



МИНИСТЕРСТВО НАУКИ
И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное бюджетное
образовательное учреждение высшего образования
«НОВОСИБИРСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ»



**НГТУ
НЭТИ** | **Факультет прикладной
математики и информатики**

Кафедра теоретической и прикладной информатики
Расчетно-графическое задание
по дисциплине «Администрирование информационных систем»

ZABBIX-APACHE-POSTGRESQL

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Вариант 2	

Преподаватели АВРУНЕВ О.Е.

Новосибирск, 2022

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

RGZ_AIS	Работает	0:00:25	180 дней	2	1 Гб	20 Гб	AIS
RGZ_AIS	SSH	172.17.3.144:22	ssh.cloud.nstu.ru:5530	Подключиться			
RGZ_AIS	TCP	172.17.3.144:80	217.71.129.139:4905				

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 preset: enabled)
   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
     CGroup: /system.slice/postgresql.service
            └─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 a14fe591: 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
```

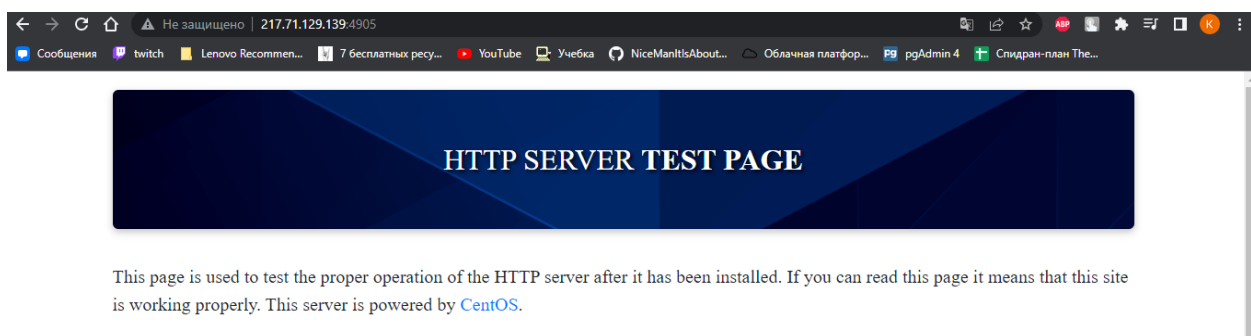
```
firewall-cmd --zone=public --permanent --add-service=http
```

```
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`

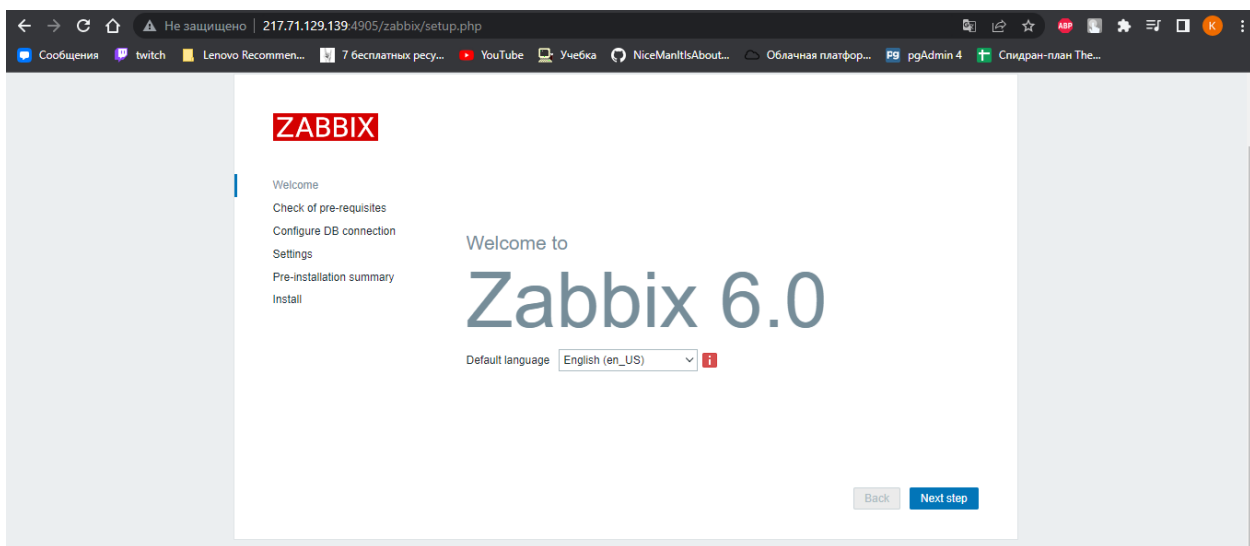
Выключим службу SELinux. Для этого отредактируем файл `/etc/selinux/config`

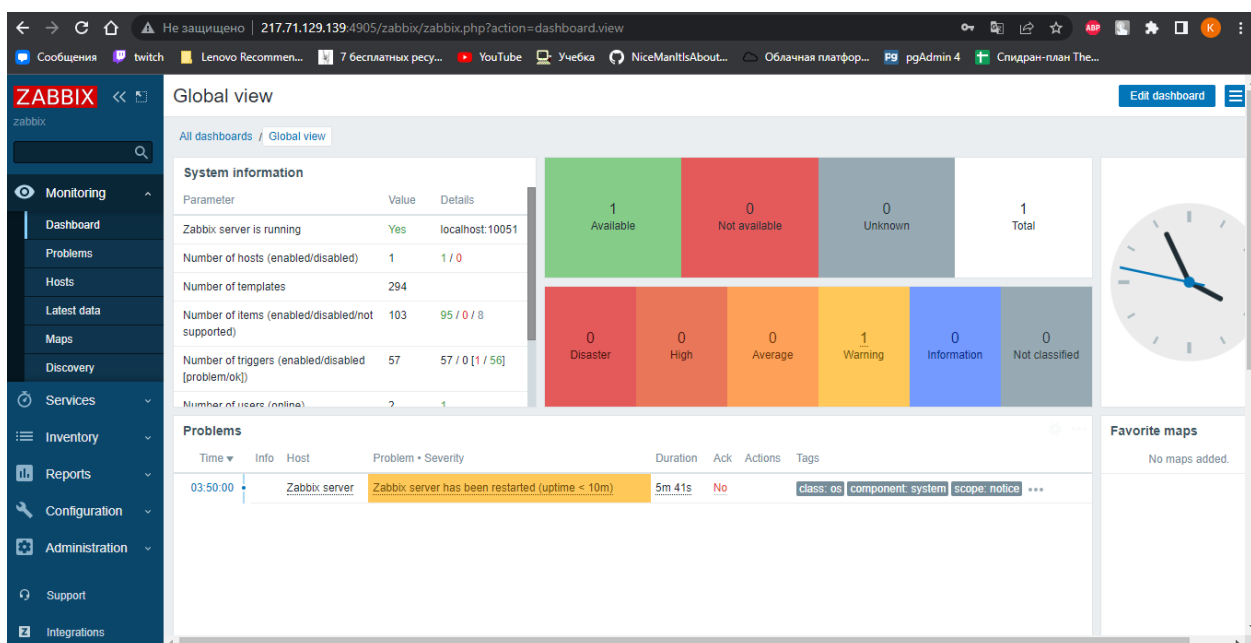
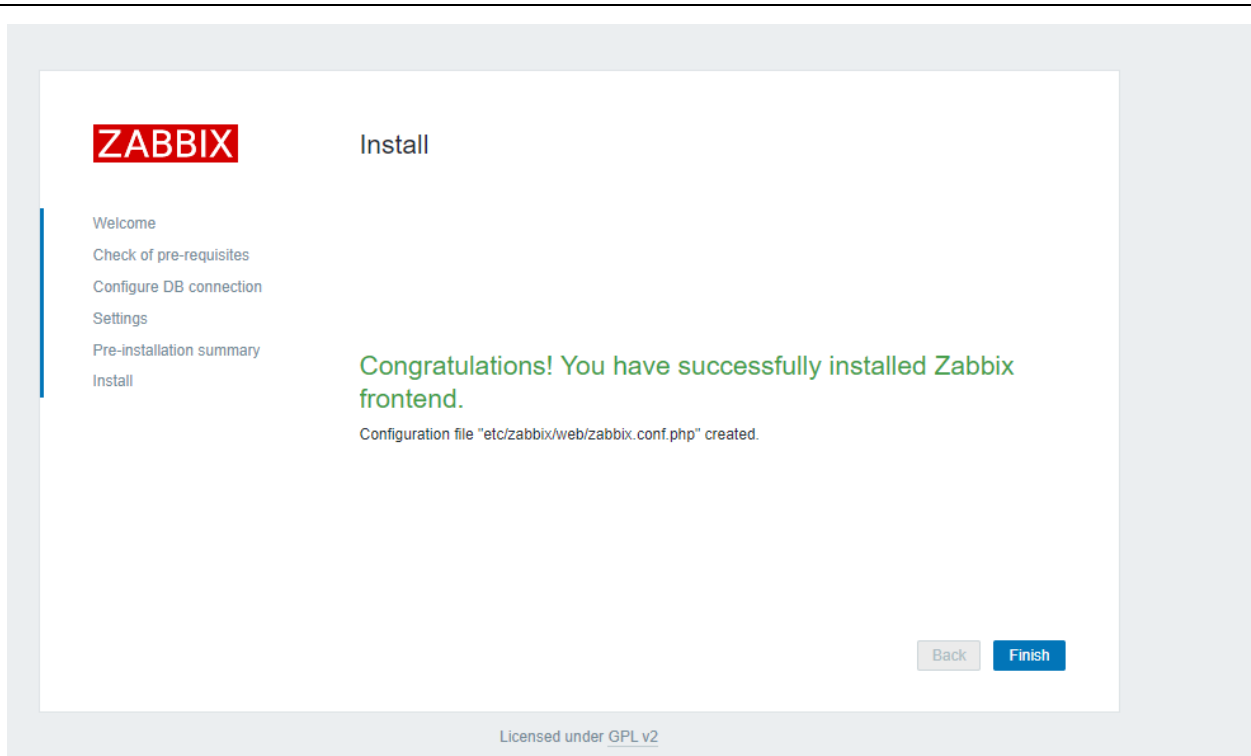
`Vi /etc/selinux/config`

`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;
postgres=# GRANT pg_monitor TO zbx_monitor;
postgres=#
```

```
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=
```

```
postgres=# select * from pg_hba_file_rules;
line_number | type | database | user_name | address | netmask | auth_method | options | error
-----
85 | local | {all} | {all} | 127.0.0.1 | 255.255.255.255 | trust | md5 |
87 | host | {all} | {all} | :::1 | ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff | md5 | peer |
92 | local | {replication} | {all} | 127.0.0.1 | 255.255.255.255 | trust | md5 |
93 | host | {replication} | {all} | :::1 | ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff | trust | md5 |
94 | host | {replication} | {all} | 172.17.6.1 | 255.255.0.0 | trust | md5 |
95 | host | {demo} | {dba} | 127.0.0.1 | 255.255.255.255 | trust | md5 |
96 | host | {all} | {zbx_monitor} | 0.0.0.0 | 0.0.0.0 | trust | md5 |
97 | host | {all} | {zbx_monitor} | :::1 | :::1 | trust | md5 |
98 | host | {all} | {zbx_monitor} | :::1 | :::1 | trust | md5 |
(10 rows)
```

New host

Host IPMI Tags Macros 4 Inventory Encryption Value mapping

* Host name

Visible name

Templates
type here to search

* Groups
type here to search

Interfaces	Type	IP address	DNS name	Connect to	Port
Agent		<input type="text" value="172.17.4.77"/>	<input type="text"/>	<input checked="" type="button" value="IP"/> <input type="button" value="DNS"/>	<input type="text" value="10050"/>

[Add](#)

Host IPMI Tags **Macros 4** Inventory Encryption Value mapping

Host macros Inherited and host macros

Macro	Value	
{SPG.DB}	demo	<input type="button" value="T"/>
{SPG.HOST}	127.0.0.1	<input type="button" value="T"/>
{SPG.PORT}	5432	<input type="button" value="T"/>
{SPG.USER}	dba	<input type="button" value="T"/>

[Add](#)

<input type="checkbox"/>	Name ▲	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability	Agent encryption
<input type="checkbox"/>	zabbix	Items 40	Triggers 11	Graphs 8	Discovery 1	Web	172.17.4.77:10050		PostgreSQL by Zabbix agent	Enabled	ZBX	None
<input type="checkbox"/>	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: dhcpv6-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

