



МИНИСТЕРСТВО НАУКИ  
И ВЫСШЕГО ОБРАЗОВАНИЯ  
РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное бюджетное  
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«НОВОСИБИРСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ»



**НГТУ  
НЭТИ | Факультет прикладной  
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Кафедра теоретической и прикладной информатики  
Расчетно-графическое задание  
по дисциплине «Администрирование информационных систем»

## ZABBIX-APACHE-POSTGRESQL

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Вариант 2

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# 1 Установить на отдельной виртуальной машине Zabbix 6.0. На виртуальной машине выбрать операционную систему CentOS 8.

Бригады	Параметры установки
1,5,9	Apache, MySQL
2,6,10	Apache, PostgreSQL
3,7,11	NGINX, MySQL
4,8,12	NGINX, PostgreSQL

## 2-Apache,PostgreSQL

Активируем поток модуля для Postgres версии 13.

```
sudo dnf module enable postgresql:13
```

Установим пакет postgresql-server для установки PostgreSQL 13 и всех зависимостей.

```
sudo dnf install postgresql-server
```

Создадим кластер.

```
sudo postgresql-setup --initdb
```

```
[root@centos-stream-8 ~]# sudo postgresql-setup --initdb
* Initializing database in '/var/lib/pgsql/data'
* Initialized, logs are in /var/lib/pgsql/initdb_postgresql.log
```

Запустим службу PostgreSQL и активируем запуск службы при загрузке сервера.

```
sudo systemctl start postgresql
```

```
sudo systemctl enable postgresql
```

```
sudo systemctl status postgresql
```

```
[root@centos-stream-8 ~]# sudo systemctl start postgresql
[root@centos-stream-8 ~]# sudo systemctl enable postgresql
created symlink /etc/systemd/system/multi-user.target.wants/postgresql.service →
/usr/lib/systemd/system/postgresql.service.
[root@centos-stream-8 ~]# sudo systemctl status postgresql
● postgresql.service - PostgreSQL database server
  Loaded: loaded (/usr/lib/systemd/system/postgresql.service; enabled; vendor >
  Active: active (running) since Wed 2022-04-13 08:09:33 +07; 16s ago
    Main PID: 2846 (postmaster)
      Tasks: 8 (limit: 4498)
     Memory: 16.9M
        CPU: 0.000 CPU(s) since start
       CGrou...[2846 /usr/bin/postmaster -D /var/lib/pgsql/data]
```

## Установка Zabbix

Установим репозиторий Zabbix

```
rpm -Uvh https://repo.zabbix.com/zabbix/6.0/rhel/8/x86\_64/zabbix-release-6.0-1.el8.noarch.rpm
dnf clean all
```

```
[root@centos-stream-8 ~]# rpm -Uvh https://repo.zabbix.com/zabbix/6.0/rhel/8/x86\_64/zabbix-release-6.0-1.el8.noarch.rpm
Retrieving https://repo.zabbix.com/zabbix/6.0/rhel/8/x86\_64/zabbix-release-6.0-1.el8.noarch.rpm
warning: /var/tmp/rpm-tmp.3phR05: Header V4 RSA/SHA512 signature, key ID a14fe59
1: NOKEY
Verifying...                                              ##### [100%]
Preparing...                                               ##### [100%]
Updating / installing...
  1:zabbix-release-6.0-1.el8                         ##### [100%]
[root@centos-stream-8 ~]# dnf clean all
52 files removed
```

Apache

```
dnf install httpd
```

```
sudo systemctl enable httpd.service
```

```
sudo systemctl start httpd.service
```

```
sudo firewall-cmd --permanent --add-service=https
```

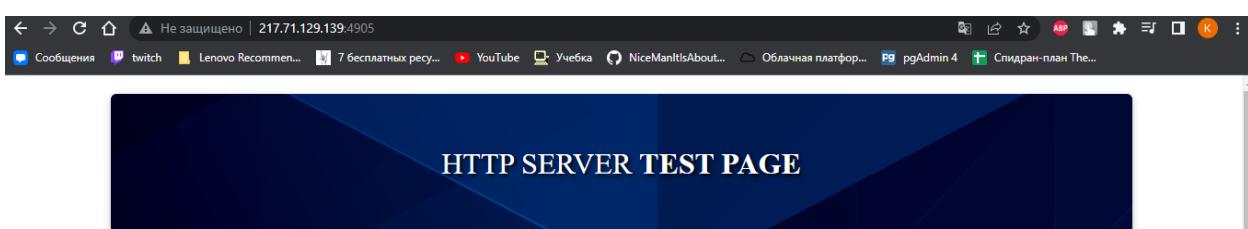
```
firewall-cmd --zone=public --permanent --add-service=http
```

```
firewall-cmd --permanent --add-port={80,5432,10050}/tcp
```

```
sudo firewall-cmd --reload
```

```
[root@centos-stream-8 ~]# sudo systemctl start httpd
[root@centos-stream-8 ~]# sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor prese>
  Drop-In: /usr/lib/systemd/system/httpd.service.d
            └─php-fpm.conf
    Active: active (running) since wed 2022-04-13 08:34:04 +07; 5min ago
      Docs: man:httpd.service(8)
     Main PID: 4148 (httpd)
```

<http://217.71.129.139:4905/>



```
httpd -v
```

```
[root@centos-stream-8 ~]# httpd -v
Server version: Apache/2.4.37 (centos)
Server built:   Apr  6 2022 14:54:37
```

Установим Zabbix сервер и веб-интерфейс

```
dnf install zabbix-server-mysql zabbix-web-mysql zabbix-apache-conf zabbix-sql-
scripts zabbix-selinux-policy zabbix-agent
```

Создадим пользователя zabbix и базу данных zabbix.

```
su – postgres
```

```
psql
```

```
CREATE USER zabbix WITH password 'sladkiyKot' ;
```

```
CREATE DATABASE zabbix OWNER zabbix;
```

```
GRANT ALL privileges ON DATABASE zabbix TO zabbix;
```

```
\q
```

```
postgres=# CREATE USER zabbix WITH password 'sladkiyKot';
CREATE ROLE
postgres=# CREATE DATABASE zabbix OWNER zabbix;
CREATE DATABASE
postgres=# GRANT ALL privileges ON DATABASE zabbix TO zabbix;
GRANT
```

```
exit
```

```
zcat /usr/share/doc/zabbix-sql-scripts/postgresql/server.sql.gz | sudo -u zabbix psql
zabbix
```

```
vi /etc/zabbix/zabbix_server.conf
```

```
DBUser=zabbix
### Option: DBPassword
#          Database password.
#          Comment this line if no password is used.
#
# Mandatory: no
# Default:
DBPassword=sladkiyKot
```

```
systemctl restart zabbix-server zabbix-agent httpd php-fpm
systemctl enable zabbix-server zabbix-agent httpd php-fpm
```

```
[root@centos-stream-8 ~]# systemctl restart zabbix-server zabbix-agent httpd php-fpm
[root@centos-stream-8 ~]# systemctl enable zabbix-server zabbix-agent httpd php-fpm
created symlink /etc/systemd/system/multi-user.target.wants/zabbix-server.service → /usr/lib/systemd/system/zabbix-server.service.
Created symlink /etc/systemd/system/multi-user.target.wants/zabbix-agent.service → /usr/lib/systemd/system/zabbix-agent.service.
created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
Created symlink /etc/systemd/system/multi-user.target.wants/php-fpm.service → /usr/lib/systemd/system/php-fpm.service.
```

*setsebool -P httpd\_can\_connect\_zabbix on*

*setsebool -P httpd\_can\_network\_connect\_db on*

*setsebool -P zabbix\_can\_network on*

*systemctl start httpd*

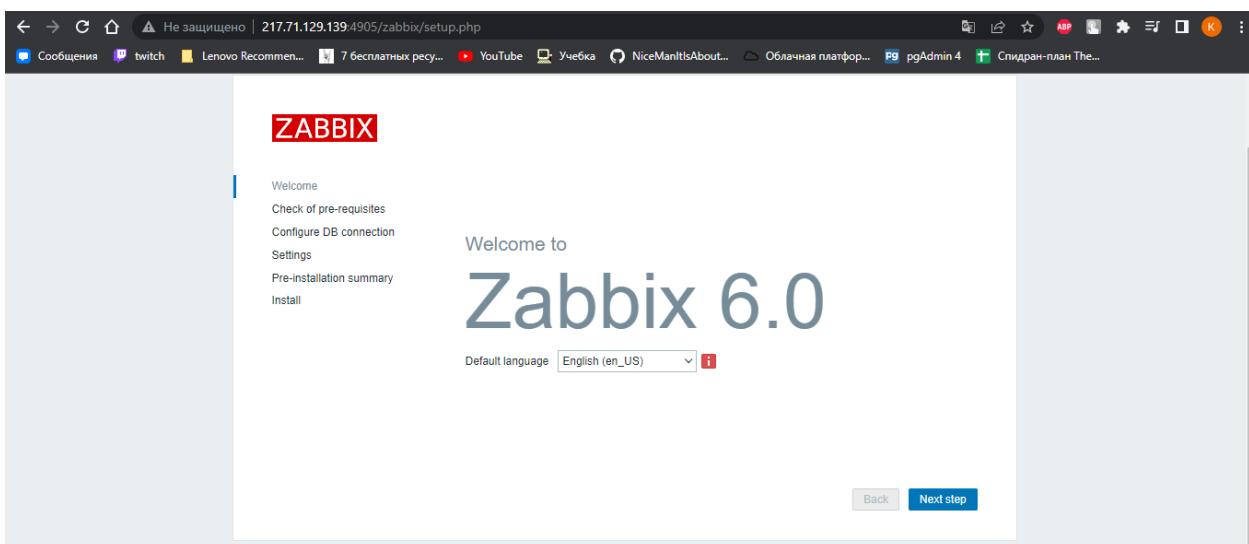
Выключим службу SELinux. Для этого отредактируем файл */etc/selinux/config*

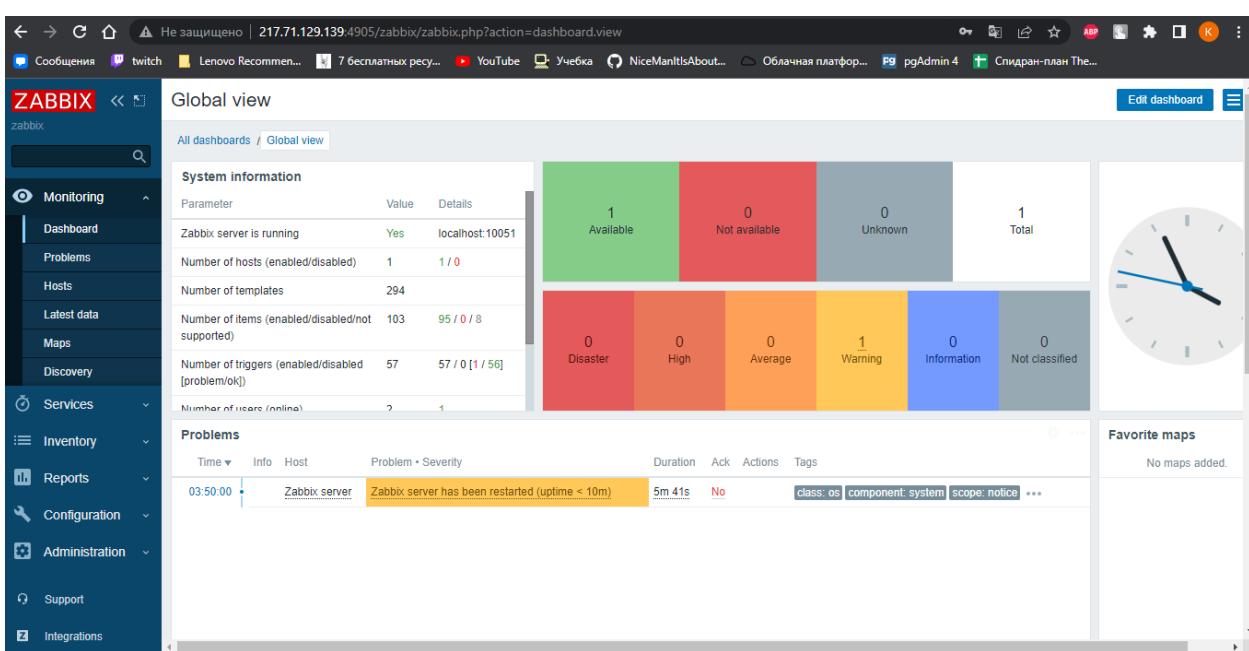
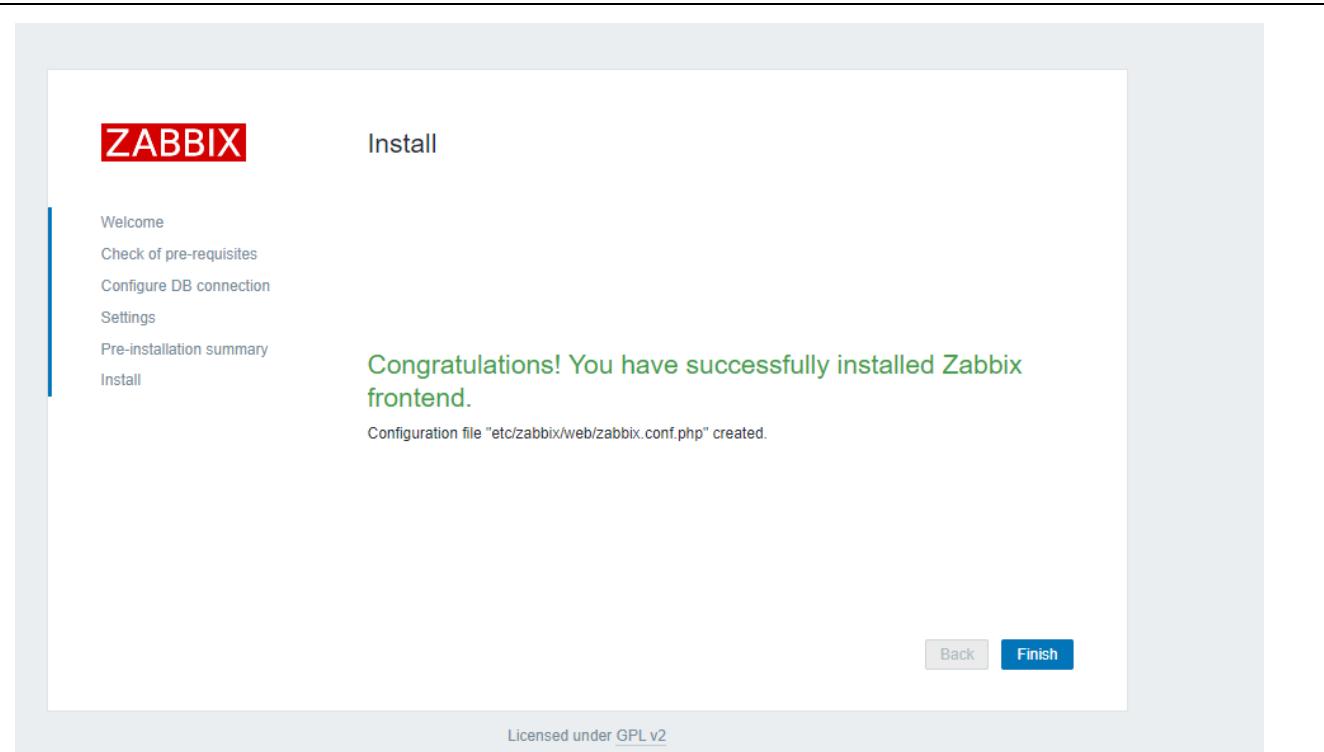
*Vi /etc/selinux/config*

**SELINUX=disabled**

**sudo shutdown -r now**

<http://217.71.129.139:4905/zabbix>





## 2 На основной машине с Postgres установить Zabbix Agent, развернуть шаблон для Postgres

sudo yum install zabbix-agent

CREATE USER zbx\_monitor WITH PASSWORD 'sladkiyKot' INHERIT;

GRANT pg\_monitor TO zbx\_monitor;

```
postgres=# CREATE USER zbx_monitor WITH PASSWORD 'sladkiyKot' INHERIT;
CREATE ROLE
postgres=# GRANT pg_monitor TO zbx_monitor;
GRANT ROLE
```

```

systemctl start zabbix-agent
systemctl enable zabbix-agent
yum -y install git
git clone https://github.com/zabbix/zabbix.git
cd zabbix/templates/db/postgresql/
cp -r postgresql/ /var/lib/zabbix/
rpm -ivh https://repo.zabbix.com/zabbix/4.0/rhel/7/x86\_64/zabbix-release-4.0-1.el7.noarch.rpm
yum install zabbix-server-pgsql zabbix-web-pgsql zabbix-get
rpm -Uvh https://repo.zabbix.com/zabbix/6.0/rhel/7/x86\_64/zabbix-release-6.0-1.el7.noarch.rpm
yum clean all
yum install zabbix-agent
vi zabbix_agentd.conf

```

```

### Option: Server
#      Example: Server=127.0.0.1,192.168.1.0/24,::1,2001:db8::/32,zabbix.example.com
Server=172.17.3.144
#Server=127.0.0.1
### Option: ServerActive
#      Example: ServerActive=127.0.0.1:20051,zabbix.domain,[::1]:30051,::1,[12fc::1]
ServerActive=172.17.3.144
#ServerActive=127.0.0.1
#      all collected data to zabbix Server or Proxy if the buffer is full.
#      Maximum number of new lines the agent will send per second to zabbix Server
### Option: TLSserverCertIssuer
# TLSserverCertIssuer=
### Option: TLSserverCertSubject
# TLSserverCertSubject=

```

line_number	type	database	user_name	address	netmask	auth_method	options	error
85	local	{all}	{all}					
87	host	{all}	{all}	127.0.0.1	255.255.255.255	trust	md5	
89	host	{all}	{all}	::1	ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff	md5		
92	local	replication	{all}			peer		
93	host	replication	{all}	127.0.0.1	255.255.255.255	trust	md5	
94	host	replication	{all}	::1	ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff	trust	md5	
95	host	demo	dba	172.17.6.1	255.255.0.0	trust	md5	
96	host	{all}	zbx_monitor	127.0.0.1	255.255.255.255	trust	md5	
97	host	{all}	zbx_monitor	0.0.0.0	0.0.0.0	trust	md5	
98	host	{all}	zbx_monitor	::	::	trust	md5	

(10 rows)

**New host**

Host IPMI Tags Macros 4 Inventory Encryption Value mapping

\* Host name zabbix  
Visible name zabbix  
Templates PostgreSQL by Zabbix agent × Select  
\* Groups Linux servers × Select  
Interfaces Type IP address DNS name Connect to Port  
Agent 172.17.4.77 IP DNS 10050  
Add

Host IPMI Tags Macros 4 Inventory Encryption Value mapping

Host macros Inherited and host macros

Macro	Value	
{\$PG.DB}	demo	T
{\$PG.HOST}	127.0.0.1	T
{\$PG.PORT}	5432	T
{\$PG.USER}	dba	T

Add

Name ▲	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability	Agent encryption	
zabbix	Items 40	Triggers 11	Graphs 8	Discovery 1	Web	172.17.4.77:10050		PostgreSQL by Zabbix agent	Enabled ZBX	None		
Zabbix server	Items 129	Triggers 70	Graphs 25	Discovery 4	Web	127.0.0.1:10050		Linux by Zabbix agent, Zabbix server health	Enabled ZBX	None		

Interface Status Error

172.17.4.144:10050 Not available Get value from agent failed: cannot connect to [[172.17.4.144]:10050]: [113] No route to host

```
[dba@centos-7 ~]$ sudo firewall-cmd --list-all
[sudo] password for dba:
public (active)
target: default
icmp-block-inversion: no
interfaces: ens3
sources:
services: dhcpcv6-client http https ssh
ports: 5432/tcp 80/tcp 10050/tcp 22/tcp
protocols:
masquerade: no
forward-ports:
source-ports:
icmp-blocks:
rich rules:
```

Отключение службы firewalld, так же не помогает

