1. Install prerequisites for Jenkins server (Java)

```
sudo apt-get install openjdk-8-jre
```

```
java -version
```

```
openjdk version "1.8.0_312"
OpenJDK Runtime Environment (build 1.8.0_312-8u312-b07-0ubuntu1~20.04-b07)
OpenJDK 64-Bit Server VM (build 25.312-b07, mixed mode)
```

2. Install Jenkins from command line

## **Unlock Jenkins**

To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:

/var/lib/jenkins/secrets/initialAdminPassword

Please copy the password from either location and paste it below.

Administrator password

3. Install and configure Nginx server for navigation to Jenkins without port in URL. URL should have the following pattern – <a href="http://jenkins">http://jenkins</a>

```
GNU nano 4.8
                                                                                                conf.d/jenkins.conf
pstream jenkins {
keepalive 32;
server 127.0.0.1:8080;
nap $http_upgrade $connection_upgrade {
 default upgrade;
'' close;
server {
 listen
                            80 default;
 server_name
                           /var/run/jenkins/war/;
                           /var/log/nginx/jenkins.access.log;
/var/log/nginx/jenkins.error.log;
 access_log
  error_log
 \mbox{\tt\#} pass through headers from Jenkins that Nginx considers invalid ignore_invalid_headers off;
  location \sim "^/static/[0-9a-fA-F]{8}\/(.*)$" {
    # rewrite all static files into requests to the root
# E.g /static/12345678/css/something.css will become /css/something.css
rewrite "^/static/[0-9a-fA-F]{8}\/(.*)" /$1 last;
 location /userContent {
    # have nginx handle all the static requests to userContent folder
    # note : This is the $JENKINS_HOME dir
     root /var/lib/jenkins/;
if (!-f $request_filename){
    # this file does not exist
        rewrite (.*) /$1 last;
        break;
     sendfile on;
   location / {
    sendfile off;
          proxy_pass http://jenkins;
proxy_redirect default;
proxy_http_version 1.1;
          proxy_set_header Connection $connection_up
proxy_set_header Upgrade $http_upgrade;
                                                                         $connection_upgrade;
                                        Host
         proxy_set_header Host
proxy_set_header X-Real-IF
proxy_set_header X-Forward
proxy_set_header X-Forward
proxy_max_temp_file_size 0;
                                                                         Shost:
                                       client_max_body_size
client_body_buffer_size
                                                        128k;
          proxy_connect_timeout
                                                         90;
          proxy_send_timeout
proxy_read_timeout
proxy_buffering
                                                         90;
          proxy_read_timeout 90;
proxy_buffering off;
proxy_request_buffering off; # Required for HTTP CLI commands
proxy_set_header Connection ""; # Clear for keepalive
```



4. Configure Jenkins settings in global configuration UI (java, authentication, email)





## Authentication □ Disable remember me **Security Realm** O Delegate to servlet container Jenkins' own user database ☐ Allow users to sign up O LDAP O Unix user/group database O None **Authorization** O Anyone can do anything O Legacy mode Logged-in users can do anything ☐ Allow anonymous read access O Matrix-based security O Project-based Matrix Authorization Strategy Use SMTP Authentication User Name forjenkins1@gmail.com Password ••••• Use SSL ☐ Use TLS SMTP Port 465 Reply-To Address Charset UTF-8 Test configuration by sending test e-mail Test e-mail recipient forjenkins1@gmail.com Email was successfully sent Test configuration

## Test email #8 Входящие ×

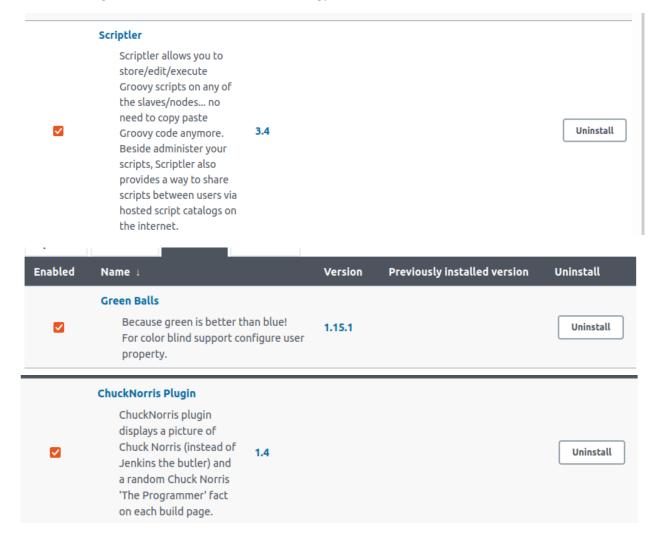


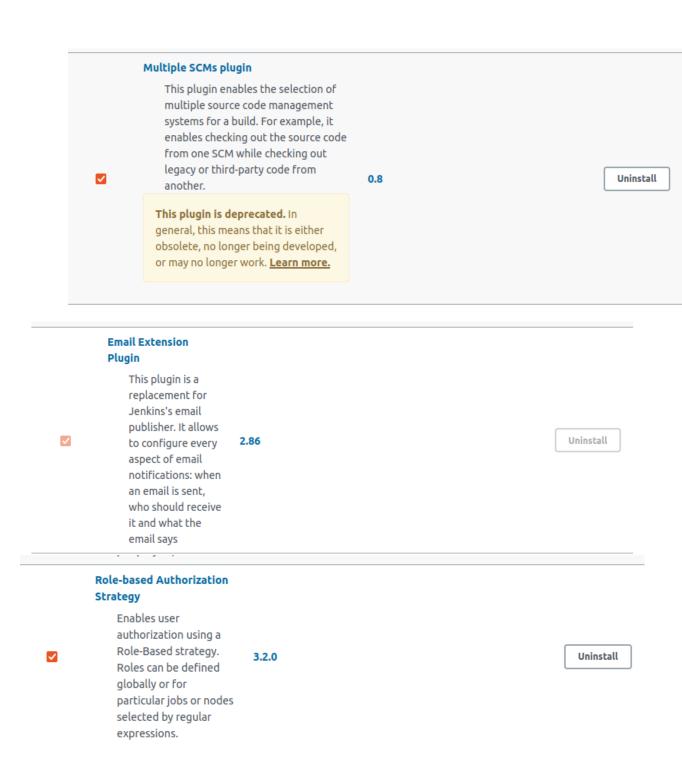
## address not configured yet <forjenkins1@gmail.com>

кому: мне 🕶

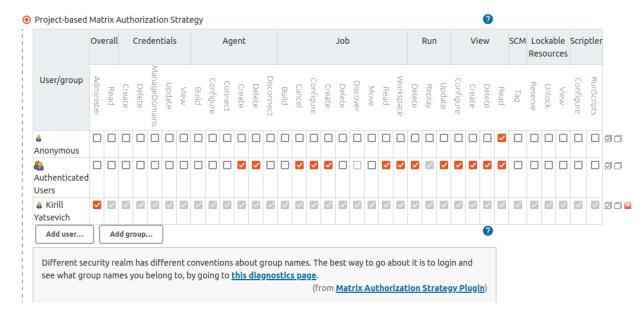
This is test email #8 sent from Jenkins

5. Install 6 Jenkins plugins (Scriptler, Green Balls, ChuckNorris, Multiple SCMs plugin, Email Extension Plugin, Role-based Authorization Strategy)





6. Remove anonymous access by configuring Role Strategy plugin.



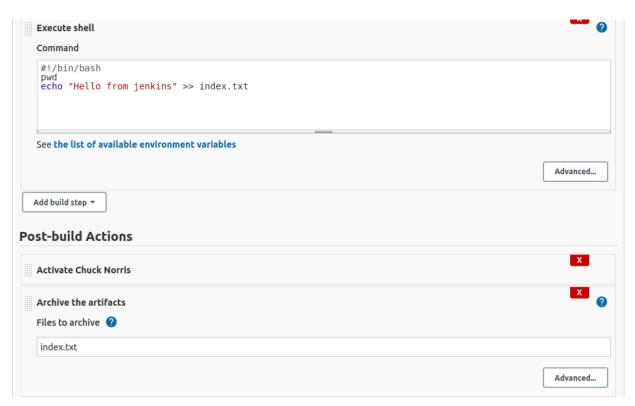
7. Create free-style job with simple build step to output some message to console. Trigger build. Configure job to be build periodically.



Started by user **Kirill Yatsevich**Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/Job-1
[Job-1] \$ /bin/bash /tmp/jenkins8736973235493188250.sh
Hello from Jenkins
Finished: SUCCESS



8. Setup Jenkins job to build of any selected open-source project. Output should be some package (artifact). Project could be even archiving of random files – this will be enough for completion.





Started by user unknown or anonymous Running as SYSTEM Building in workspace /var/lib/jenkins/workspace/Job-2 [Job-2] \$ /bin/bash /tmp/jenkins4918590112157223552.sh /var/lib/jenkins/workspace/Job-2 Archiving artifacts

Finished: SUCCESS