Jenkins + Django 完整实战,细化到每一步操作

一、简介

一般网站部署的流程如下:

需求分析—原型设计—开发代码—内网部署-提交测试—确认上线—备份数据—外网更新-最终测试,如果发现外网部署的代码有异常,需要及时回滚

我们可以通过jenkins工具平台实现全自动部署+测试,是一个可扩展的持续集成引擎,是一个开源软件项目,旨在提供一个开放易用的软件平台,使软件的持续集成变成可能。 Jenkins非常易于安装和配置,简单易用

• 简单来说方便如下人员:

- 1. 开发人员:写好代码,不需要自己进行源码编译、打包等工作,直接将代码分支存放在SVN、GIT仓库即可。war源码多自动把代码放到服务器上面
- 2. 运维人员:减轻人工干预的错误率, ansible 一键完成了同时解放运维人员繁杂的上传代码、手动备份、更新
- 3. 测试人员:可以通过jenkins进行简单的代码及网站测试

• 持续集成的意义:

- 1. 持续集成中的任何一个环节都是自动完成的,无需太多的人工干预,有利于减少重复过程以节省时间、费用和工作量
- 2. 持续集成保障了每个时间点上团队成员提交的代码是能成功集成的。换言之,任何时间点都能第一时间发现软件的集成问题,使任意时间发布可部署

二、安装jenkins

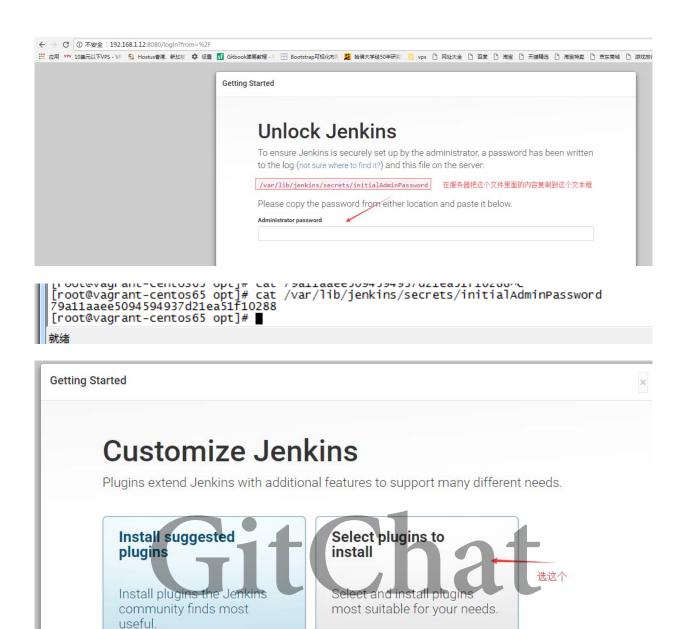
由于jenkins是使用java代码开发的,所以我们需要安装java容器才能运行jenkins,又因为java的web服务器用的是tomcat,所以我们要安装JDK+Tomcat

安装JDK+Tomcat:

```
[root@vagrant-centos65 ~]# yum -y install java-1.8.0-
openjdk.x86_64
[root@vagrant-centos65 ~]# cd /opt/
[root@vagrant-centos65 opt]# wget
http://mirrors.tuna.tsinghua.edu.cn/apache/tomcat/tomcat-
7/v7.0.81/bin/apache-tomcat-7.0.81.tar.gz
[root@vagrant-centos65 opt]# tar zxvf apache-tomcat-7.0.81.tar.gz
[root@vagrant-centos65 opt]# mkdir -p /usr/local/tomcat
[root@vagrant-centos65 opt]# mv apache-tomcat-7.0.81/*
/usr/local/tomcat
```

安装jenkins:

```
[root@vagrant-centos65 ~]# cd /opt/
[root@vagrant-centos65 opt]# wget
http://mirrors.tuna.tsinghua.edu.cn/jenkins/redhat/jenkins-2.60-
1.1.noarch.rpm
[root@vagrant-centos65 opt]# rpm -ivh jenkins-2.60-1.1.noarch.rpm
[root@vagrant-centos65 opt]# /etc/init.d/jenkins start
Starting Jenkins
                                                            Γ
                                                              OK
1
[root@vagrant-centos65 opt]# netstat -tnlp | grep 8080
[root@vagrant-centos65 opt]# /etc/init.d/jenkins start
Starting Jenkins
                                                            Γ
                                                              0K
]
[root@vagrant-centos65 opt]# netstat -tnlp | grep 8080
```





安装常用的插件

选择你需要的插件安装

Crea	ate First <i>F</i>	Admin User
用户名:	admin	
密码:		→ 安装完成之后会出现这个页面 填入信息就
确认密码:		
全名:	知了阿文	
电子邮件地址	44262769@qq.com	

Jenkins is ready! Your Jenkins setup is complete. Start using Jenkins





```
[root@vagrant-centos65 opt]# git clone git@git.oschina.net:ZhiLiaoAWen/test.git test-git/Initialized empty Git repository in /opt/test-git/.git/
The authenticity of host 'git.oschina.net (218.11.0.86)' can't be established.
RSA key fingerprint is e3:ee:82:78:fb:c0:ca:24:65:69:ba:bc:47:24:6f:d4.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'git.oschina.net,218.11.0.86' (RSA) to the list of known hosts.
Permission denied (publickey).
fatal: The remote end hung up unexpectedly
[root@vagrant-centos65 opt]#

GARR Day Continue Connecting (ASA)

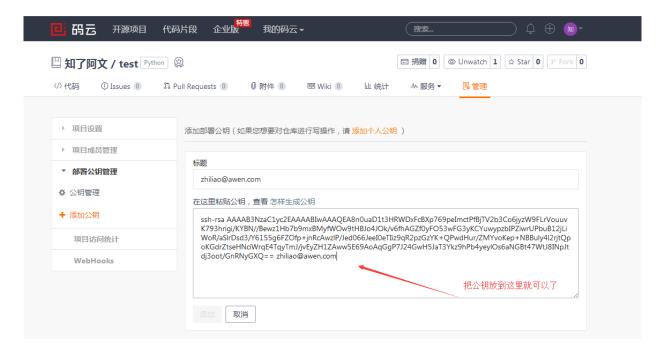
Captrol Day Cont
```

2) 创建公钥和私钥:

三次回车即可生成 ssh key

[root@vagrant-centos65 opt]# cat ~/.ssh/id_rsa.pub
ssh-rsa

AAAAB3NzaC1yc2EAAAABIwAAAQEA8n0uaD1t3HRWDxFcBXp769peImctPfBjTV2b3 Co6jyzW9FLrVouuvK793hrigi/KYBN//Bewz1Hb7b9mxBMyfW0w9tHBJo4J0k/v6f



4) 同步代码:

[root@vagrant-centos65 opt]# git clone
git@git.oschina.net:ZhiLiaoAWen/test.git test-git/

四、升级python 2.6到python 2.7

由于jdnago 1.7之后的版本就不支持python 2.6了, 所以我们需要升级python 2.6-2.7。

```
[root@vagrant-centos65 ~]# yum -y install zlib zlib-devel
openssl openssl-devel sqlite-devel
[root@vagrant-centos65 ~]# wget
http://python.org/ftp/python/2.7.3/Python-2.7.3.tar.bz2
[root@vagrant-centos65 ~]# tar -jxvf Python-2.7.3.tar.bz2
[root@vagrant-centos65 ~]# cd Python-2.7.3
```

五、安装django

安装setuptools: pip的安装需要依赖setuptools。其实是pip的安装setup.py有这样一条代码from setuptools import setup:

```
[root@vagrant-centos65 bin]# cd /opt/
[root@vagrant-centos65 opt]# wget
https://pypi.python.org/packages/61/3c/8d680267eda244ad6391fb8b21
1bd39d8b527f3b66207976ef9f2f106230/setuptools-1.4.2.tar.gz
[root@vagrant-centos65 opt]# tar zxvf setuptools-1.4.2.tar.gz
[root@vagrant-centos65 opt]# cd setuptools-1.4.2
[root@vagrant-centos65 setuptools-1.4.2]# python setup.py install
```

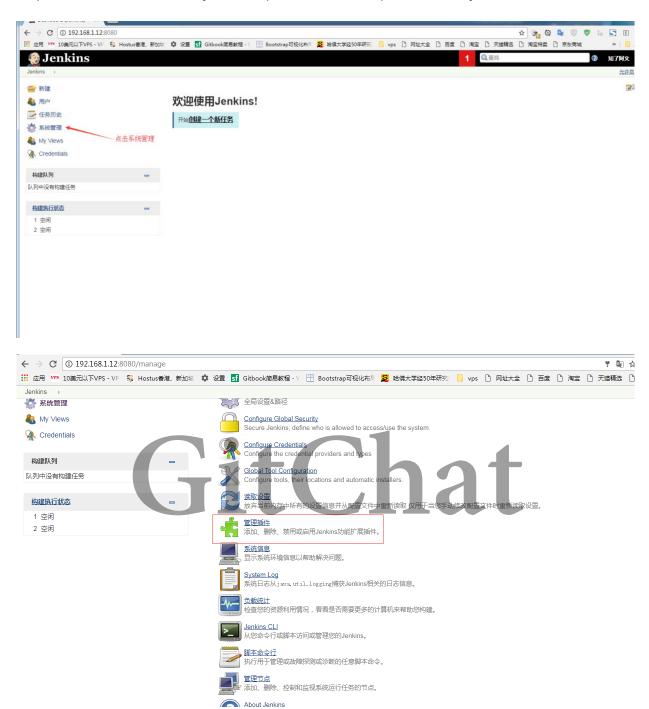
安装pip:

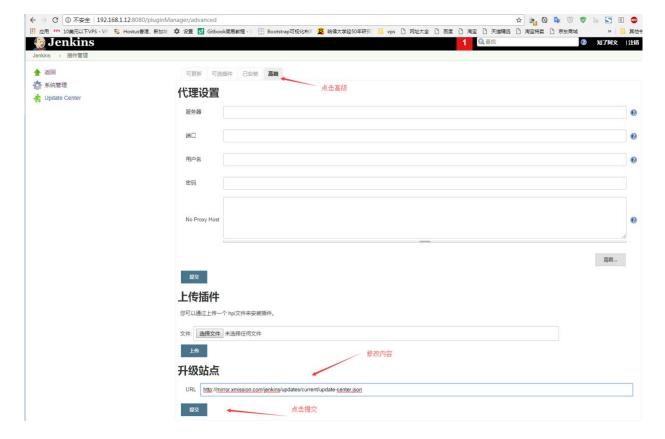
```
[root@vagrant-centos65 ~]# cd /opt/
[root@vagrant-centos65 opt]# wget
"https://pypi.python.org/packages/source/p/pip/pip-
1.5.4.tar.gz#md5=834b2904f92d46aaa333267fb1c922bb" --no-check-certificate
[root@vagrant-centos65 opt]# tar zxvf pip-1.5.4.tar.gz
[root@vagrant-centos65 opt]# cd pip-1.5.4
[root@vagrant-centos65 pip-1.5.4]# python setup.py install
[root@vagrant-centos65 pip-1.5.4]# pip
-bash: pip: command not found
[root@vagrant-centos65 pip-1.5.4]# find / -name pip
/usr/local/python2.7/bin/pip
[root@vagrant-centos65 pip-1.5.4]# ln -s
/usr/local/python2.7/bin/pip /usr/bin/pip
```

安装django:

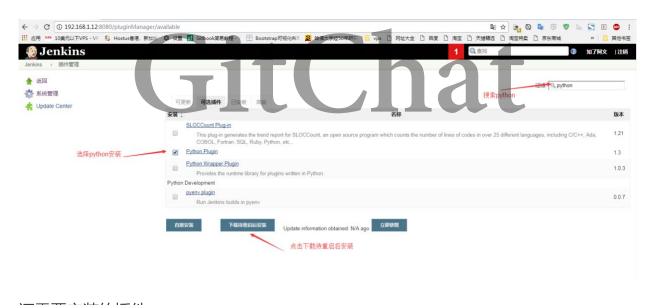
1) 更换更新插件源 国内连接块的地址地址:

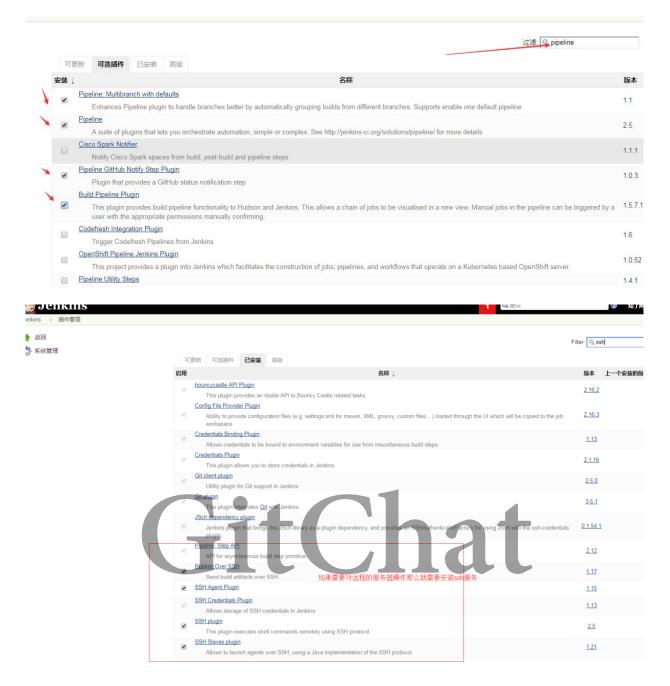
http://mirror.xmission.com/jenkins/updates/current/update-center.json





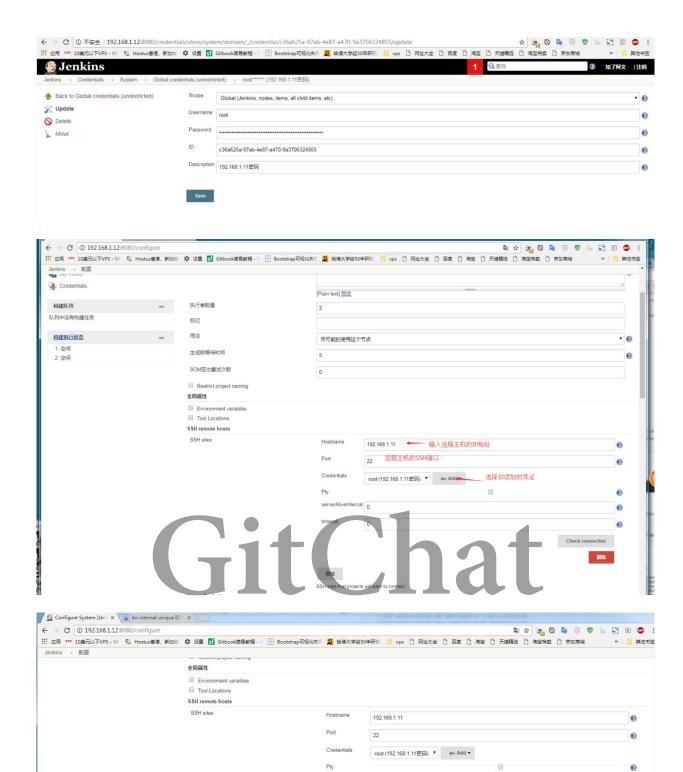
2) 安装自动部署的项目所需要的插件:





创建远程主机。第一步添加凭证:





serverAliveInterval 0

0

```
#出现了一个test11目录就是我们的django项目的容器
[root@vagrant-centos65 test-git]# ll
total 8
-rw-r--r-- 1 root root 29 Sep 15 12:55 README.md
drwxr-xr-x 3 root root 4096 Sep 15 14:55 test11
#创建一个django app 创建静态模板目录 templates
[root@vagrant-centos65 test11]# python manage.py startapp test22
[root@vagrant-centos65 test11]# mkdir templates
#修改django配置文件
[root@vagrant-centos65 test11]# vim test11/settings.py
TEMPLATES = [
    {
        'BACKEND':
'django.template.backends.django.DjangoTemplates',
        'DIRS': [BASE_DIR+"/templates",],
#添加test22
INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'test22',
]
#修改3个文件
[root@vagrant-centos65 test11]# cat templates/inde
<h1>hello zhiliaoawen<h1>
[root@vagrant-centos65 test11]# cat test22/views.py
# -*- coding: utf-8 -*-
from __future__ import unicode_literals
from django.shortcuts import render
# Create your views here.
def index(request):
    return render(request, 'index.html')
```



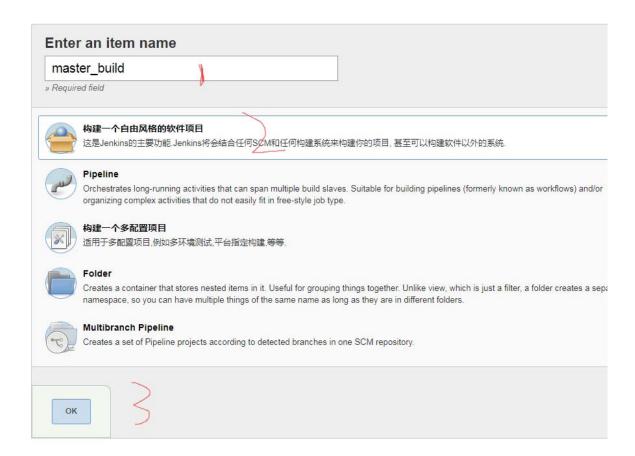
把项目提交到码云:

```
[root@vagrant-centos65 test-git]# git add test11/
[root@vagrant-centos65 test-git]# git commit -m 'test django'
[master cf58679] test django
Committer: root <root@vagrant-centos65.vagrantup.com>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are
accurate.
You can suppress this message by setting them explicitly:
    git config --global user.name "Your Name"
   git config --global user.email you@example.com
If the identity used for this commit is wrong, you can fix it
with:
                         author='Your Name <you@example.com>'
20 files changed, 202 insertions(+), 0 deletions(-)
create mode 100644 test11/db.sqlite3
create mode 100755 test11/manage.py
create mode 100644 test11/templates/index.html
create mode 100644 test11/test11/__init__.py
create mode 100644 test11/test11/__init__.pyc
create mode 100644 test11/test11/settings.py
create mode 100644 test11/test11/settings.pyc
create mode 100644 test11/test11/urls.pv
```

八、创建测试任务

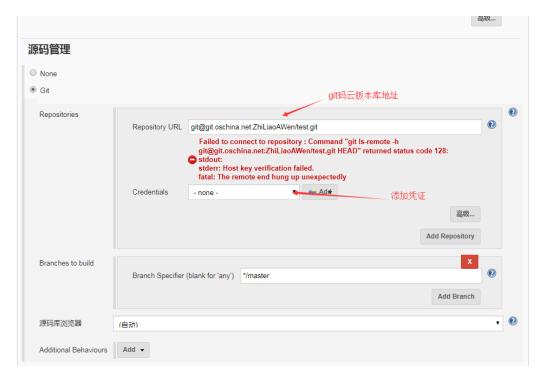
#哈哈代码提交成功了





er_build →





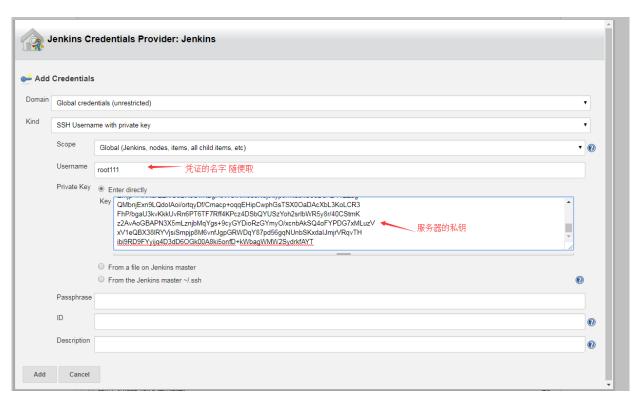
[root@vagrant-centos65 test-git]# cd ~/.ssh/
id_rsa id_rsa.pub known_hosts
[root@vagrant-centos65 test-git]# cd ~/.ssh/id_rsa
-bash: cd: /root/.ssh/id_rsa: Not a directory
[root@vagrant-centos65 test-git]# cat ~/.ssh/id_rsa
-----BEGIN RSA PRIVATE KEY----

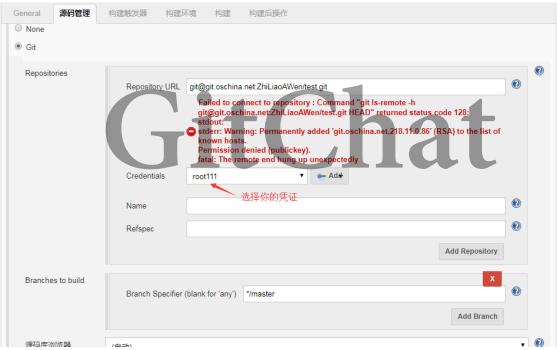
拷贝服务器的私钥到jenkins服务器

[root@vagrant-centos65 test-git]# cat ~/.ssh/id_rsa
----BEGIN RSA PRIVATE KEY---MILEOWIBAAKCAQEA8nOuaDlt3HRWDxFcBXp769peImctPfBjTV2b3Co6jyzw9FLr
VouuvK793hrigi/KYBN//Bewz1Hb7b9mxBMyfwOw9tHBJ04J0k/v6fhAGzf0yFo5
3WFG3yKCYuwypzbIPZiwrUPbuBl2jLiWoR/aSlrDsd3/Y6155g6FZOfp+jnRcAwz
lP/Jed066JeeIOeTIi29qR2pZg2ZYK+QPwdHur/ZMYVOkep+NBBuly4l2rjtqDoKG
dr2tseHNciwrqe4TqyTmJ/jvEyzHlZAww5E69AOAqGgP7J24GwH5JaT3Ykz9hpb4
yeylos6aNGBt47wtJ8INpltdj3oot/GnRNyGXQIBIWKCAQEAg6MKkFvcjZ49WKMG
EZDDRYUryYh3pUf7ZINF4yZd9fPFJWZWt4d8bleuYqDhXJ2ZvyCHTlYA5ZLWeb+s
ONC4qnfyWhOYZWMMUtrv9Apr8KLymKJ62CVDuvV5+y/DudvpC37GT2367utsPCNK
dLmFIQyzYI5OsnQdmiuj17EYncaPEPa3BMihDXT2HFbTg1DyiwkviwerLoplYBq0
/JKRD9Hm6wcaKF01X3sf8F9xxEGesvjusiZUvNQRmynxn+i69HPnzpWusZ3mNOeZ
R6K3bqHHI5sOWJFBAJWzpYkC7L6VhoVk3g9wwUUmL5gJrclbczkOf2xqMccZ4SeY
Iwp9JWKBgQD6t7U09elQtDsYT8Kc3hz588HSHLaQAwHh8TxafpDw+oG6Nb40yEBB
9+hJYev3wfjszxb8abxFqm5x2Hz2OhpjpGYbHpd3ZFc/VAd+qOR6Tsdukboj/zPc
RX3WEnLEUUQUviYVUVwpoeOCbWJHVkRtMlu/6EjJYrg+c8rTDxsGewKBgQD3mRdB
stkaM5TJBlACZew4tQm5jEuAIuPI9wlPjo+7pcmxAwZ6q2LATtdJ/6pPcXjFtVvt
S5Gg5HOLEAiZ3spYCSDcqwCAuGp7Y3JG5458N8E3dsyvOP/4Tb09Mxrc1jCR+m2w
Zj4lJ212fMsiMlyluE3Em7NNgbQp9jwloJM7BwKBgQDloj9Gw7c+OKso6daAyxMt
q6nkrImopUoMv00fiaj/EotzZFX+4vjr21gIlArwxOnk8IoLwvw8CYl04zJAPG/l
s5CNOVdIlkej9Q4qqotogopzuGm6gu2wMoguLh/Jbt8o6FlvUbNzQ5bdpdYymAQM
EMjp+PIXNa/EEhiGdDx3swKBgH9wC/Xm809Nujt/ltypcivK0bku86D8AB41Ezag
QMbnjExn9QdoIAoi/ortqyDf/cmacp+oqqEHipCwph6sTsX0OabAcXbL3KoLCR3
FhP/bgaU3kvKkkUvRn6PT6TF7Rff4KPcz4DsbQYUszYoh2srlbwRSy8r/4OCStmK
z2AvAoGBAPN3X5mLznjbMqYgs+9cyGyDioRzGYmyO/xcnbAkSQ4OFYPDG7XMLuzV
xv1eQBX38lRvyJsiSmpjpBM6vnfJgpGRWDq487pd56gqNunbSKxdaIJmjrVRqvTH
ibi9RD9Fyyjjq4D3db6oGk00A8ki5onfD+kwbagwMw2SydrkfAYT
----END RSA PRIVATE KEY----[root@vagrant-centos65 test-git]# ■

at

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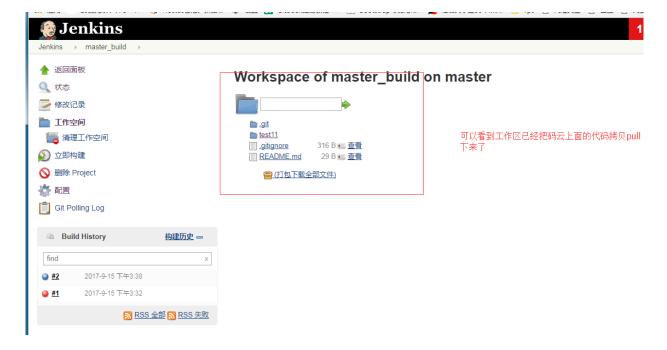












公钥和私钥分配:

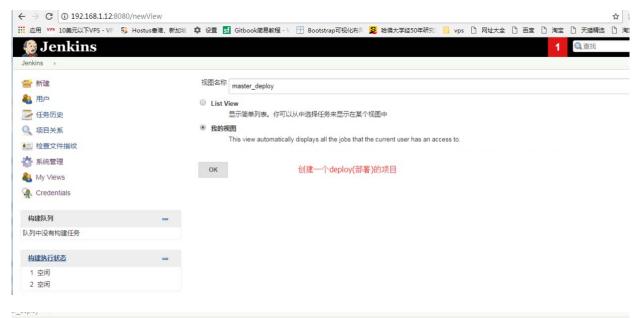
[root@vagrant-centos65 ~]# ssh-keygen -t rsa -C "xxxx@qq.com" cat ~/.ssh/id_rsa.pub 发送给码云 cat ~/.ssh/id_rsa 写入到jenkins

九、创建内网部署任务

注意:

BUILD_ID=DONTKILLME: 在jenkins里面在后台运行的程序都会被jenkins自动杀死所以需要加上BUILDID这个参数。加了这个参数你的程序就不会被杀。

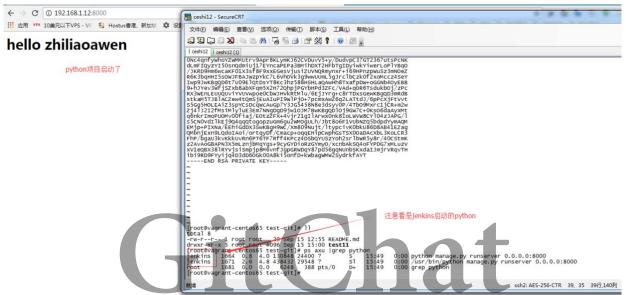












十、创建外网部署任务









1. 安装django

远程主机要做的事情

- 2. 创建一个目录把代码版本库拉取到本地
- 3. 写脚本来运行你代码 脚本内容

xxx.sh:

nohup python manage.py runserver 0.0.0.0:8000 > /dev/null 2>&1
&



远端服务部署成功

