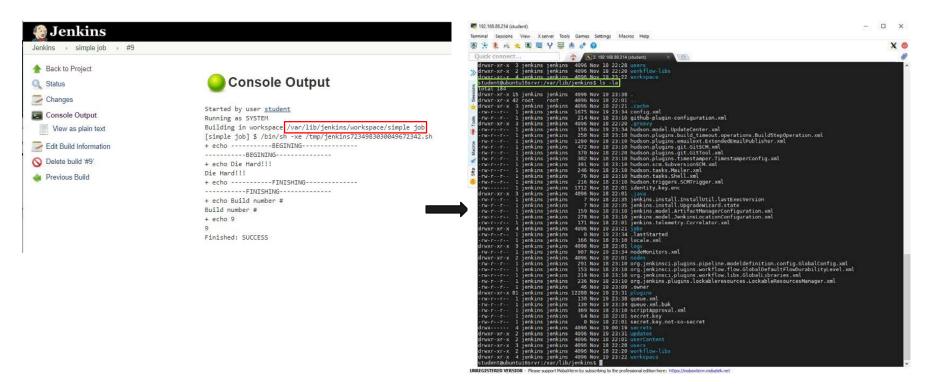


Continuous integration / Continuous delivery (deployment).
Lection 2

Simple job example in Jenkins.

Job and Build working directories on Jenkins server.





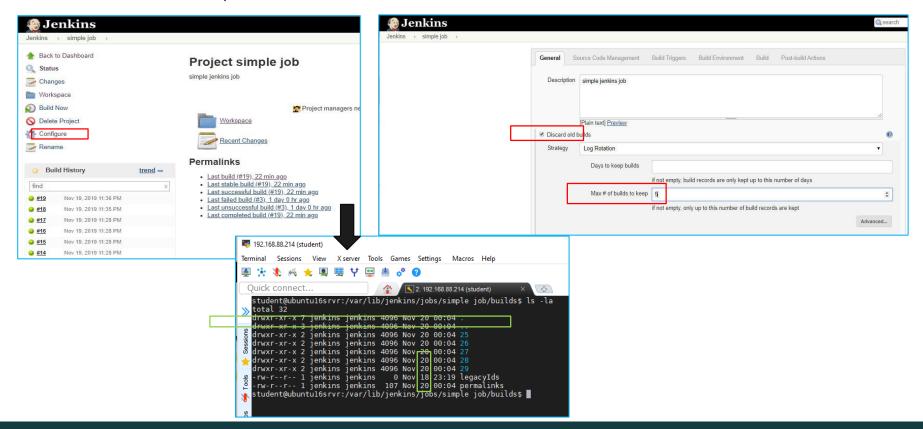
Simple job example in Jenkins. Don't waste disk space.

```
3 192.168.88.214 (student)
                      X server Tools Games Settings Macros Help
                                                                                               X O
 Ouick connect...
                                          2. 192.168.88.214 (student)
  student@ubuntul6srvr:/var/lib/jenkins/jobs/simplejob2/builds$ ls -la
  total 56
   drwxr-xr-x 13 jenkins jenkins 4096 Nov 19 23:37 .
  drwxr-xr-x 3 ienkins ienkins 4096 Nov 19 23:37 ...
   drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:22 1
   drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:34 10
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:37 11
              2 jenkins jenkins 4096 Nov 19 23:28 2
               2 jenkins jenkins 4096 Nov 19 23:28 3
   drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:28 4
              2 jenkins jenkins 4096 Nov 19 23:29 5
   drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:29 6
   drwxr-xr-x  2 jenkins jenkins 4096 Nov 19 23:29 7
   drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:32 8
   drwxr-xr-x  2 jenkins jenkins 4096 Nov 19 23:34 <mark>9</mark>
  -rw-r--r-- 1 jenkins jenkins 0 Nov 19 23:21 legacyIds
   -rw-r--r-- 1 jenkins jenkins 105 Nov 19 23:37 permalinks
   student@ubuntu16srvr:/var/lib/jenkins/jobs/simplejob2/builds$
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net
```

```
192.168.88.214 (student)
                     X server Tools Games Settings
 Ouick connect...
                                       2. 192.168.88.214 (student)
  student@ubuntu16srvr:/var/lib/jenkins/jobs$ cd simple\ job
 student@ubuntul6srvr:/var/lib/ienkins/iobs/simple_iob$ cd_builds
  student@ubuntul6srvr:/var/lib/jenkins/jobs/simple job/builds$ ls -la
  drwxr-xr-x 21 jenkins jenkins 4096 Nov 19 23:36 .
  drwxr-xr-x 3 jenkins jenkins 4096 Nov 19 23:36 ...
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 18 23:35 1
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:28 10
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:28 11
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:28 12
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:28 13
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:28 14
               jenkins jenkins 4096 Nov 19 23:28 15
             2 jenkins jenkins 4096 Nov 19 23:28 16
  jenkins jenkins 4096 Nov 19 23:35 18
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 23:36 19
             2 jenkins jenkins 4096 Nov 18 23:37 2
               jenkins jenkins 4096 Nov 18 23:58 3
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 00:13 4
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 00:13 5
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 00:16 6
               jenkins jenkins 4096 Nov 19 00:16 7
  drwxr-xr-x 2 ienkins ienkins 4096 Nov 19 00:23 8
  drwxr-xr-x 2 jenkins jenkins 4096 Nov 19 22:25 9
  -rw-r--r-- 1 jenkins jenkins 0 Nov 18 23:19 legacyIds
  -rw-r--r-- 1 jenkins jenkins 105 Nov 19 23:36 permalinks
  student@ubuntul6srvr:/var/lib/jenkins/jobs/simple job/builds$
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here; https://mobaxterm.mobatek.net
```

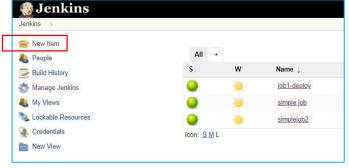


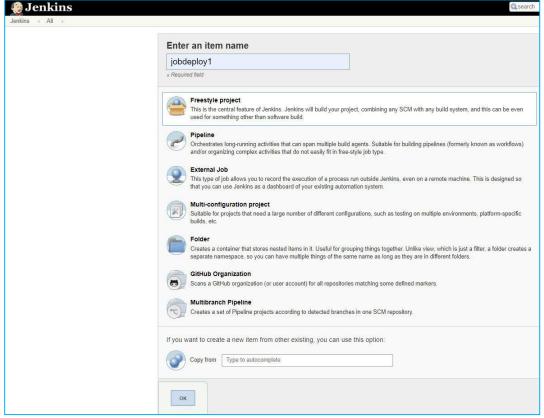
Simple job example in Jenkins. Don't waste disk space.



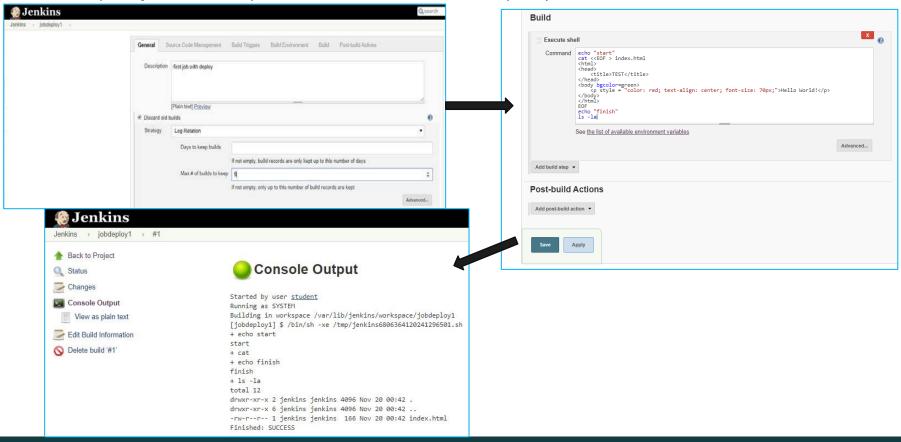


Simple job example in Jenkins with deploy.





Simple job example in Jenkins with deploy.





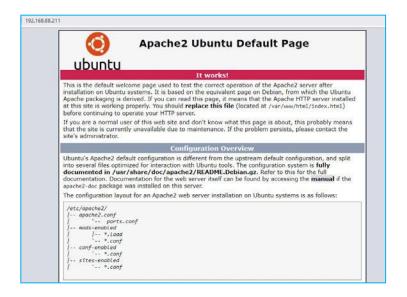
Simple job example in Jenkins with deploy. Establish SSH connection without login/password

```
3 192,168,88,214 (student)
                                                                                          ×
Terminal Sessions View X server Tools Games Settings Macros Help
                                                                                              X O
 Quick connect...
                                        2. 192.168.88.214 (studer × 2 3. student@ubuntu16srvr:
  student@ubuntu16srvr:~$ ssh-keygen
  Generating public/private rsa key pair.
   Enter file in which to save the key (/home/student/.ssh/id_rsa):
  Enter passphrase (empty for no passphrase):
  Enter same passphrase again:
  Your identification has been saved in /home/student/.ssh/id rsa.
  Your public key has been sayed in /home/student/.ssh/id rsa.pub.
  The key fingerprint is:
  SHA256:d5ml+KpzYe7sBrC0DRqoM88/l6frRIqf9vmnQulllGo student@ubuntu16srvr
  The kev's randomart image is:
  +---[RSA 2048]----+
      . ..@S o =
      .00=++X=
    ----[SHA256]----+
  student@ubuntul6srvr:~$ sudo ssh student@192.168.88.211
  [sudo] password for student:
  The authenticity of host '192.168.88.211 (192.168.88.211)' can't be established.
  ECDSA key fingerprint is SHA256:/z3Q8P7qBEewbHT2topjj/Vgfz9w4mT4idf+gx+jK7E.
  Are you sure you want to continue connecting (yes/no)? yes
   arning: Permanently added '192.168.88.211' (ECDSA) to the list of known hosts.
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net
```

```
392.168.88.214 (student)
                                                                                             П
Terminal Sessions View X server Tools Games Settings Macros Help
🖲 💃 👠 🙉 🛨 風 🕮 🗘 🖼 🛦 🚜 🛭
 Ouick connect...
                                       2. 192.168.88.214 (student) ×
                                                                 3. student@ubuntu16srvr: /var
  student@ubuntul6srvr:~$ sudo ssh student@192.168.88.211
  [sudo] password for student:
    he authenticity of host '192.168.88.211 (192.168.88.211)' can't be established.
   E<del>CDSA key fingerprint is SHA250./z3Q8P7qBEewbHT2topjj/Vg</del>fz9w4mT4idf+gx+jK7E.
  Are you sure you want to continue connecting (yes/no)? yes
  Warning: Permanently added '192.168.88.211' (ECDSA) to the list of known hosts.
  student@192.168.88.211's password:
  Welcome to Ubuntu 16.04.5 LTS (GNU/Linux 4.4.0-131-generic x86 64)
   * Documentation: https://help.ubuntu.com
                      https://landscape.canonical.com
   * Management:
   * Support:
                      https://ubuntu.com/advantage
  186 packages can be updated.
  117 updates are security updates.
  New release '18.04.3 LTS' available.
   Run 'do-release-upgrade' to upgrade to it.
  Last login: Wed Nov 20 00:59:22 2019 from 192.168.88.254
  student@ubuntul6srvr:~$ exit
     nnection to 192 168 88 211 closed
   tudent@ubuntul6srvr:~$ ssb-conv-id student@192 168 88 211
  /usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/student/.ssh/id rsa.p
  The authenticity of host '192.168.88.211 (192.168.88.211)' can't be established.
  ECDSA key fingerprint is SHA256:/z3Q8P7qBEewbHT2topjj/Vgfz9w4mT4idf+gx+jK7E.
  Are you sure you want to continue connecting (yes/no)? yes
  /usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any th
   at are already installed
  /usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it
  is to install the new keys
  student@192.168.88.211's password:
  Number of key(s) added: 1
  Now try logging into the machine, with: "ssh 'student@192.168.88.211'"
  and check to make sure that only the key(s) you wanted were added
  student@ubuntu16srvr:~$
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net
```



Simple job example in Jenkins with deploy. Establish privileges for /var/www



```
student@ubuntu16srvr: /var/www/html
                                                                                        П
                                                                                             ×
Terminal Sessions View X server Tools Games Settings Macros Help
X @
 Ouick connect...
                                      2. 192.168.88.214 (stud
  -rw-r--r-- 1 student student 0 Sep 21 15:14 .sudo as admin successful
   -rw------ 1 student student 58 Nov 20 00:59 .Xauthority
  student@ubuntu16srvr:~$ cd /var/www
  student@ubuntu16srvr:/var/www$ ls -la
  total 12
   drwxrwxr-x 3 root student 4096 Sep 23 17:50
  drwxr-xr-x 14 root root 4096 Sep 23 17:50 . .
drwxr-xr-x 2 root root 4096 Sep 23 17:50 html
  student@ubuntul6srvr:/var/www$ sudo chmod -R g+rw /var/www
  student@ubuntu16srvr:/var/www$ ls -la
  total 12
  drwxrwxr-x 3 root student 4096 Sep 23 17:50
   drwxr-xr-x 14 root root 4096 Sep 23 17:50
  drwxrwxr-x 2 root root 4096 Sep 23 17:50 html
  student@ubuntu16srvr:/var/www$ cd html
  student@ubuntu16srvr:/var/www/html$ ls -la
  total 20
   drwxrwxr-x 2 root root 4096 Sep 23 17:50
   lrwxrwxr-x 3 root student 4096 Sep 23 17:50
    rw-rw-r-- 1 root root 11321 Sep 23 17:50 index.html
  student@ubuntu16srvr:/var/www/html$ sudo chgrp -R student /var/www
  student@ubuntul6srvr:/var/www/html$ sudo chmod -R g+rw /var/www
  student@ubuntul6srvr:/var/www/html$ ls -la
  total 20
  drwxrwxr-x 2 root student 4096 Sep 23 17:50
  drwxrwxr-x 3 root student 4096 Sep 23 17:50
  -rw-rw-r-- 1 root student 11321 Sep 23 17:50 index.html
  student@ubuntul6srvr:/var/www/htmls 

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```



Simple job example in Jenkins with deploy. Establish SSH connection without login/password

On instance with Jenkins (example):

1) We have to use -o StrictHostKeyChecking=no:

scp -v -o StrictHostKeyChecking=no index.html student@192.168.88.211:/var/www/html

instead of:

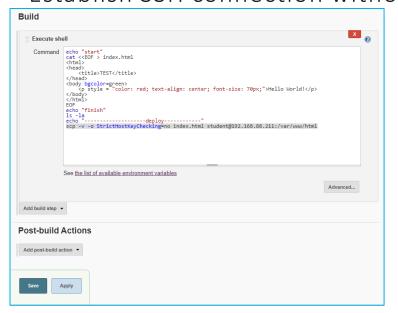
scp -v index.html student@192.168.88.211:/var/www/html

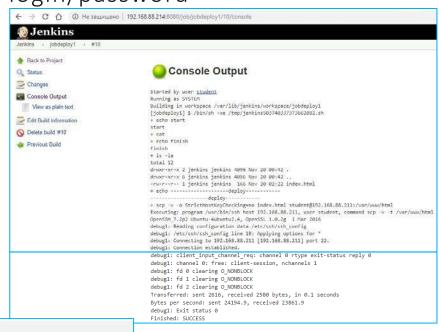
2) We have to copy id_rsa to /var/lib/jenkins/.ssh

3)The /var/lib/jenkins/.ssh directory and files inside of it should be owned by jenkins



Simple job example in Jenkins with deploy. Establish SSH connection without login/password



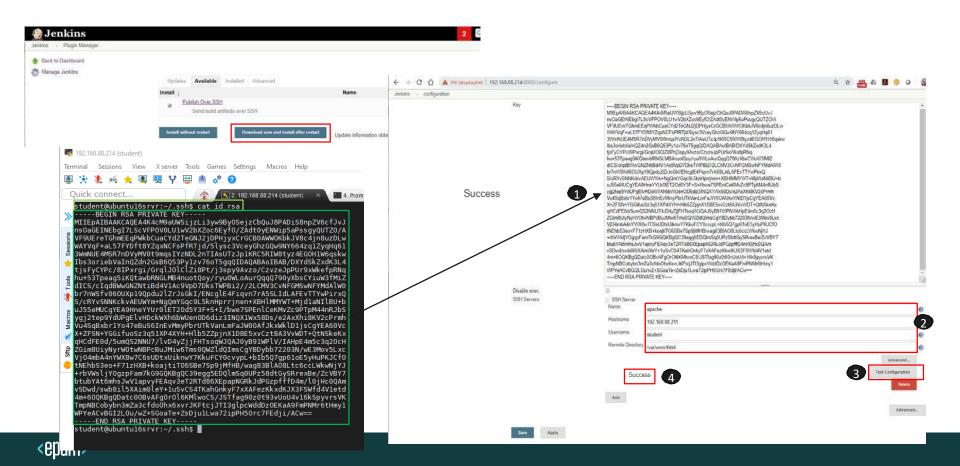


Hello World!

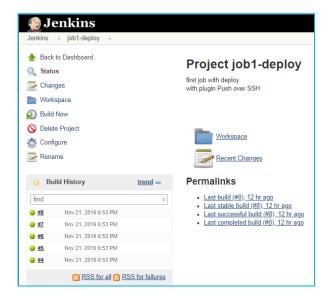
← → С ⊕ ① Не защищено | 192.168.88.211

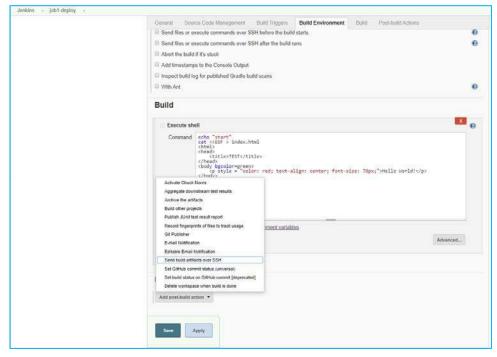
Simple job example in Jenkins with deploy using plugin

"Publish Over SSH"



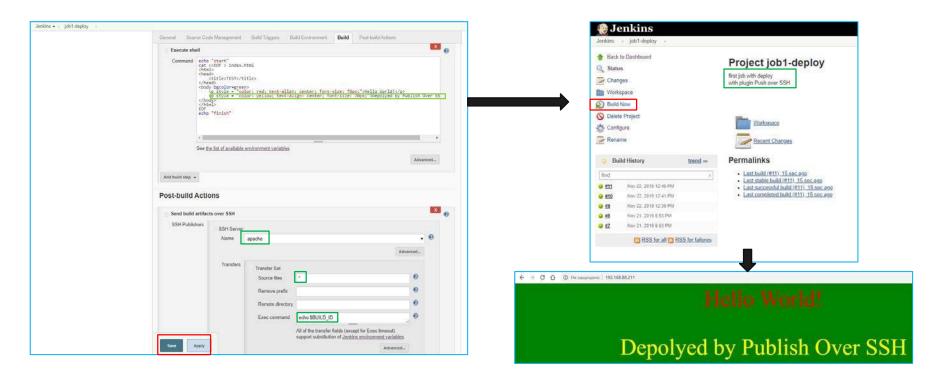
Simple job example in Jenkins with deploy using plugin "Publish Over SSH"



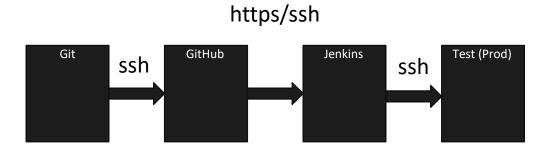


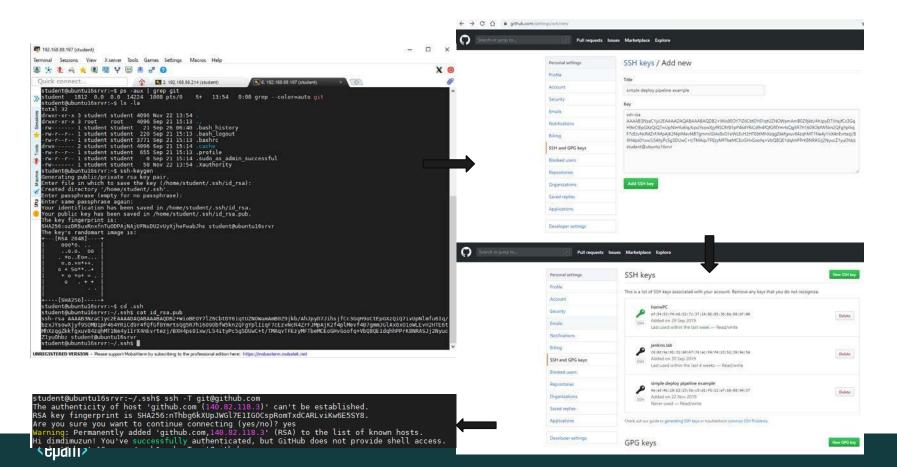


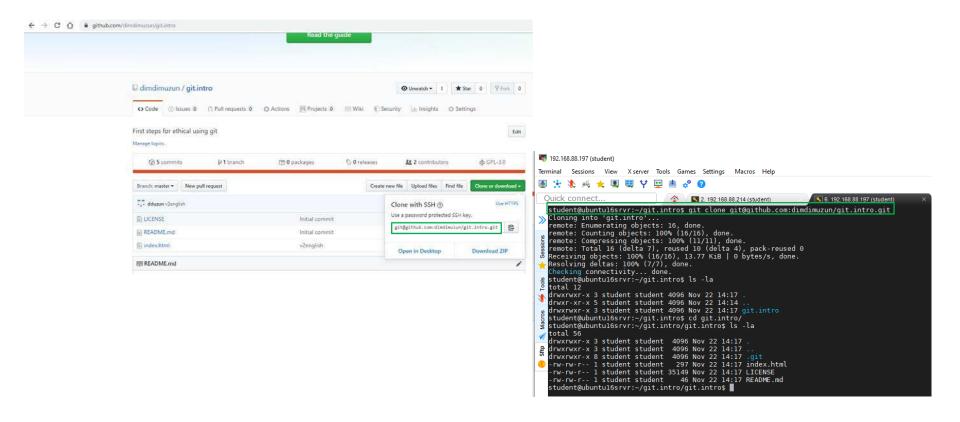
Simple job example in Jenkins with deploy using plugin "Publish Over SSH"



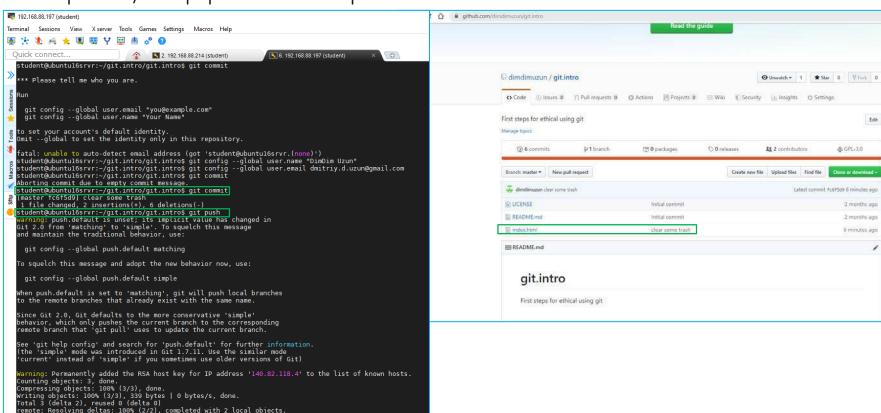








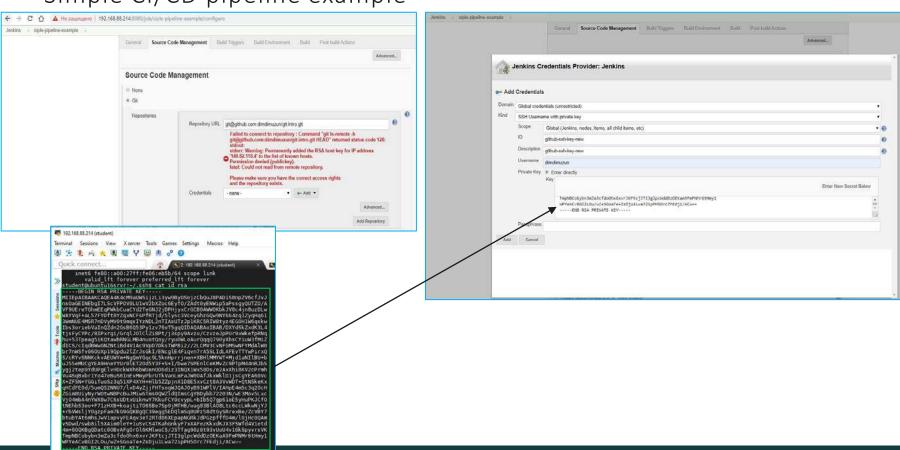


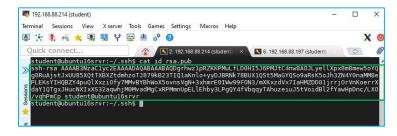


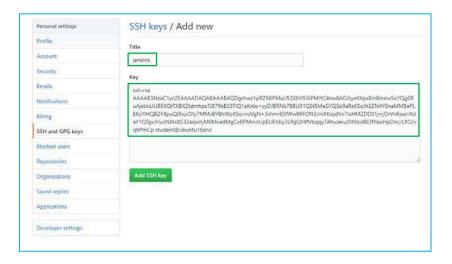


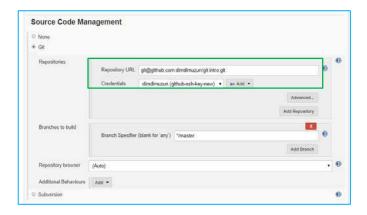
To git@github.com:dimdimuzun/git.intro.git 2963cc8..fc6f5d9 master -> master student@ubuntul6srvr:~/git.intro/git.intro\$ ■

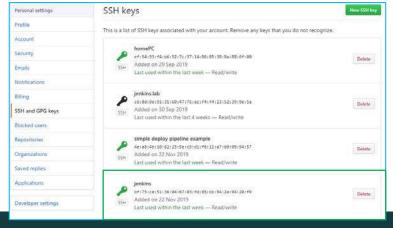
udent@ubuntul6srvr:~/.sshs



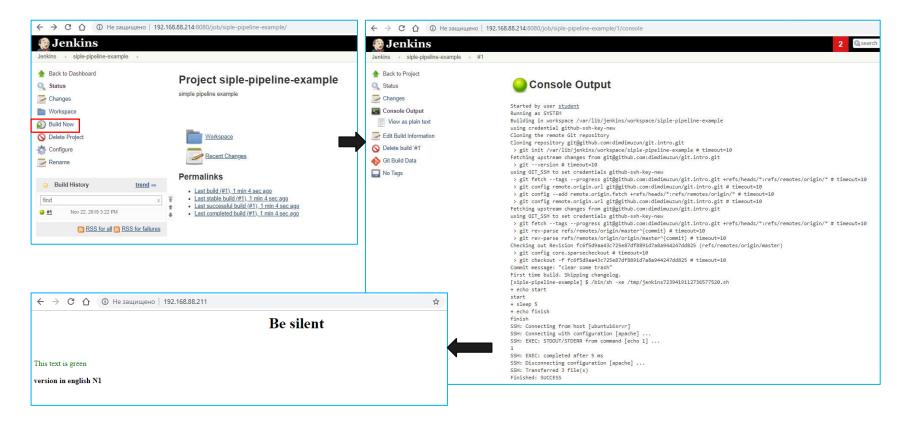




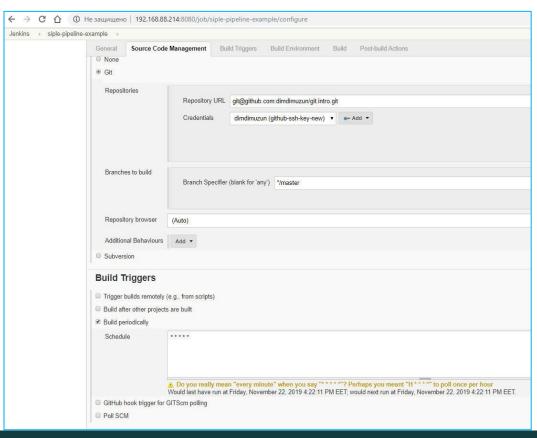






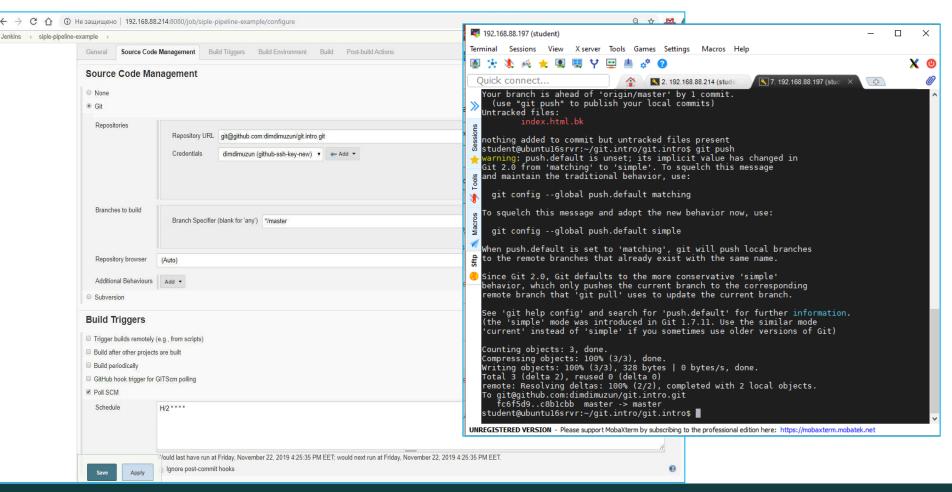




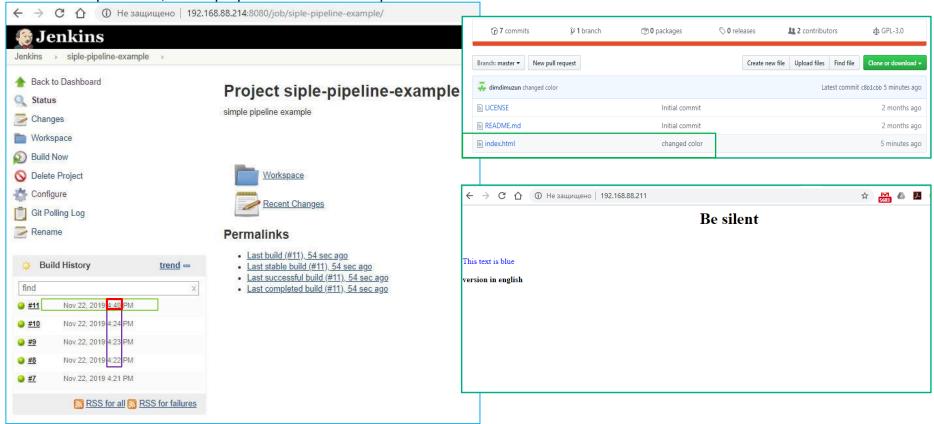




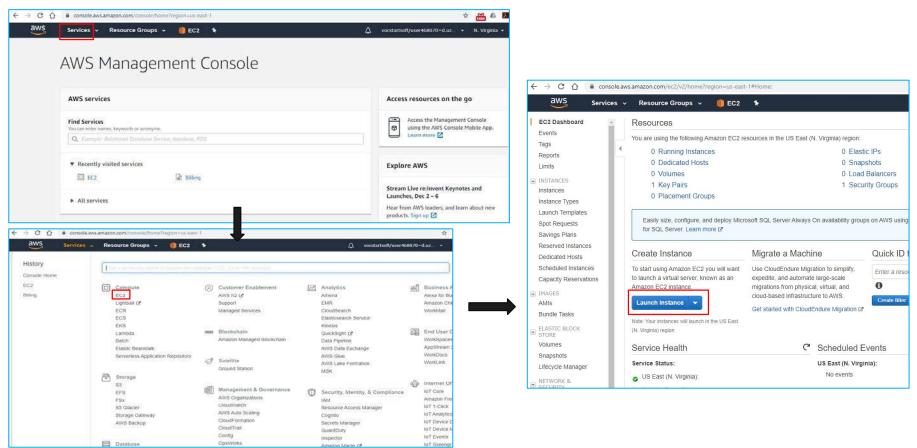




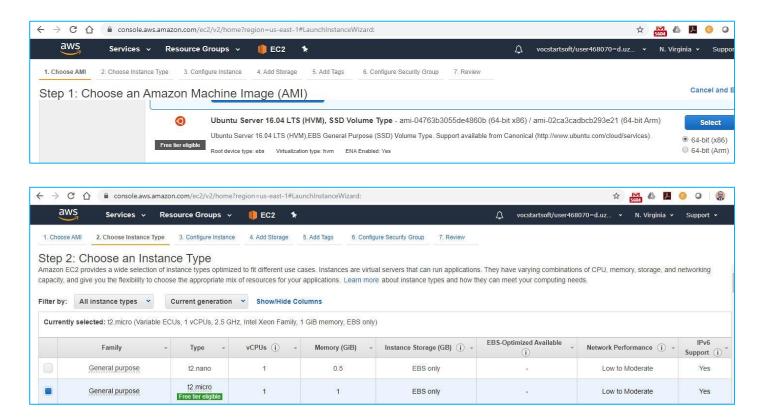




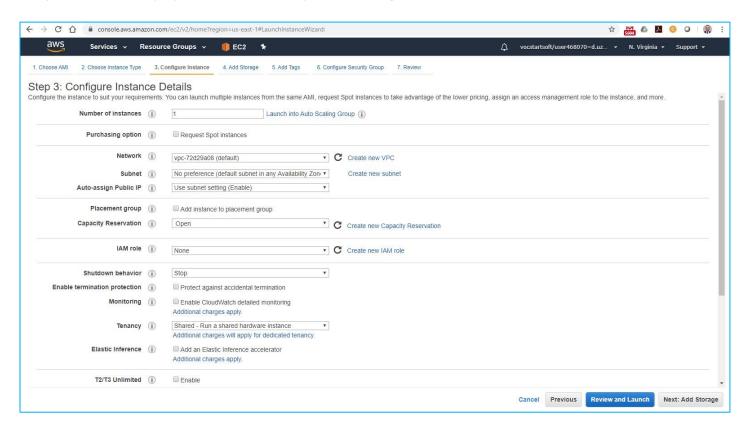




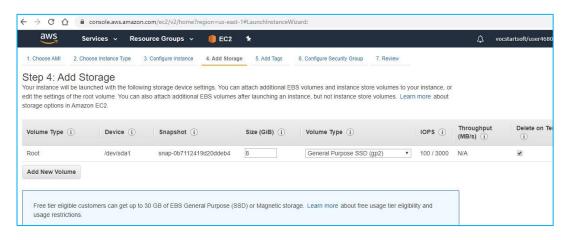


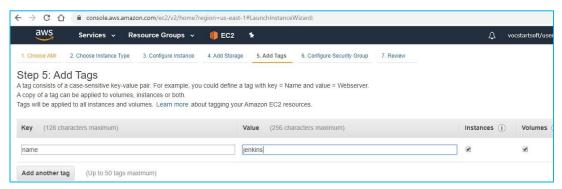




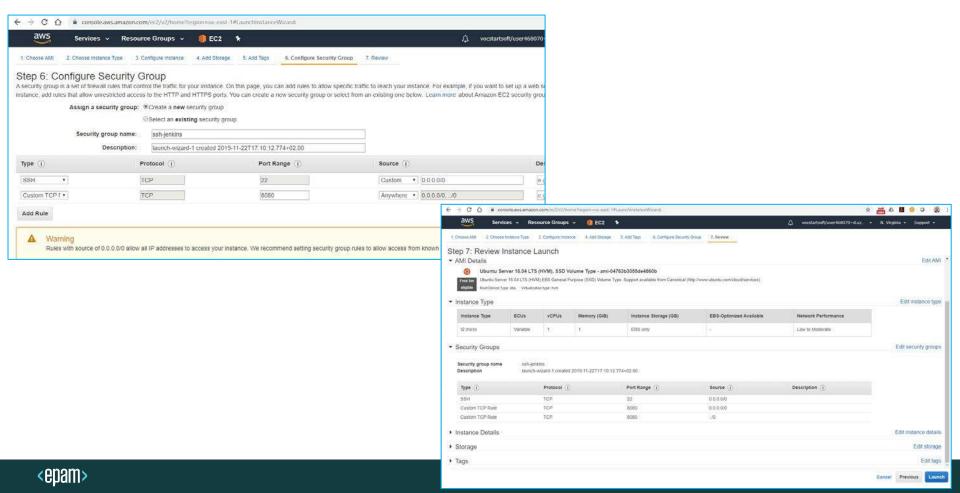


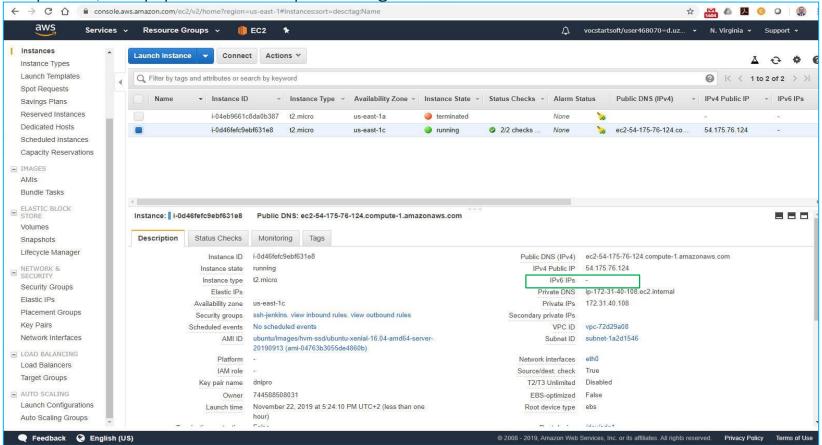




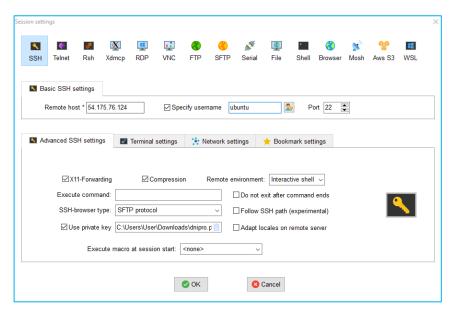


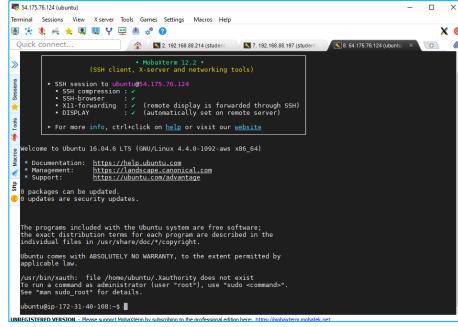




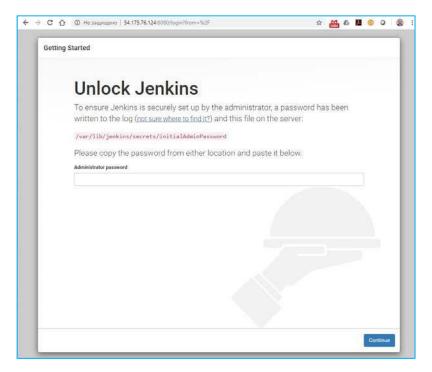






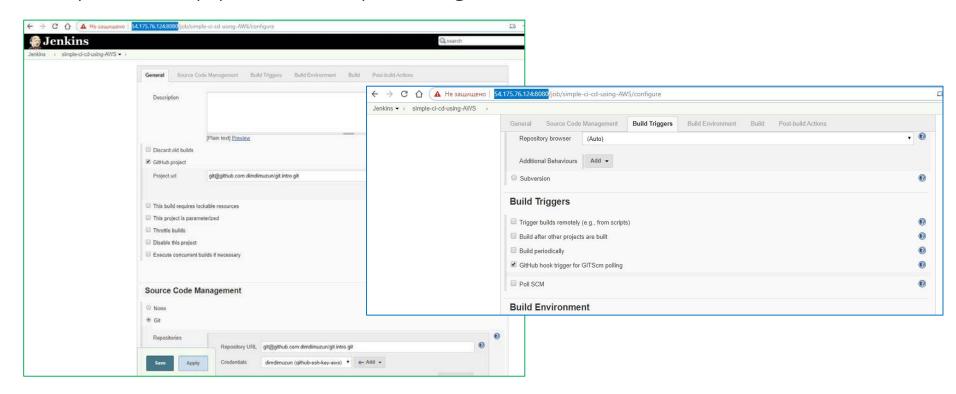




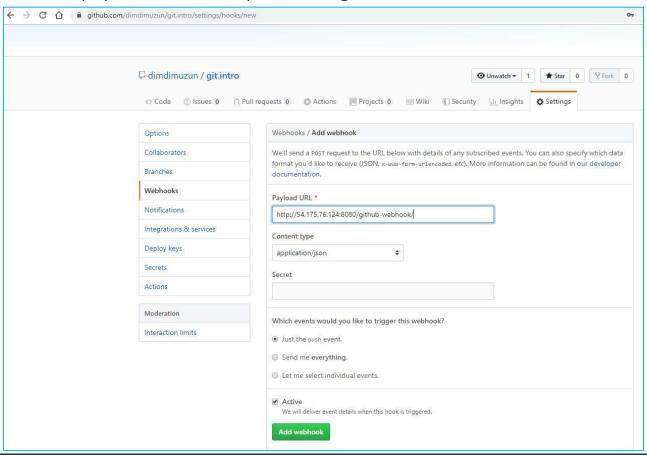


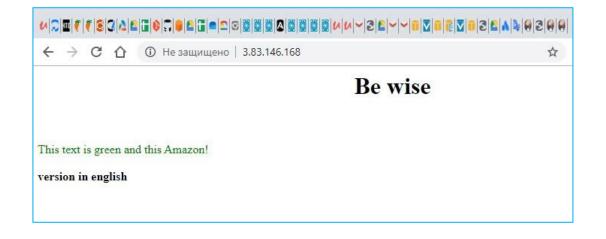
```
34.175.76.124 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
 Ouick connect...
                                      2. 192.168.88.214 (studen
                                                              7, 192,168,88,197 (student
                                                                                        8. 54.175.76.124 (ubuntu)
  After this operation, 78.6 MB of additional disk space will be used.
  Do you want to continue? [Y/n]
   et:1 <u>http://us-east-1.ec2.archive.ubuntu.com/ubuntu</u> xenial/universe amd64 daemon amd64 0.6.4-1 [98.2 kB]
  Get:2 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.190.3 [77.8 MB]
  Fetched 77.9 MB in 5s (13.5 MB/s)
  Selecting previously unselected package daemon.
  (Reading database ... 54468 files and directories currently installed.)
  Preparing to unpack .../daemon 0.6.4-1 amd64.deb ...
   Unpacking daemon (0.6.4-1) ...
  Selecting previously unselected package jenkins.
  Preparing to unpack .../jenkins_2.190.3_all.deb ...
  Unpacking jenkins (2.190.3) ...
  Processing triggers for man-db (2.7.5-1) ...
  Processing triggers for ureadahead (0.100.0-19.1) ...
  Processing triggers for systemd (229-4ubuntu21.22) ...
  Setting up daemon (0.6.4-1) ...
  Setting up jenkins (2.190.3) ...
Processing triggers for ureadahead (0.100.0-19.1) ...
  Processing triggers for systemd (229-4ubuntu21.22) ...
   ubuntu@ip-172-31-40-108:~$ service jenkins status
    jenkins.service - LSB: Start Jenkins at boot time
     Loaded: loaded (/etc/init.d/jenkins; bad; vendor preset: enabled)
     Active: active (exited) since Fri 2019-11-22 15:36:31 UTC; 44s ago
       Docs: man:systemd-sysv-generator(8)
  Nov 22 15:36:29 ip-172-31-40-108 systemd[1]: Starting LSB: Start Jenkins at boot time...
  Nov 22 15:36:29 ip-172-31-40-108 jenkins[9061]: Correct java version found
  Nov 22 15:36:29 ip-172-31-40-108 jenkins[9061]: * Starting Jenkins Automation Server jenkins
  Nov 22 15:36:29 ip-172-31-40-108 su[9095]: Successful su for jenkins by root
  Nov 22 15:36:29 ip-172-31-40-108 su[9095]: + ??? root:jenkins
  Nov 22 15:36:29 ip-172-31-40-108 su[9095]: pam unix(su:session): session opened for user jenkins by (uid=0)
  Nov 22 15:36:31 ip-172-31-40-108 jenkins[9061]: ...done.
  Nov 22 15:36:31 ip-172-31-40-108 systemd[1]: Started LSB: Start Jenkins at boot time.
  ubuntu@ip-172-31-40-108:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
  47440a922d314ae1b413d5026d144edf
  ubuntu@ip-172-31-40-108:~$
```











References

- https://wiki.jenkins.io/display/JENKINS/Publish+Over+SSH+Plugin
- https://jenkins.io/doc/pipeline/steps/publish-over-ssh/

Q&A

