|    . o..O+o     |
|   . .=B+=.o .   |
|    .o+=.o= +    |
|     .o. E.So    |
| .o+ o o+        |
|  . o= o .       |
| .ooo+.*         |
|    ==+=         |
+----[SHA256]-----+
```

```
[makimmakim Информационная безопасность]$ gpg --full-generate-key
gpg (GnuPG) 2.1.3; Copyright (C) 2021 Free Software Foundation, Inc.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

gpg: directory '/home/makim/.gnupg' created
gpg: keybox '/home/makim/.gnupg/pubring.kbx' created
Please select what kind of key you want:
   (1) RSA and RSA (default)
   (2) DSA and Elgamal
   (3) DSA (sign only)
   (4) RSA (sign only)
  (14) Existing key from card
Your selection? 1
RSA keys may be between 1024 and 4096 bits long.
What keysize do you want? (3072) 4096
Requested keysize is 4096 bits
Please specify how long the key should be valid.
         0 = key does not expire
      <n>  = key expires in n days
      <n>w = key expires in n weeks
      <n>m = key expires in n months
      <n>y = key expires in n years
Key is valid for? (0) 0
Key does not expire at all
Is this correct? (y/N) y

GnuPG needs to construct a user ID to identify your key.

Real name: Michael
```

```
[makimmakim ~]$ gpg --list-secret-keys --keyid-format LONG
/home/makim/.gnupg/pubring.kbx
-------------------------------
sec   rsa4096/792E082185 10FEA3 2023-09-09 [SC]
      824A4A4C92765319030265657920821851 0FEA3
uid                 [ultimate] Michael (first_try) <exmarkag@gmail.com>
ssb   rsa4096/F7EFF3840936E7BD 2023-09-09 [E]

[makimmakim ~]$ gpg --armor --export 792E082185 10FEA3 | xclip -sel clip
bash: xclip: command not found...
[makimmakim ~]$ gpg --armor --export 792E082185 10FEA3
-----BEGIN PGP PUBLIC KEY BLOCK-----
```

```
mQINBDTAynsBEACcP/5+PKHhOFfhbnwtLurkB8DBL5g/psbwE7Vr+eXYogOWc+L1k
/ZBdwjpKXgzObeTCQKyK4Ta1KtGkvFAP65POu2WuhpTsbHzth+XRDTh5FlGAuGbP
O+XaeVt7Sc4MgqWD7Nrvbz1ZfBZvOL8ABS9POv+1p7xsXc1MVBmgZ1S10ho7xgr
CQuEEmXwzNuBkBHLKrESLLWTTKj8/5JVUNJHVQ1ujrF43zrVqHeEBoXD5PQ4Him
/Gq3HXKgNUTxh+hQNEzHhNCIFGdqf3/qPZOVT4l/qqnrfpDvbEQNeqtwaT+m
phNJm/2IEfUpObaqzOcf4TXAs1eV9ymYrIfLBpPmbLW9gEDTNmfyMwMmYOuwqN
rMmnbbZel1KR1FdwQX6Ggkmaaaxyxb6ZJ6dLE5/TlI6GLmNm2zmIFOb8ai3AAI
```

Конфигурация ключей и установа gh для подключения к GitHub. 2

```
[maksim@maksim ~]$ git config --global user.signingkey 792E8821851DFEA3
[maksim@maksim ~]$ git config --global commit.gpgsign true
[maksim@maksim ~]$ git config --global gpg.program $(which gpg2)
[maksim@maksim ~]$
```

```
Updatedb to find a match: gh
No command is in the dnf5 copr manager --add-repo https://cli.github.com/packages/rpm/gh-cli.repo
Install password for maksim:
Adding repo from: https://cli.github.com/packages/rpm/gh-cli.repo
[maksim@maksim ~]$ sudo dnf install gh
Packages for the GitHub CLI                    7.3 kB/s |  2.6 kB     00:00
Dependencies resolved.
================================================================================
 Package        Architecture    Version                 Repository       Size
================================================================================
Installing:
 gh             x86_64          2.33.0-2                gh-cli           11 M

Transaction Summary
================================================================================
Install  1 Package
```

Подключение к GitHub и создание репозитория

```
mak1mpmak1m ~]$ gh auth login
? What account do you want to log into? GitHub.com
? What is your preferred protocol for Git operations? SSH
? Upload your SSH public key to your GitHub account? /home/mak1m/.ssh/id_rsa.pub
? Title for your SSH key: mak1m
? How would you like to authenticate GitHub CLI? Paste an authentication token
Tip: you can generate a Personal Access Token here https://github.com/settings/tokens
The minimum required scopes are 'repo', 'read:org', 'admin:public_key'.
? Paste your authentication token: ********************************************
- gh config set -h github.com git_protocol ssh
- configured git protocol
- Uploaded "mak1m" to your GitHub account: /home/mak1m/.ssh/id_rsa.pub
- logged in as emmakka
```

```
mak1mpmak1m ~]$ gh repo clone emmakka/study_2023-2024_infosec
Cloning into 'study_2023-2024_infosec'...
remote: Enumerating objects: 37, done.
remote: Total 37 (delta 0), reused 0 (delta 0), pack-reused 37
Receiving objects: 100% (37/37), done.
Resolving deltas: 100% (4/4), done.
mak1mpmak1m ~]$ cd study_2023-2024_infosec
mak1mpmak1m study_2023-2024_infosec]$ rm -rf .git
mak1mpmak1m study_2023-2024_infosec]$ cd ~/Документы/Учебная\ информационная\ безопасность
mak1mpmak1m Информационная безопасность]$ rm -rf .git
mak1mpmak1m Информационная безопасность]$ cp -r ~/study_2023-2024_infosec ./emmakka-course-structure
mak1mpmak1m Информационная безопасность]$ cd emmakka-course-structure
mak1mpmak1m emmakka-course-structure]$ ls -la
total 12
drwxr-xr-x. 3 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 .
drwxr-xr-x. 3 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 ..
drwxr-xr-x. 2 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 .gitlab-ci-local-template
mak1mpmak1m emmakka-course-structure]$ rm -rf .gitlab-ci-local-template
mak1mpmak1m emmakka-course-structure]$ ls -la
total 8
drwxr-xr-x. 2 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 .
drwxr-xr-x. 3 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 ..
mak1mpmak1m emmakka-course-structure]$ git init
Initialized empty Git repository in /home/mak1mpmak1m/Документы/Учебная информационная безопасность/emmakka-course-structure/.git/
mak1mpmak1m emmakka-course-structure]$ git remote add origin https://github.com/emmakka/study_2023-2024_infosec.git
mak1mpmak1m emmakka-course-structure]$ git fetch origin
remote: Enumerating objects: 37, done.
remote: Total 37 (delta 0), reused 0 (delta 0), pack-reused 37
Receiving objects: 100% (37/37), done.
Resolving deltas: 100% (4/4), done.
From https://github.com/emmakka/study_2023-2024_infosec
 * [new branch]      master     origin/master
mak1mpmak1m emmakka-course-structure]$ git checkout -b master origin/master
Branch 'master' set up to track remote branch 'master' from 'origin'.
Switched to a new branch 'master'
mak1mpmak1m emmakka-course-structure]$ ls -la
total 12
drwxr-xr-x. 3 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 .
drwxr-xr-x. 3 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 ..
drwxr-xr-x. 2 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 .gitlab-ci-local-template
mak1mpmak1m emmakka-course-structure]$ rm -rf .gitlab-ci-local-template
mak1mpmak1m emmakka-course-structure]$ ls -la
total 8
drwxr-xr-x. 2 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 .
drwxr-xr-x. 3 mak1mpmak1m mak1mpmak1m 4096 Окт 16 19:47 ..
mak1mpmak1m emmakka-course-structure]$ cd ~/Документы/Учебная\ информационная\ безопасность
mak1mpmak1m Информационная безопасность]$ rm -rf emmakka-course-structure
mak1mpmak1m Информационная безопасность]$ cd infosec
mak1mpmak1m infosec]$ rm package.json
mak1mpmak1m infosec]$ echo "infosec" > COURSE
mak1mpmak1m infosec]$ make
mak1mpmak1m infosec]$ git add -A
mak1mpmak1m infosec]$ git commit -am 'feat(main): make course structure'
[master 4238305] feat(main): make course structure
 151 files changed, 41845 insertions(+), 14 deletions(-)
 create mode 100644 labs/README.md
 create mode 100644 labs/README.ru.md
 create mode 100644 labs/lab1/presentation/Makefile
 create mode 100644 labs/lab1/presentation/image/kulyabov.jpg
 create mode 100644 labs/lab1/presentation/presentation.md
```

```
mak1mpmak1m infosec]$ git push
Enumerating objects: 37, done.
Counting objects: 100% (37/37), done.
Delta compression using up to 8 threads
Compressing objects: 100% (26/26), done.
Writing objects: 100% (35/35), 342.77 KiB | 2.50 MiB/s, done.
Total 35 (delta 4), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To github.com:emmakka/study_2023-2024_infosec.git
   1977b2b..a238305  master -> master
```

Результаты

Результаты

- Выполнены все необходимые действия.

Вывод

Начал знакомство с ОС Rocky Linux, вспомнил основы работы с GitHub, создал репозитрий. Вспомнил основы работ с Markdown.