目录

DevOps_6.1_GA安装手册

目的

普元DevOps平台基于Ansible PlayBook自动化脚本实现了自动化安装，本文提供安装过程指导，为需要安装使用DevOps平台的用户提供安装过程指引，方便快速搭建DevOps平台。

范围

- 文档范围
  适用普元DevOps_6.1GA管理门户及集成的第三方工具的部署。
- 人员范围
  文档工程师：编写相关技术文档时使用。
  部署工程师：普元DevOps平台部署时使用。

技术要求

- 熟悉Linux操作
- 熟悉Ansible工具

参考资料

-

02_软硬件配置

普元DevOps平台分为2大部分，包括DevOps及其集成的第三方工具，本文档采取使用ansible自动化运维工具来实现DevOps平台一键安装。此DevOps平台搭建在CentOS7（CentOS Linux release 7.2.1511）最小化安装的系统上。

2.1_机器资源

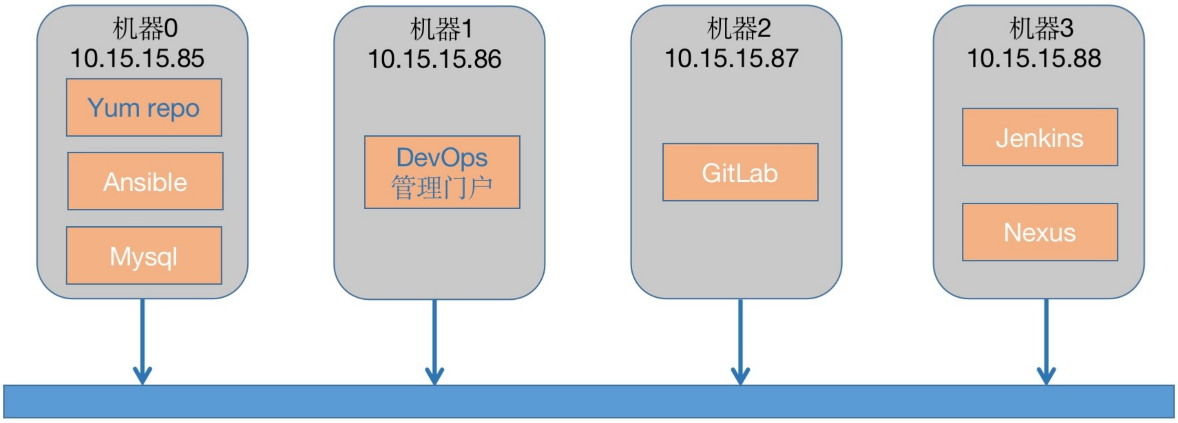
所有环境需要安装CentOS Linux release 7.2.1511操作系统。（请使用最小安装方式安装，避免存在已有安装包与平台安装包冲突的情况）

-

机器	最低配置	建议配置	安装软件
机器0	2c4g100g	4c8g100g	Ansible+Yum（用于部署DevOps平台和初始化云主机）,MySQL 5.7.23
机器1	4c8g100g	8c16g200g	DevOps 6.1管理门户
机器2	4c8g100g	8c16g200g	Gitlab 12.3.5
机器3	4c8g100g	8c16g500g	Jenkins 2.249.2(构建+部署)，Nexus 3.16.0-01

2.2_拓扑结构图

本文档示例采用五台虚拟机搭建DevOps平台及其集成的第三方工具。具体拓扑如下：



2.3_平台安装包

DevOps平台提供了安装介质：DevOps_6.1_GA_Installer.tar.gz，同时也提供文件的sha256的签名文件，用于检查文件的完整性。 同时平台的部分功能依赖第三方工具（jenkins，nexus等），可从公共GitHub仓库或各软件官网下载：Extension_Installer.tar.gz00 ~ Extension_Installer.tar.gz32。

从6.1版本开始，DevOps项目管理相关功能不再依赖JIRA，也不再提供JIRA自动化安装支持。

因SonarQube代码泄露零日漏洞事件，后续不再提供新版本SonarQube自动化安装支持，但DevOps任然支持SonarQube代码扫描及相关功能，同时DevOps6.1.0.3版本已经支持SonarQube最新版本（9.2，该版本已修复代码泄露零日漏洞），如需使用，可自行下载安装。

- 下载必要扩展包
-

```
#!/bin/sh
mkdir md5sum
touch error.log
for i in `seq 0 32`
do
num=`printf "%02d" $i`
wget 地址
$num
wget -P 地址
if [[ `md5sum Extension_Installer.tar.gz$num` != `cat md5sum/Extension_Installer.tar.gz$num.md5` ]];then
echo "Error: file Extension_Installer.tar.gz$num md5 different whith md5sum/Extension_Installer.tar.gz$num.md5!" >> error.log
fi
done
cat error.log
```

脚本会自动下载签名文件进行文件完整性校验，并将校验结果输出到控制台!

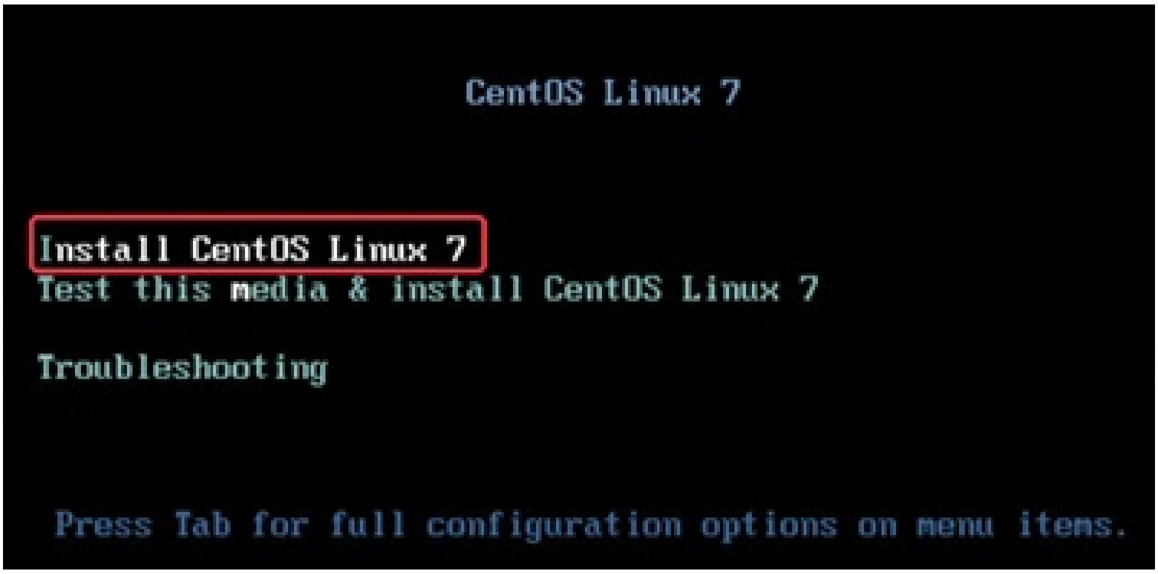
若GitHub访问受限，请联系售后cservice@primeton.com处理。

03_物理服务器操作系统安装及配置

3.1_安装CentOS操作系统

操作系统版本要求为，CentOS Linux

通过光盘或挂载iso的方式启动安装。

- 

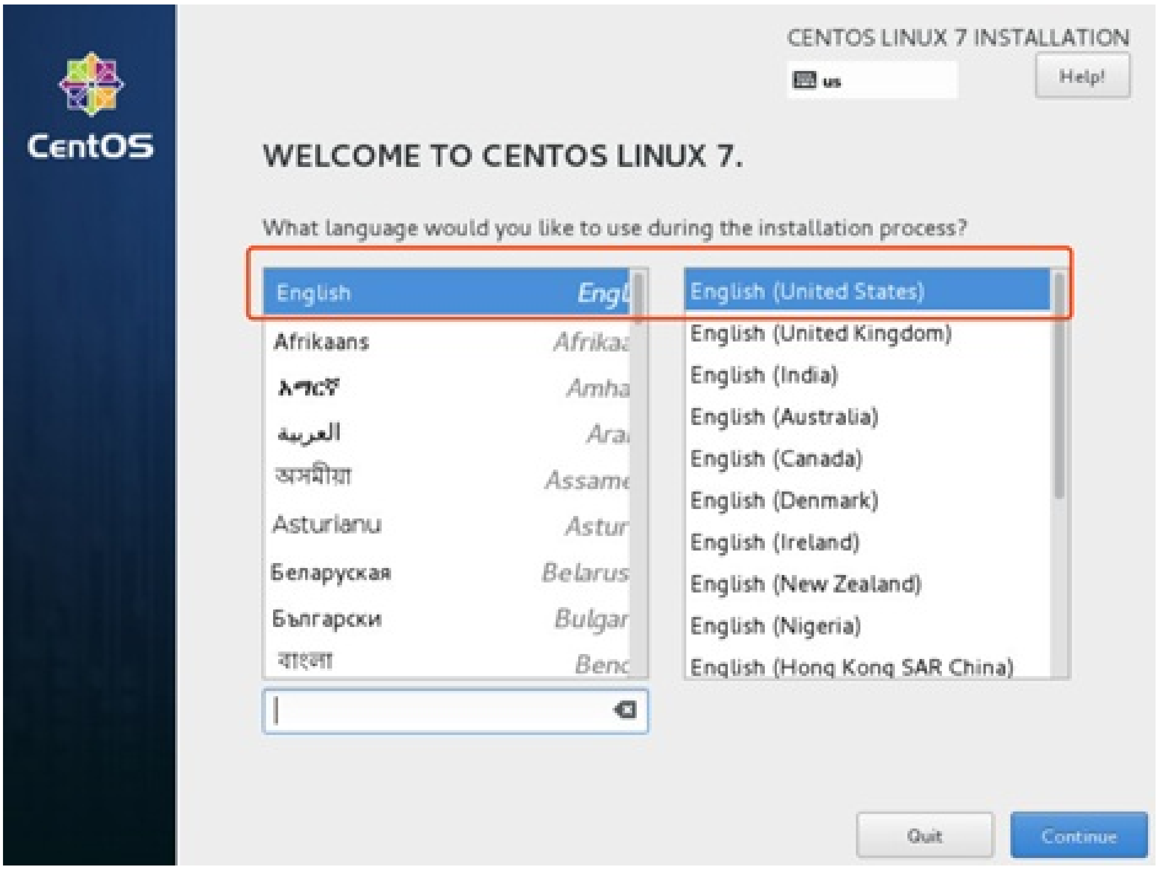
```
CentOS Linux 7

Install CentOS Linux 7
Test this media & install CentOS Linux 7

Troubleshooting

Press Tab for full configuration options on menu items.
```

- 配置操作系统语言。
  语言选择“English”。



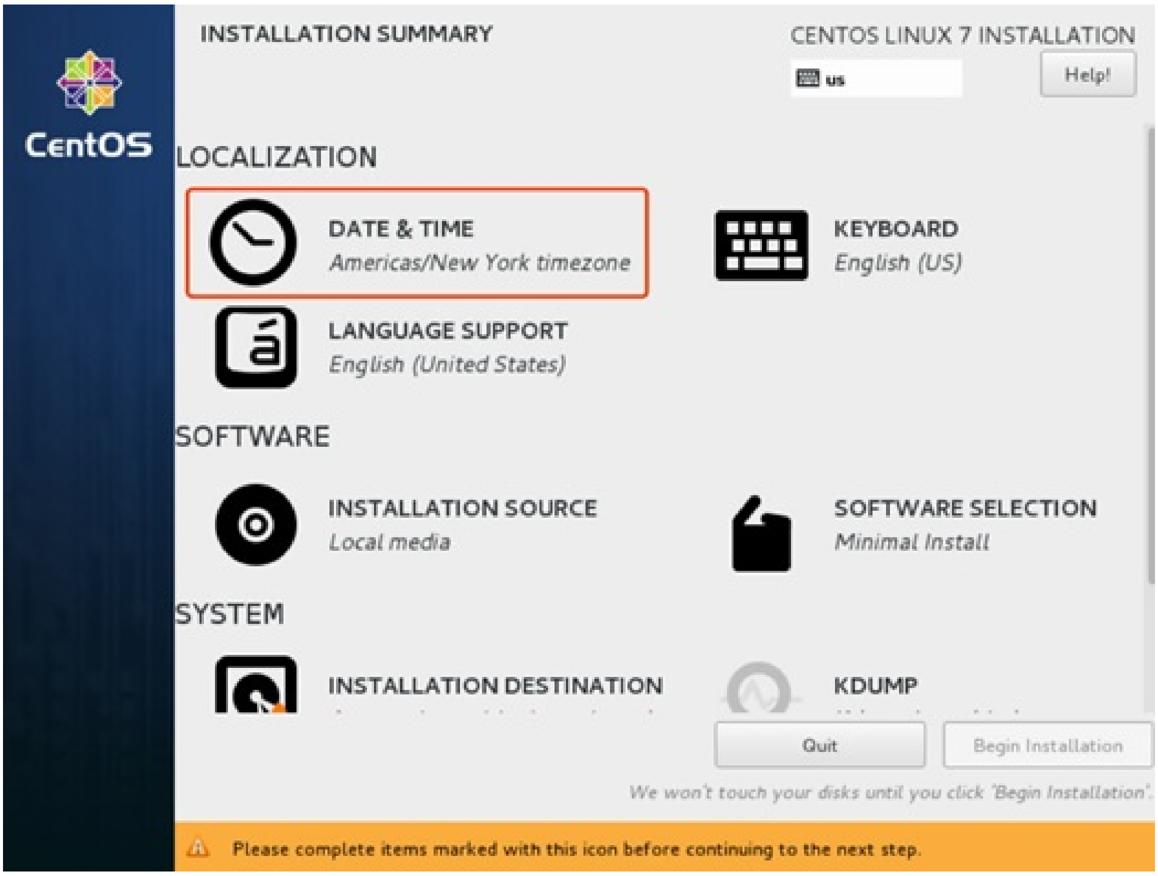
CENTOS LINUX 7 INSTALLATION

WELCOME TO CENTOS LINUX 7.

What language would you like to use during the installation process?

English (United States)

- 配置操作系统时区。
  选择“DATE & TIME”



INSTALLATION SUMMARY

CENTOS LINUX 7 INSTALLATION

us

Help!

LOCALIZATION

DATE & TIME
Americas/New York timezone

KEYBOARD
English (US)

LANGUAGE SUPPORT
English (United States)

SOFTWARE

INSTALLATION SOURCE
Local media

SOFTWARE SELECTION
Minimal Install

SYSTEM

INSTALLATION DESTINATION

KDUMP

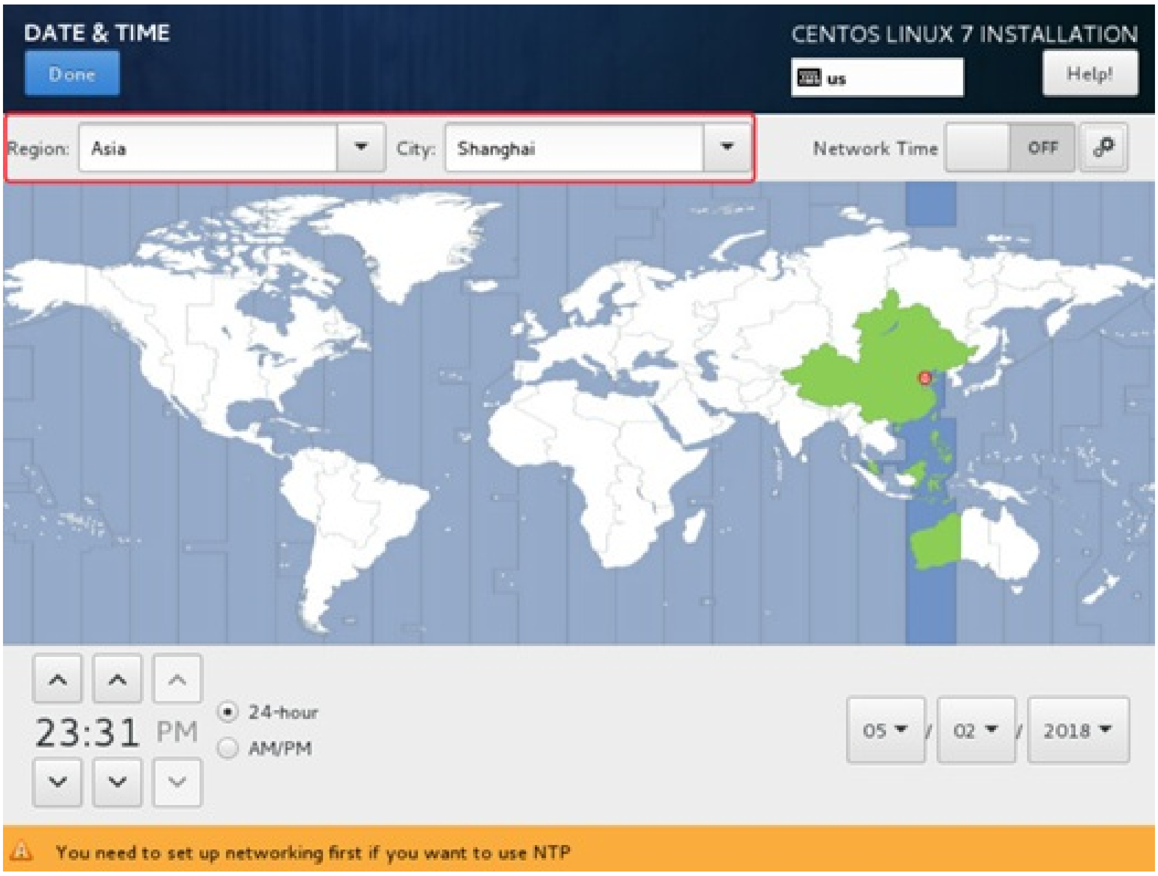
Quit

Begin Installation

We won't touch your disks until you click 'Begin Installation'.

Please complete items marked with this icon before continuing to the next step.

Region选择“Asia”，City选择“Shanghai”



DATE & TIME

Done

CENTOS LINUX 7 INSTALLATION

us

Help!

Region: Asia

City: Shanghai

Network Time OFF

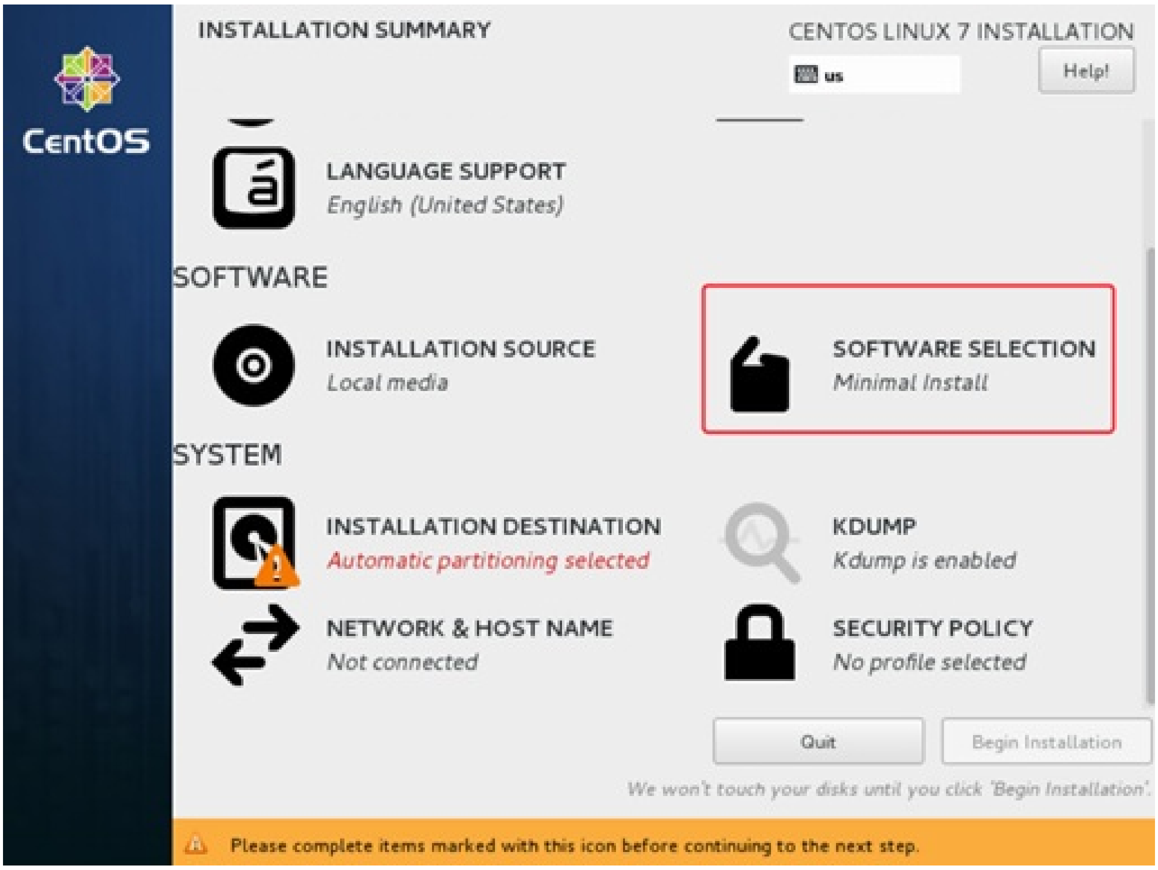
23:31 PM

● 24-hour
○ AM/PM

05 / 02 / 2018

You need to set up networking first if you want to use NTP

- 配置操作系统软件包。
  选择“SOFTWARE SELECTION”，请选择“Minimal install”，也就是最小化安装。



INSTALLATION SUMMARY

CENTOS LINUX 7 INSTALLATION

LANGUAGE SUPPORT
English (United States)

SOFTWARE

INSTALLATION SOURCE
Local media

SOFTWARE SELECTION
Minimal Install

SYSTEM

INSTALLATION DESTINATION
Automatic partitioning selected

KDUMP
Kdump is enabled

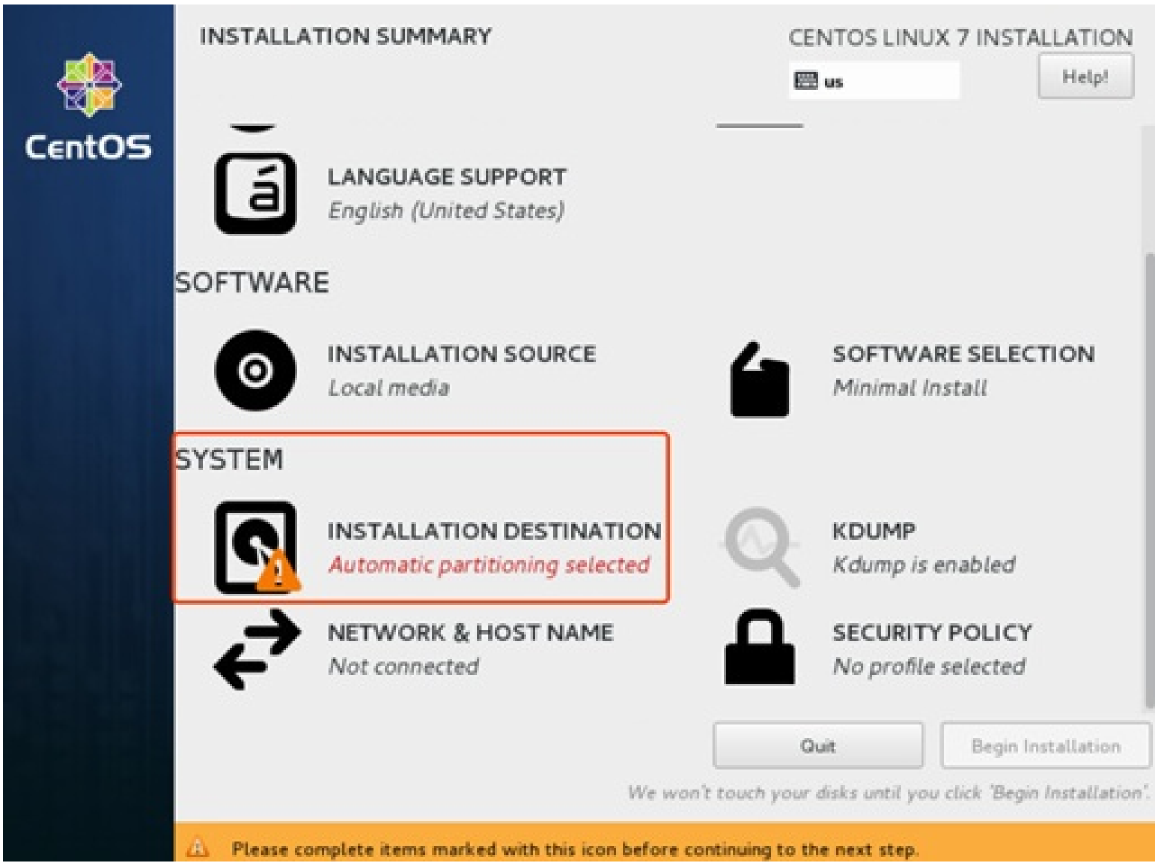
NETWORK & HOST NAME
Not connected

SECURITY POLICY
No profile selected

We won't touch your disks until you click 'Begin Installation'.

Please complete items marked with this icon before continuing to the next step.

- 配置操作系统分区。
  选择“INSTALLATION DESTINATION”



LANGUAGE SUPPORT
English (United States)

INSTALLATION SOURCE
Local media

SOFTWARE SELECTION
Minimal Install

INSTALLATION DESTINATION
Automatic partitioning selected

KDUMP
Kdump is enabled

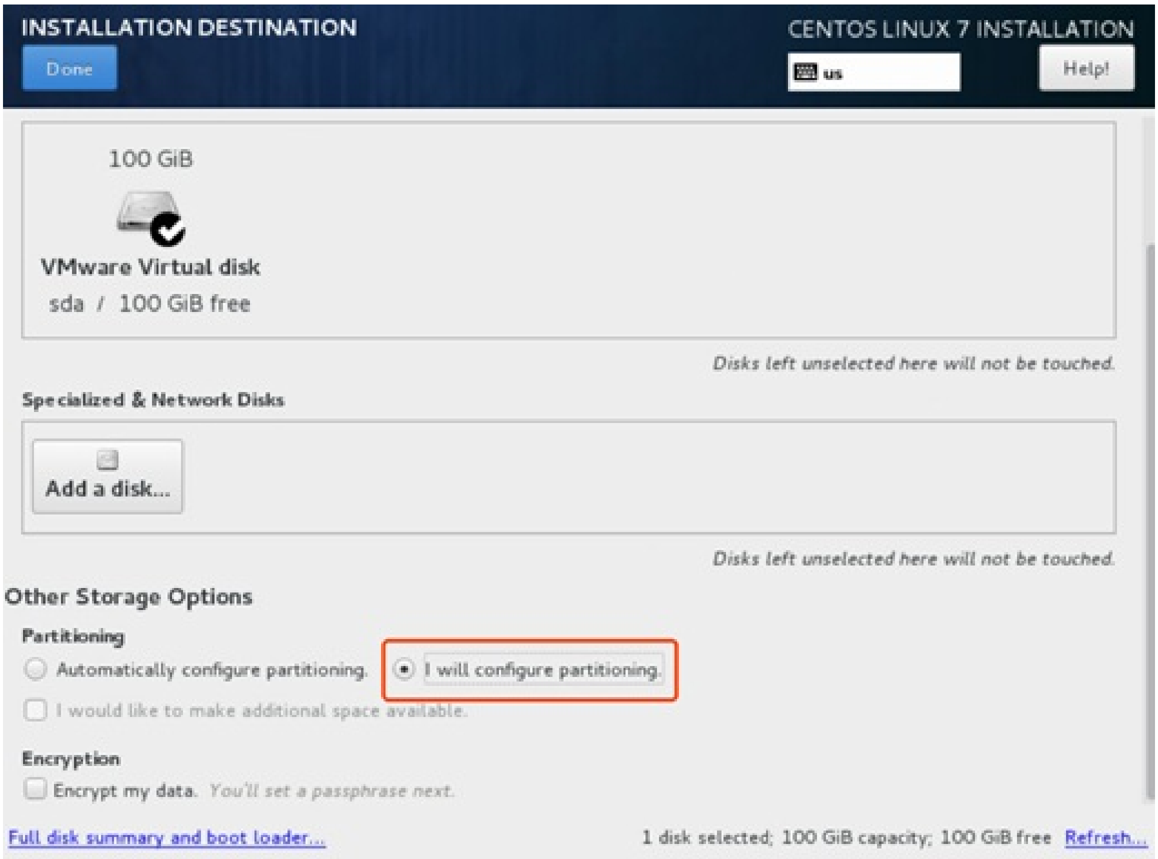
NETWORK & HOST NAME
Not connected

SECURITY POLICY
No profile selected

We won't touch your disks until you click 'Begin Installation'.

⚠ Please complete items marked with this icon before continuing to the next step.

选择“I will configure partitioning”进行手工分区，点击“Done”



100 GiB

VMware Virtual disk

sda / 100 GiB free

Disks left unselected here will not be touched.

Specialized & Network Disks

Add a disk...

Disks left unselected here will not be touched.

Other Storage Options

Partitioning

○ Automatically configure partitioning. ● I will configure partitioning.

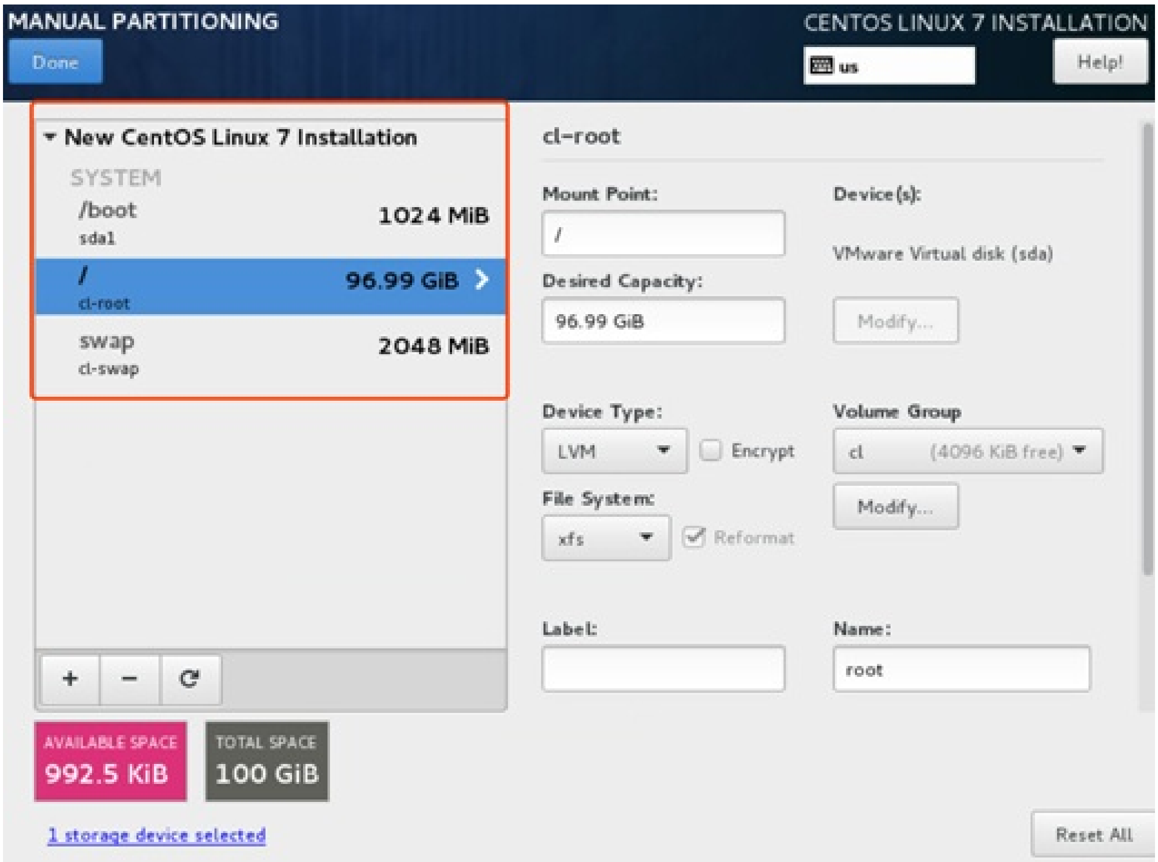
□ I would like to make additional space available.

Encryption

□ Encrypt my data. *You'll set a passphrase next.*

Full disk summary and boot loader... 1 disk selected; 100 GiB capacity; 100 GiB free Refresh...

进行自定义分区，并点击“Done”



New CentOS Linux 7 Installation

SYSTEM

/boot sda1	1024 MiB
/ cl-root	96.99 GiB
swap cl-swap	2048 MiB

cl-root

Mount Point: /

Device(s): VMware Virtual disk (sda)

Desired Capacity: 96.99 GiB

Modify...

Device Type: LVM □ Encrypt

Volume Group: cl (4096 KiB free)

Modify...

File System: xfs ☑ Reformat

Label:

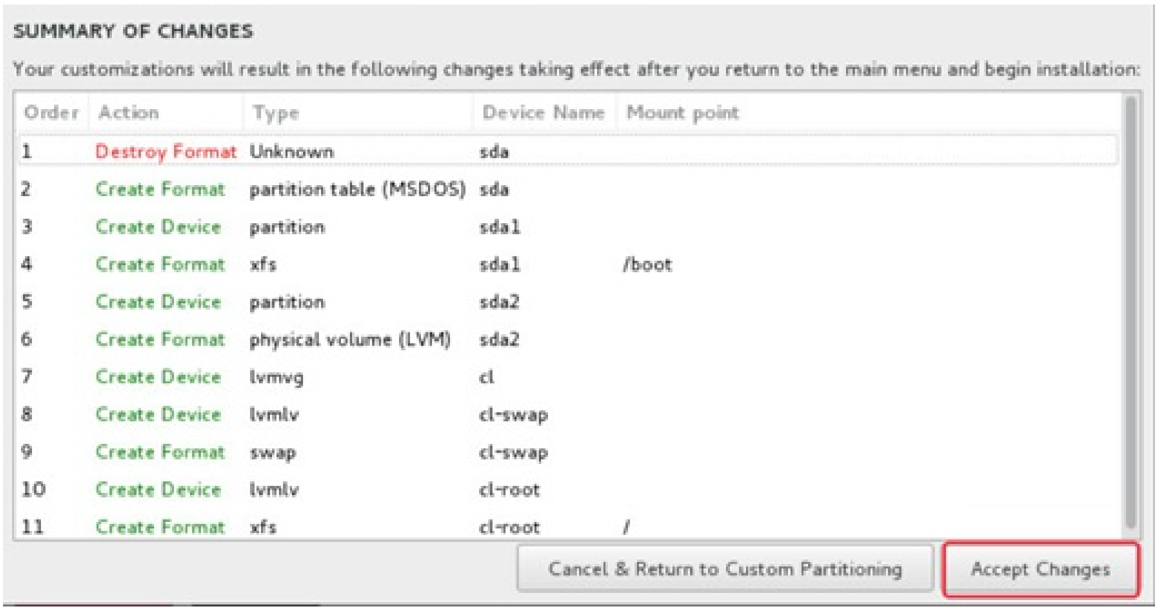
Name: root

AVAILABLE SPACE 992.5 KiB

TOTAL SPACE 100 GiB

1 storage device selected

接受分区修改，点击“Accept Changes”

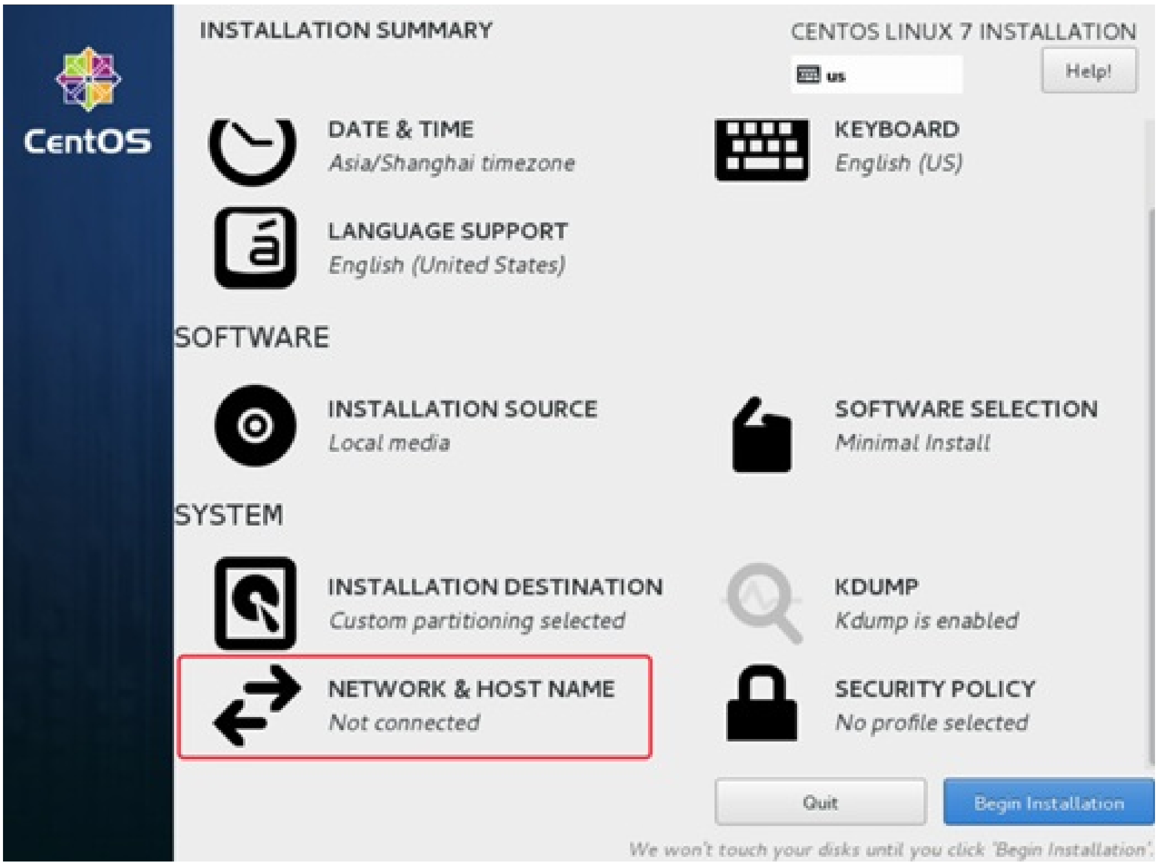


SUMMARY OF CHANGES

Your customizations will result in the following changes taking effect after you return to the main menu and begin installation:

Order	Action	Type	Device Name	Mount point
1	Destroy Format	Unknown	sda	
2	Create Format	partition table (MSDOS)	sda	
3	Create Device	partition	sda1	
4	Create Format	xfs	sda1	/boot
5	Create Device	partition	sda2	
6	Create Format	physical volume (LVM)	sda2	
7	Create Device	lvmvg	cl	
8	Create Device	lvmlv	cl-swap	
9	Create Format	swap	cl-swap	
10	Create Device	lvmlv	cl-root	
11	Create Format	xfs	cl-root	/

- 配置操作系统网络。
  选择“NETWORK & HOST NAME”



DATE & TIME
Asia/Shanghai timezone

KEYBOARD
English (US)

LANGUAGE SUPPORT
English (United States)

SOFTWARE

INSTALLATION SOURCE
Local media

SOFTWARE SELECTION
Minimal Install

SYSTEM

INSTALLATION DESTINATION
Custom partitioning selected

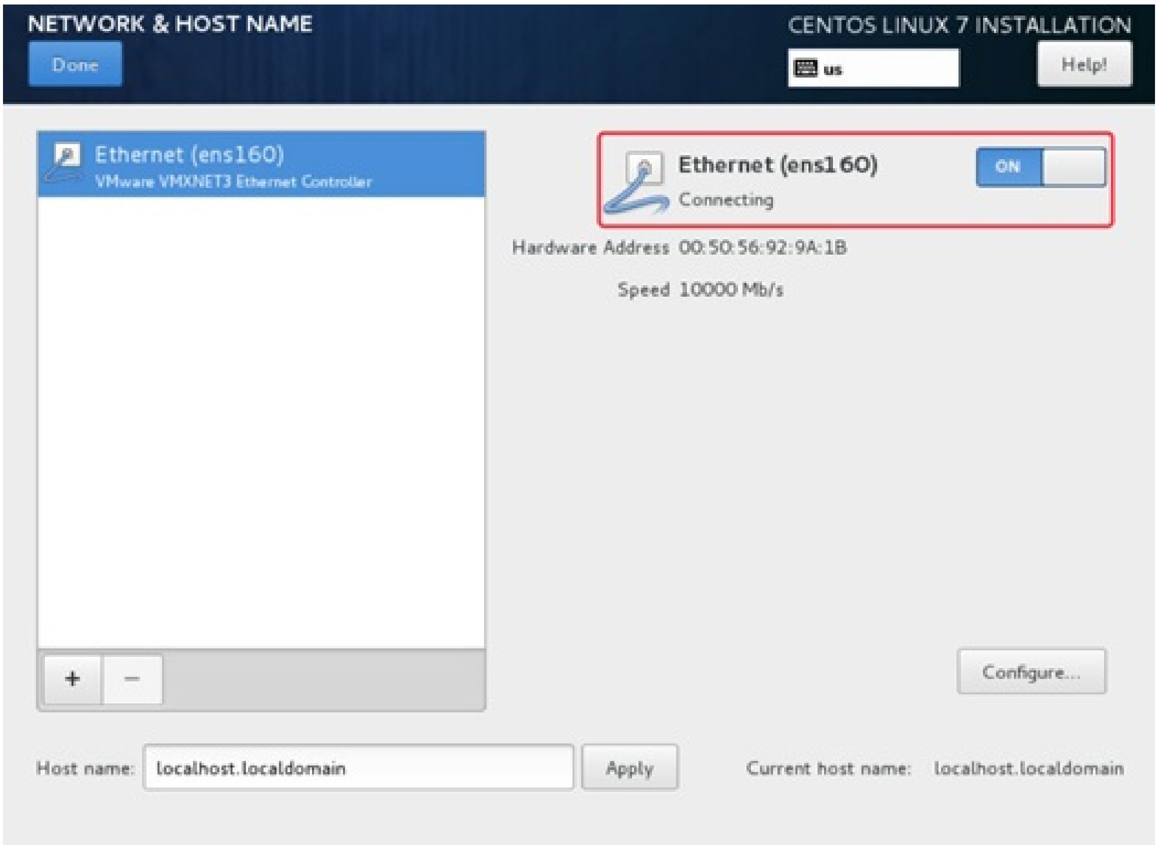
KDUMP
Kdump is enabled

NETWORK & HOST NAME
Not connected

SECURITY POLICY
No profile selected

We won't touch your disks until you click 'Begin Installation'.

配置网卡开机自启动，点击开关显示为“ON”



NETWORK & HOST NAME

CENTOS LINUX 7 INSTALLATION

Ethernet (ens160)
VMware VMXNET3 Ethernet Controller

Ethernet (ens160)
Connecting

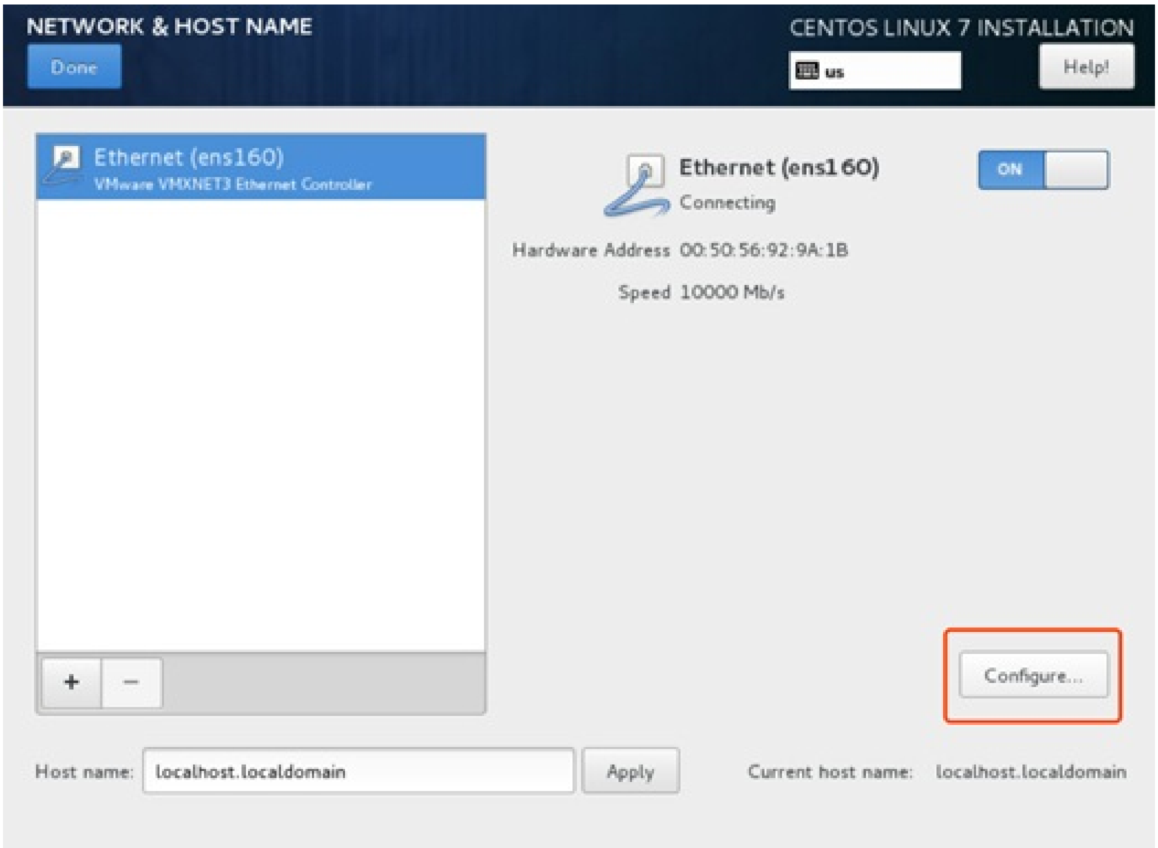
Hardware Address 00:50:56:92:9A:1B

Speed 10000 Mb/s

Host name: localhost.localdomain

Current host name: localhost.localdomain

网卡配置，点击“Configure…”



NETWORK & HOST NAME

CENTOS LINUX 7 INSTALLATION

Ethernet (ens160)
VMware VMXNET3 Ethernet Controller

Ethernet (ens160)
Connecting

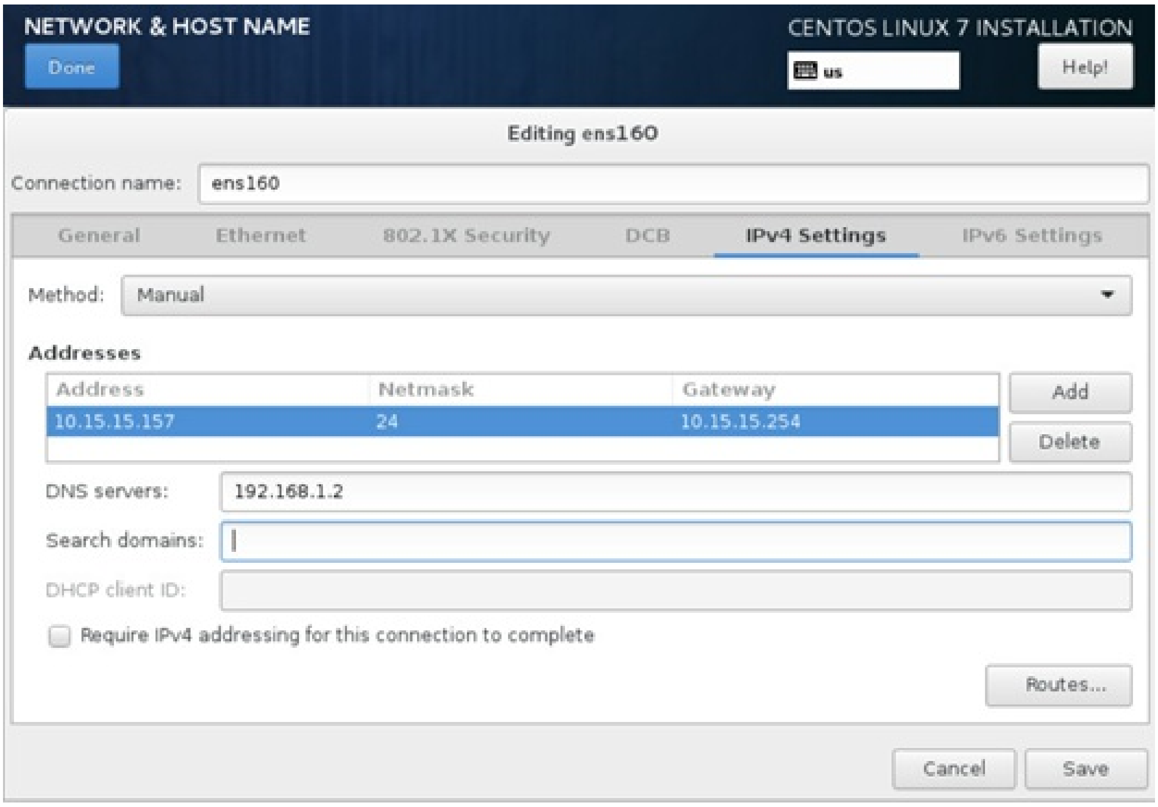
Hardware Address 00:50:56:92:9A:1B

Speed 10000 Mb/s

Host name: localhost.localdomain

Current host name: localhost.localdomain

配置网卡信息，点击“IPv4 Settings”标签。Method选择“Manual”。点击“Add”添加地址，请根据实际情况填写IP地址（本示例中为10.15.15.85）、子网掩码、网关（本示例中为10.15.15.254）、DNS服务器地址等信息。本图仅为示例。最后，点击“save”à 再点击“Done”。完成网卡信息配置。



Editing ens160

Connection name: ens160

Method: Manual

Addresses

Address	Netmask	Gateway
10.15.15.157	24	10.15.15.254

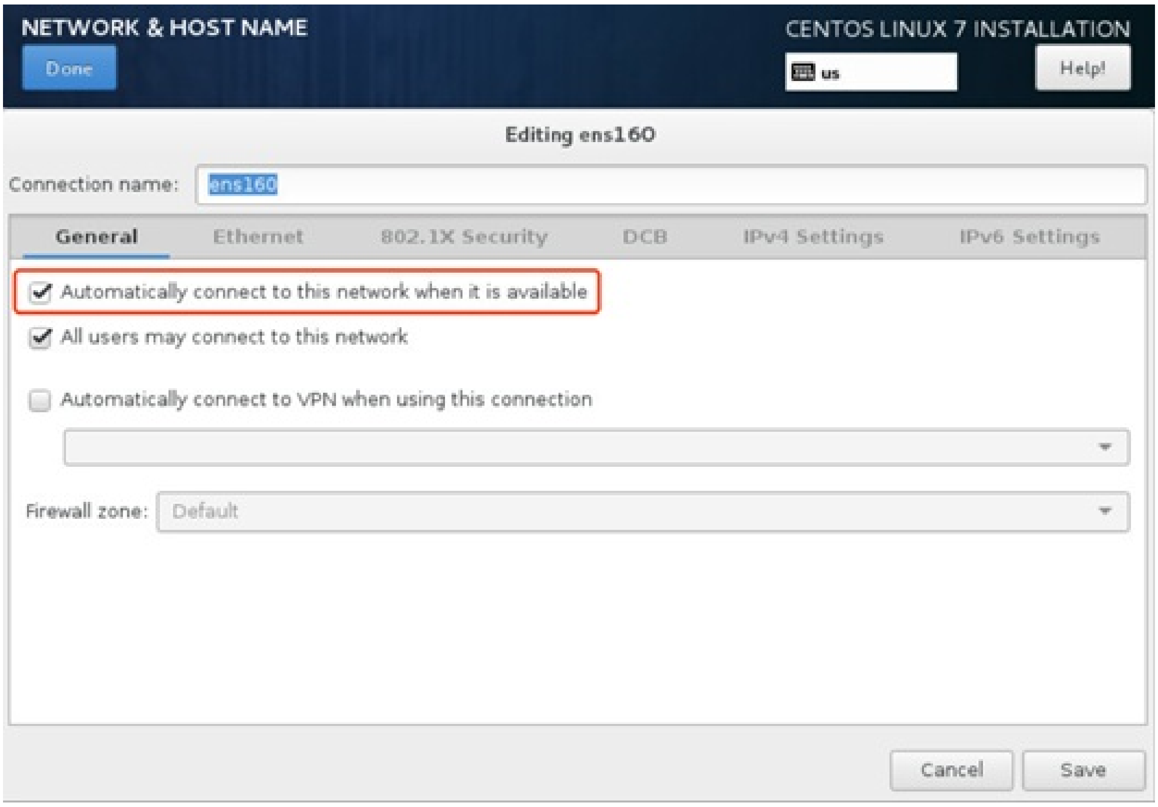
DNS servers: 192.168.1.2

Search domains:

DHCP client ID:

□ Require IPv4 addressing for this connection to complete

点击“General”标签，配置网卡自动连接



Editing ens160

Connection name: ens160

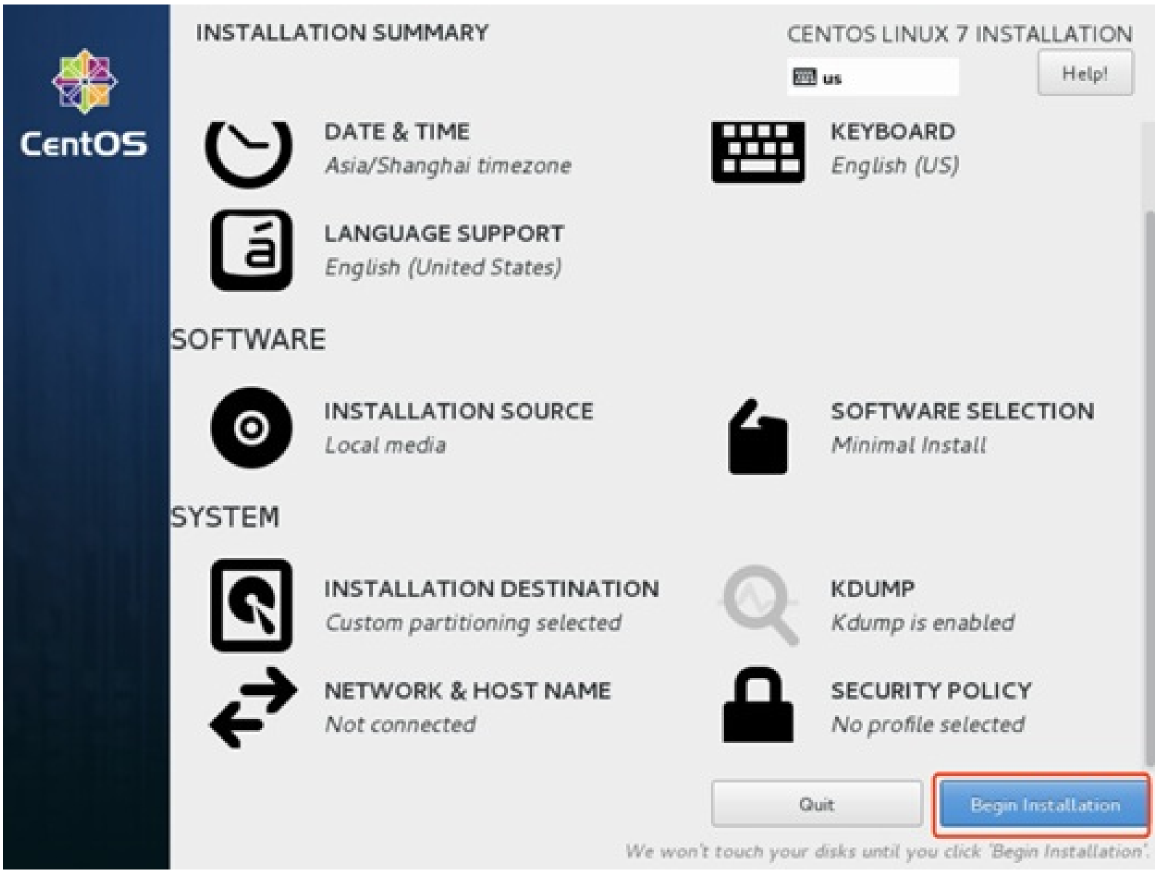
☑ Automatically connect to this network when it is available

☑ All users may connect to this network

□ Automatically connect to VPN when using this connection

Firewall zone: Default

- 执行安装。
  点击“Begin Installation”，开始安装操作系统。



INSTALLATION SUMMARY

CENTOS LINUX 7 INSTALLATION

DATE & TIME
Asia/Shanghai timezone

KEYBOARD
English (US)

LANGUAGE SUPPORT
English (United States)

SOFTWARE

INSTALLATION SOURCE
Local media

SOFTWARE SELECTION
Minimal Install

SYSTEM

INSTALLATION DESTINATION
Custom partitioning selected

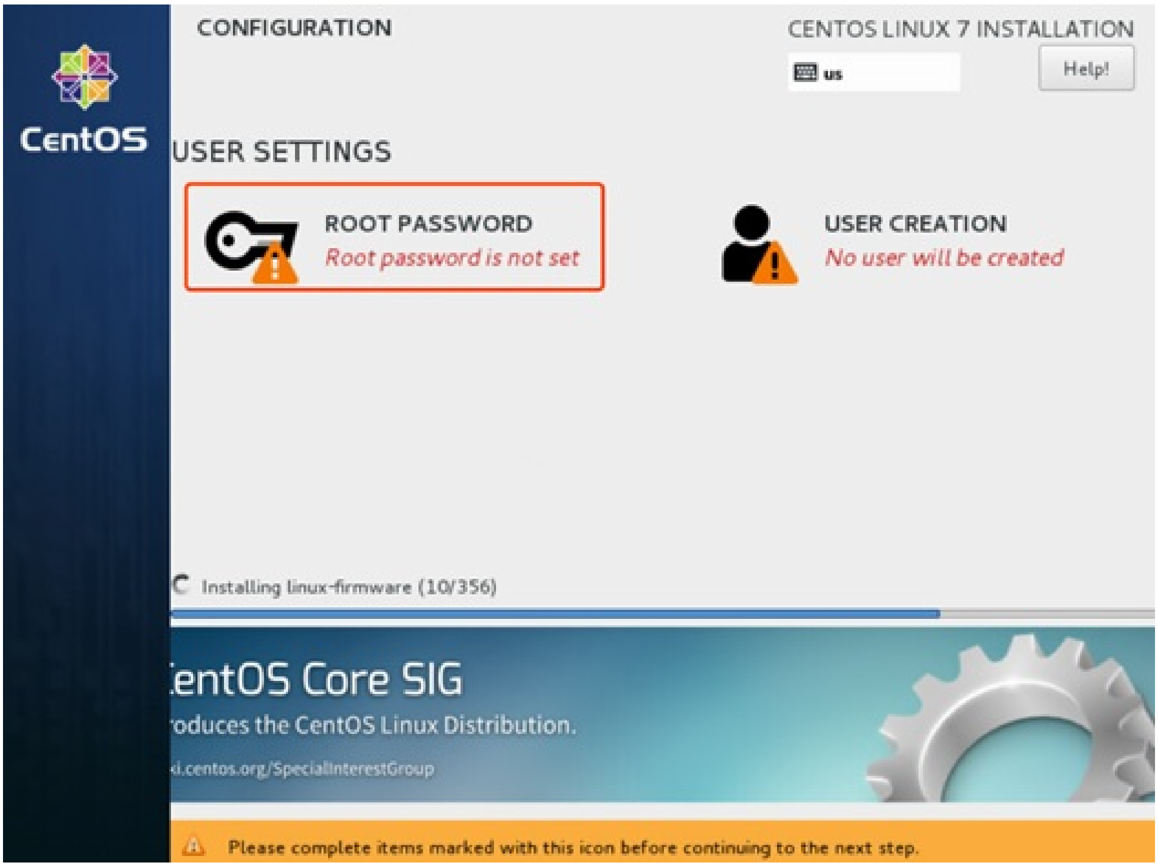
KDUMP
Kdump is enabled

NETWORK & HOST NAME
Not connected

SECURITY POLICY
No profile selected

We won't touch your disks until you click 'Begin Installation'.

- 配置管理员密码。



CONFIGURATION

CENTOS LINUX 7 INSTALLATION

USER SETTINGS

ROOT PASSWORD
Root password is not set

USER CREATION
No user will be created

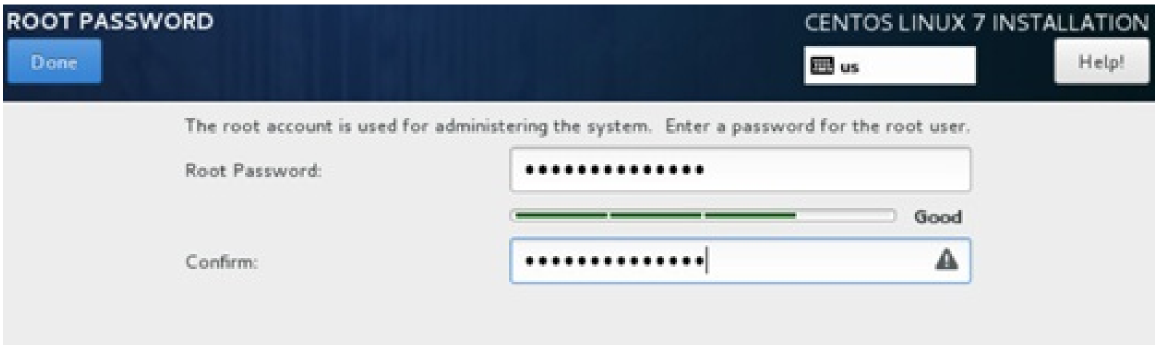
Installing linux-firmware (10/356)

Please complete items marked with this icon before continuing to the next step.

CentOS
us
Help!
entOS Core SIG
oduces the CentOS Linux Distribution.
i.centos.org/SpecialInterestGroup

输入ROOT PASSWORD，为root用户设置一个稍复杂的密码（注意不要使用简单密码）。注意不

需要创建userapp用户，安装过程中会自动创建。



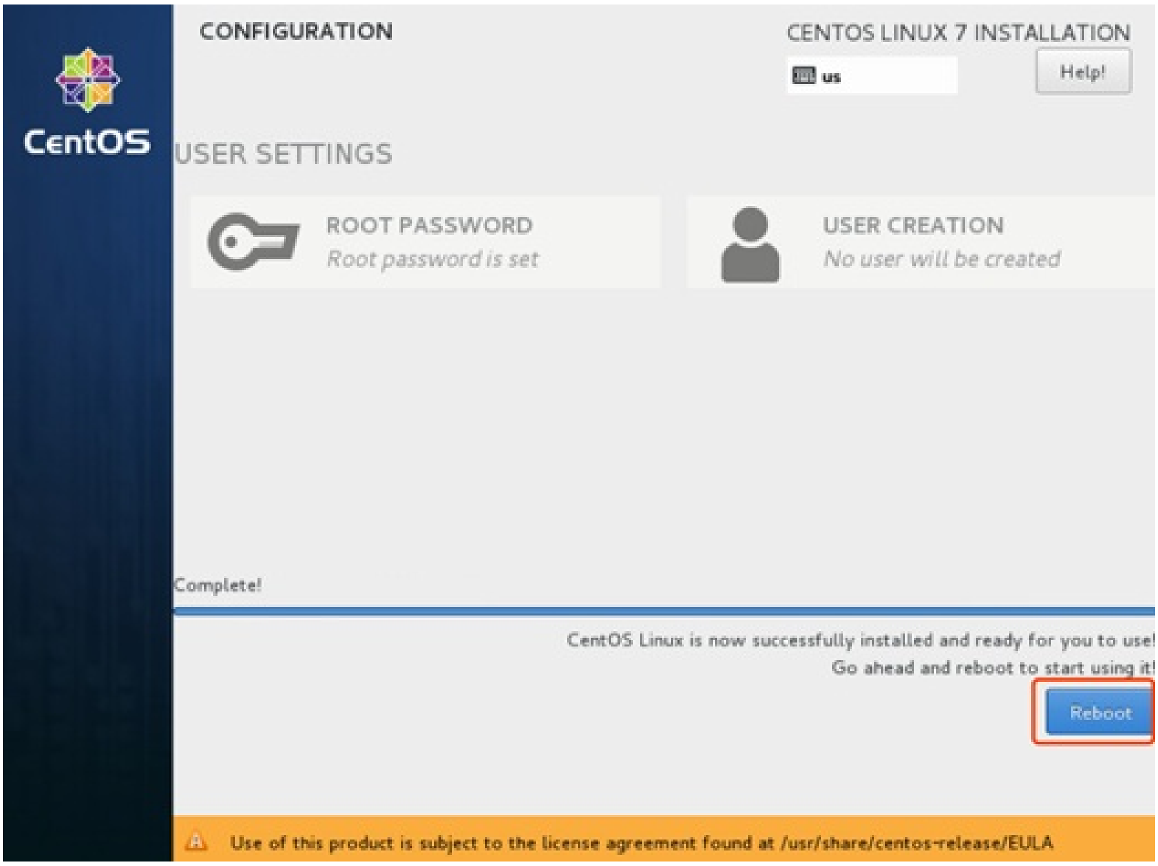
The root account is used for administering the system. Enter a password for the root user.

Root Password: ••••••••••••••

Good

Confirm: ••••••••••••••

接下来就是耐心的等待系统的安装完成。安装完成后点击“Reboot”重新启动操作系统。



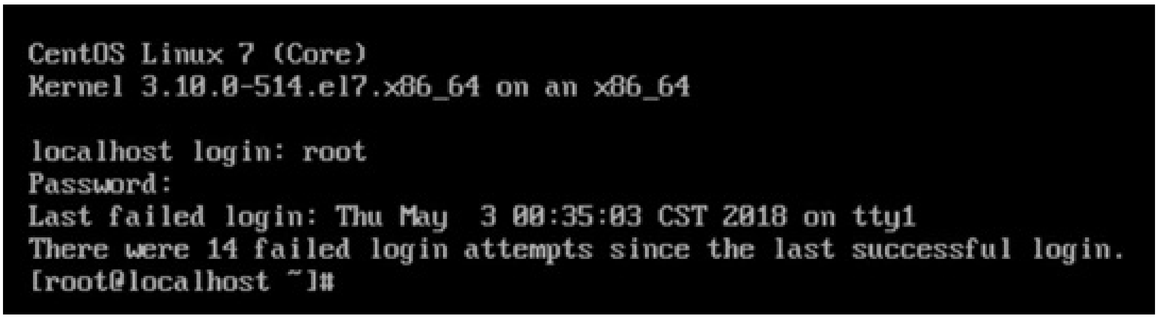
Complete!

CentOS Linux is now successfully installed and ready for you to use!
Go ahead and reboot to start using it!

Use of this product is subject to the license agreement found at /usr/share/centos-release/EULA

- 验证系统并登录。

  输入之前配置的ROOT PASSWOARD，验证成功可以看到如下成功login信息。



```
CentOS Linux 7 (Core)
Kernel 3.10.0-514.el7.x86_64 on an x86_64

localhost login: root
Password:
Last failed login: Thu May  3 00:35:03 CST 2018 on tty1
There were 14 failed login attempts since the last successful login.
[root@localhost ~]#
```

3.2_网络信息配置

修改网卡

- 配置网卡：

机器资源如果没有配置过网卡，请按下面步骤进行设置。本文以机器10.15.15.85举例，请根据实际情况进行修改。

```
vi /etc/sysconfig/network-scripts/ifcfg-eno16777984
```

建议将NM_CONTROLLED设置为no

```
TYPE=Ethernet
BOOTPROTO=none
DEFROUTE=yes
DEVICE=eno16777984
ONBOOT=yes
IPADDR=10.15.15.85
PREFIX=24
GATEWAY=10.15.15.254
NM_CONTROLLED=no
```

- 验证

配置完成后，使用ifconfig查看网络和ping测试网络是否联通。

04_配置Ansible部署节点及Yum内网源

4.1_搭建内网源

可选择一台机器（10.15.15.85）作为执行ansible任务的节点，并搭建内网的yum源：

解压安装包：

解压第三方工具压缩包Extension_Installer.tar.gz00 ~ *（下载过程参考2.3），并拷贝到/opt目录，采用以下命令：

```
cat Extension_Installer.tar.gz* | tar -xvzf -
mv mirrors /opt/
```

校验DevOps_6.1_GA_Installer.tar.gz包完整性，查看如下两条命令返回值是否一致，若返回值一样则校验通过：

```
cat sha256sum/DevOps_6.1_GA_Installer.tar.gz.sha256sum
sha256sum DevOps_6.1_GA_Installer.tar.gz
```

解压压缩包DevOps_6.1_GA_Installer.tar.gz时，采用以下命令解压：

```
tar -zvxf DevOps_6.1_GA_Installer.tar.gz -C /opt
```

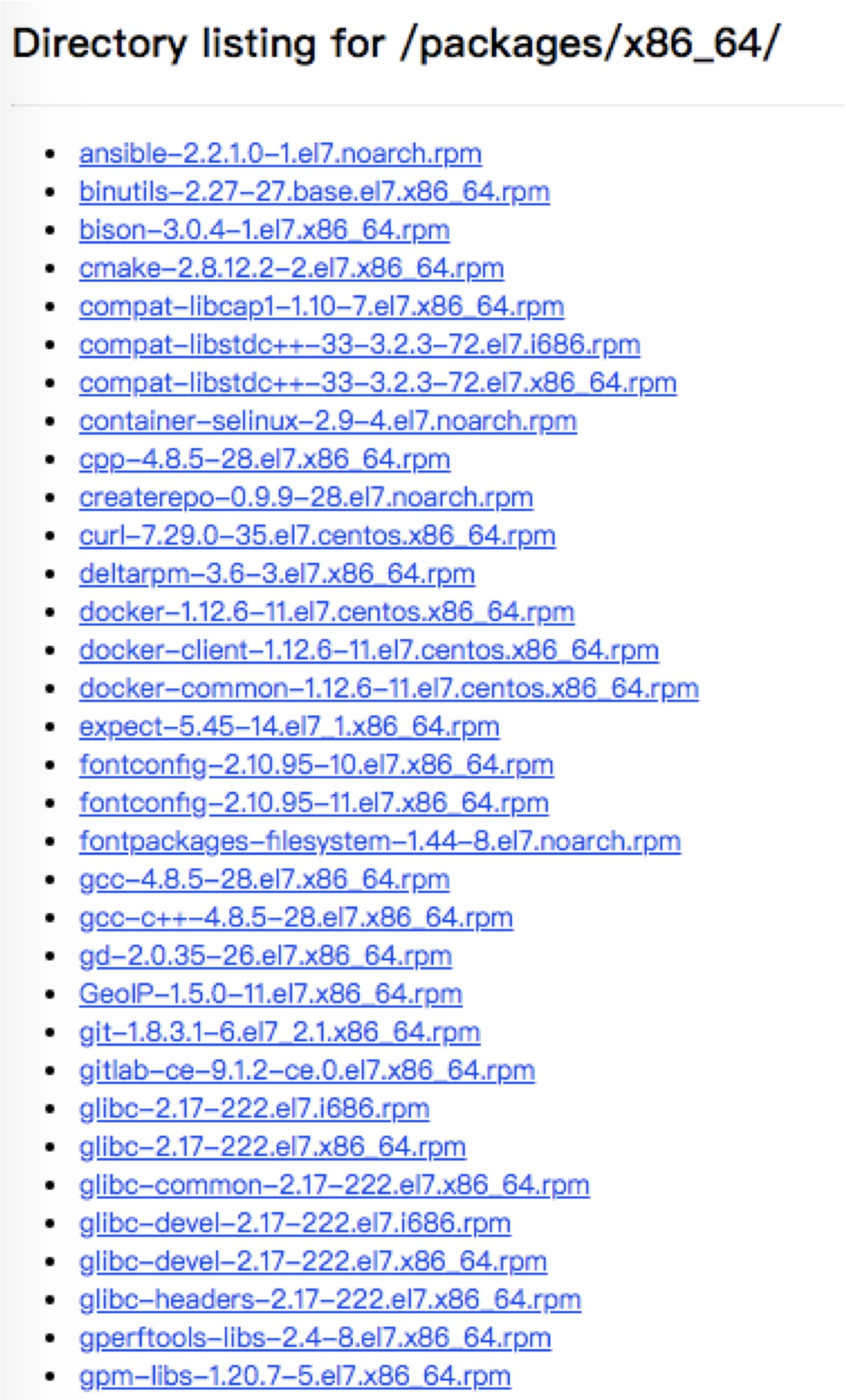
启动内网源

通过以下命令启动内网源，并注意在安装过程中保证内网源可正常访问（启动过程中的错误信息可以忽略，控制台执行回车即可）。

```
/opt/mirrors/sbin/start-repo.sh
# 使用指定端口，默认为8000
/opt/mirrors/sbin/start-repo.sh 8000
```

访问验证yum源

输出类似如下内容，说明yum源配置成功：



Directory listing for /packages/x86_64/

- ansible-2.2.1.0-1.el7.noarch.rpm
- binutils-2.27-27.base.el7.x86_64.rpm
- bison-3.0.4-1.el7.x86_64.rpm
- cmake-2.8.12.2-2.el7.x86_64.rpm
- compat-libcap1-1.10-7.el7.x86_64.rpm
- compat-libstdc++-33-3.2.3-72.el7.i686.rpm
- compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
- container-selinux-2.9-4.el7.noarch.rpm
- cpp-4.8.5-28.el7.x86_64.rpm
- createrepo-0.9.9-28.el7.noarch.rpm
- curl-7.29.0-35.el7.centos.x86_64.rpm
- deltarpm-3.6-3.el7.x86_64.rpm
- docker-1.12.6-11.el7.centos.x86_64.rpm
- docker-client-1.12.6-11.el7.centos.x86_64.rpm
- docker-common-1.12.6-11.el7.centos.x86_64.rpm
- expect-5.45-14.el7_1.x86_64.rpm
- fontconfig-2.10.95-10.el7.x86_64.rpm
- fontconfig-2.10.95-11.el7.x86_64.rpm
- fontpackages-filesystem-1.44-8.el7.noarch.rpm
- gcc-4.8.5-28.el7.x86_64.rpm
- gcc-c++-4.8.5-28.el7.x86_64.rpm
- gd-2.0.35-26.el7.x86_64.rpm
- GeoIP-1.5.0-11.el7.x86_64.rpm
- git-1.8.3.1-6.el7_2.1.x86_64.rpm
- gitlab-ce-9.1.2-ce.0.el7.x86_64.rpm
- glibc-2.17-222.el7.i686.rpm
- glibc-2.17-222.el7.x86_64.rpm
- glibc-common-2.17-222.el7.x86_64.rpm
- glibc-devel-2.17-222.el7.i686.rpm
- glibc-devel-2.17-222.el7.x86_64.rpm
- glibc-headers-2.17-222.el7.x86_64.rpm
- gperftools-libs-2.4-8.el7.x86_64.rpm
- gpm-libs-1.20.7-5.el7.x86_64.rpm

4.2_配置Ansible安装节点

配置本地yum源

- 首先备份原有的yum.repos.d目录

```
mv /etc/yum.repos.d /etc/yum.repos.bak
mkdir /etc/yum.repos.d
```

- 添加本地yum源配置文件

```
vi /etc/yum.repos.d/CentOS-Local.repo
```

```
[DevOps_Repository]name=DevOps_Repository
baseurl=http://x.x.x.85:8000/packages/x86_64
gpgcheck=0
enable=1
priority=2
```

- 安装配置ansible

```
yum install ansible
```

修改ansible配置

在安装ansible的机器上进行设置，在本示例中在部署拓扑图的10.15.15.85机器上进行配置。 注意：private_key_file配置路径为安装介质中keypair文件夹中的密钥文件。

```
vi /etc/ansible/ansible.cfg
```

```
[defaults]
host_key_checking = False
sudo_user      = root
remote_user = userapp
private_key_file = /opt/mirrors/keypair/userapp_access.pem
```

- 验证ansible安装与配置

修改/opt/mirrors/playbook/init-server.inventory文件中的ip及root用户名密码配置。该文件为初始化所有机器的配置文件，所有部署devops机器以及devops部署功能用到的机器都要添加到该配置文件并执行初始化操作。

```
vi /opt/mirrors/playbook/init-server.inventory
```

添加部署用主机信息

```
[server]
x.x.x.x ansible_ssh_user=root ansible_ssh_pass=****** ansible_ssh_port=22
x.x.x.x ansible_ssh_user=root ansible_ssh_pass=****** ansible_ssh_port=22
x.x.x.x ansible_ssh_user=root ansible_ssh_pass=****** ansible_ssh_port=22
x.x.x.x ansible_ssh_user=root ansible_ssh_pass=****** ansible_ssh_port=22
[server:vars]
user_dir=/opt/idc/apps/
repo_ip=x.x.x.x
repo_port=8000
```

```
ansible -i /opt/mirrors/playbook/init-server.inventory all -m ping
```

执行测试ping操作，返回如下信息则访问正常

```
x.x.x.x | SUCCESS =>
{    "changed": false,
"ping": "pong"
}
x.x.x.x | SUCCESS =>
{    "changed": false,
"ping": "pong"
}
x.x.x.x | SUCCESS =>
{    "changed": false,
"ping": "pong"
}
.......
```

4.3_Ansible执行初始化机器任务

执行初始化

```
cd /opt/mirrors/playbook/
ansible-playbook -i init-server.inventory init.yml
```

注意： SeLinux是个经过安全强化的Linux操作系统，其采用强制访问控制安全机制，在这种访问控制体系的限制下，进程只能访问那些在他的任务中所需要文件。这里用于搭建普元DevOps平台的服务器都需要关闭SELinux。 执行初始化之后SeLinux为Permissive状态，重启机器后变成disable状态。安装节点重启机器后需要重新启动yum源。

验证初始化机器

初始化步骤会在机器上添加部署devops平台的用户userapp及密钥等配置，初始化完成后使用默认的ssh配置（ansible.cfg中配置的用户及密钥）再进行验证。

```
vi /etc/ansible/hosts
```

添加主机信息

```
x.x.x.1
x.x.x.2
x.x.x.3
x.x.x.4
```

执行测试ping操作。

```
ansible all -m ping
```

返回如下信息则访问正常。

```
10.15.15.85 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
10.15.15.86 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
10.15.15.87 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
.......
```

05_Ansible执行部署任务

5.1_部署角色划分

DevOps部署角色划分

此配置不需要修改，可以根据角色对应的执行任务在playbook目录下role目录中找到对应的执行脚本。

```
cat /opt/mirrors/playbook/site.yml
```

下面是代码示例仅供参考，具体以解压文件内容为准。

```
---
- name: Install Mysql
hosts: mysql
remote_user: userapp
roles:
    - mysql
    - dbinit
tags:
    - mysql

- name: Install Jenkins
hosts: jenkins
remote_user: userapp
roles:
    - ansible
    - git
    - jenkins
    - jdk6
    - jdk7
tags:
    - jenkins

- name: Install Jenkins slave node
hosts: jenkinsnode
remote_user: userapp
roles:
    - git
    - ansible
    - jenkinsnode
    - jdk6
    - jdk7
tags:
    - jenkins-salve

- name: Install Nexus
hosts: nexus
remote_user: userapp
roles:
    - jdk
    - nexus
```

```
tags:
    - nexus

- name: Install Gitlab
hosts: gitlab
remote_user: userapp
roles:
    - gitlab
tags: gitlab

- name: Install DevOps
hosts: devops
remote_user: userapp
roles:
    - jdk
    - tomcat
    - devops
tags:
    - devops

- name: Install DevOps Proxy
hosts: proxy
remote_user: userapp
roles:
    - proxy
tags:
    - devops-proxy

- name: Install OpenLDAP
hosts: openldap
remote_user: userapp
roles:
    - openldap
tags:
    - openldap
```

角色对应安装项说明：

```
Mysql角色安装mysql以及执行数据库初始化（dbinit）。
Jenkins角色安装jenkins以及部署依赖的ansible与git命令行工具。
Nexus角色安装nexus（自带部署介质库与构建库）及依赖的java环境。
GitLab角色安装gitlab。
DevOps角色安装tomcat及依赖的java环境，并部署war包到tomcat。
jenkinsnode安装jenkins slave nodes（可选）。
proxy安装DevOps集群门户代理服务nginx（可选）。
```

5.2_配置变量与部署角色并执行部署

修改角色分组与配置文件

```
vi /opt/mirrors/playbook/devops.inventory
```

如果不太理解配置方式，ip相关配置需要配置，其他用默认值即可。下面是代码示例仅供参考，具体以解压文件内容为准。

注意：当一台机器上配置多个应用时注意端口冲突问题，如拓扑图中的**DevOps**管理平台后端和**JIRA**部署在同一台机器，它们的默认端口一样，因此需要修改以避免端口冲突，此处修改**JIRA**端口。

```
[all:children]
mysql
jenkins
nexus
gitlab
devops

[all:vars]
user_dir=/opt/idc/apps/
repo_ip=10.15.15.85
repo_port=8000
remotelogs_port=6380
java_dir=jdk
tomcat_dir=tomcat
# nginx or devops url
#devops_url=http://x.x.x.x
devops_url=http://x.x.x.x:8080

[database:children]
mysql
devops

[database:vars]
mysql_database_ip=x.x.x.x
mysql_database_port=3306

devops_db_name=devops
devops_db_user=devopsadmin
devops_db_passwd="Devops,admin000"

sonar_db_name=sonar
sonar_db_user=sonaradmin
sonar_db_passwd="Sonar,admin000"

jira_db_name=jira
jira_db_user=jiraadmin
jira_db_passwd="Jira,admin000"
```

```
confluence_db_name=confluence
confluence_db_user=confluenceadmin
confluence_db_passwd="Confluence,admin000"

cmdb_db_name=cmdb
cmdb_db_user=cmdbadmin
cmdb_db_passwd="Cmdb,admin000"

[mysql]
x.x.x.x

[mysql:vars]
mysql_root_passwd="Primeton,4cloud"
# 仅支持5.7.23版本（默认值mysql_version="57"即可）。
# 注意mysql5.7的密码规则要求，需要包含大写字母，小写字母，数字以及特殊字符（如 Sysadmin,000）。
请设置mysql_root_passwd，devops_db_passwd，sonar_db_passwd，jira_db_passwd，cmdb_db_passwd为符合密码要求的字符串。
mysql_version="57"
mysql_init_devops=true
mysql_init_sonar=true
mysql_init_jira=true
mysql_init_confluence=false
# cmdb no need install
mysql_init_cmdb=false

[nexus]
x.x.x.x

[nexus:vars]
nexus_dir=nexus
nexus_user=userapp
nexus_port=8081

[jenkins]
x.x.x.x

[jenkins:vars]
jenkins_dir=jenkins
jenkins_port=8080
jenkins_min_mem=1024
jenkins_max_mem=2048

ansible_remote_user=userapp
ansible_key_dir=ansible-key
has_jenkins_node=yes
ssh_pem_key=userapp_access.pem

[jenkinsnode]

[jenkinsnode:vars]
jenkins_dir=jenkins
ansible_remote_user=userapp
```

```
ansible_key_dir=ansible-key

[gitlab]

[gitlab:vars]
gitlab_url=x.x.x.x
gitlab_init_dir=gitlab_init

[devops]

[devops:vars]
out_config_dir=apps_config
web_app_name=ROOT
devops_shutdown_port=8005
devops_app_port=8080
# devops_ajp_port=8009
devops_max_threads=10000
devops_admin_port=6200

[proxy]

[proxy:vars]
proxy_port=80

[openldap]

[openldap:vars]
dc1=devops
dc2=primeton
olc_root_pw=test4cloud

[cmdb]
# no need install cmdb

[cmdb:vars]
cmdb_install_ip=x.x.x.x
cmdb_install_dir=cmdb
cmdb_web_port=8077
cmdb_api_port=8087
cmdb_api_min_mem=1024
cmdb_api_max_mem=2048
cmdb_service_port=8097
cmdb_service_min_mem=1024
cmdb_service_max_mem=2048
cmdb_eureka_shutdown_port=8047
cmdb_eureka_app_port=8067
cmdb_eureka_ajp_port=8057
```

执行部署

```
cd /opt/mirrors/playbook
ansible-playbook -i devops.inventory site.yml
```

若执行过程出现错误，根据错误信息解决，重新执行可以跳过某些已经成功的TAG（要求掌握Ansible-Playbook基础），参考Ansible-Playbook tag & skip-tag & list-tag

替换license文件

从普元售后申请DevOps的临时License文件，将primetonlicense.xml文件拷贝到安装DevOps(10.15.15.86)的外置目录下：/opt/idc/apps/tomcat/apps_config/ROOT/license，之后userapp用户使用以下命令重启DevOps Server：

```
su - userapp
cd /opt/idc/apps/tomcat/
./stopServer.sh
nohup ./startServer.sh &
```

5.3_部署结果验证

若应用未启动或需要重启，请使用启动命令。

- devops

```
如果安装了多个实例则需要逐个访问测试，(sysadmin/000000)
如果安装了代理，则需要访问测试，(sysadmin/000000)
```

```
/opt/idc/apps/tomcat/startServer.sh
```

- gitlab

```
登录后设置root用户密码，注意：示例代码需要手动上传。
```

```
sudo gitlab-ctl start
```

- jenkins

```
默认登录帐号：sysadmin/Sysadmin000
```

```
/opt/idc/apps/jenkins/start.sh
```

- mysql

```
默认登录帐号：root/Primeton,4cloud

```

```
systemctl start mysql
```

- nexus

```
默认登录帐号：admin/admin123
```

```
/opt/idc/apps/nexus/bin/nexus start
```

06_Ansible执行卸载任务

6.1_卸载任务说明

如果需要卸载通过自动化脚本安装的DevOps及所有中间件，可以使用如下命令执行卸载操作：

```
ansible-playbook -i devops.inventory uninstall.yml
```

如果仅想卸载某一个中间件如gitlab，可以使用如下命令：

```
ansible-playbook -i devops.inventory uninstall.yml --tag="gitlab"
```

6.2_重新安装说明

如果需要重新安装某个模块，建议先执行uninstall之后再重新执行部署，以重新安装gitlab为例，首先执行uninstall：

```
ansible-playbook -i devops.inventory uninstall.yml --tag="gitlab"
```

之后再重新部署：

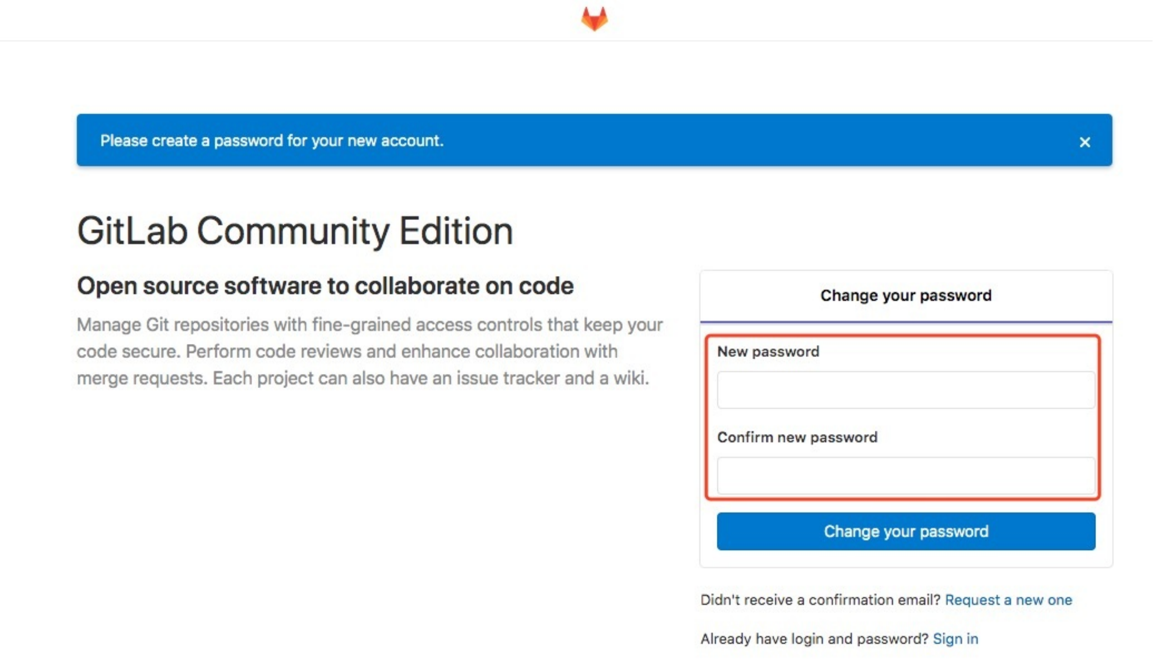
```
ansible-playbook -i devops.inventory site.yml --tag="gitlab"
```

07_附录

7.1_GitLab初始化配置

因为gitlab的备份导入功能存在问题，导致恢复的项目无法触发webhook，因此示例项目采用手动初始化的方式。

- 访问GitLab地址，设置root用户密码。



Please create a password for your new account.

GitLab Community Edition

Open source software to collaborate on code

Manage Git repositories with fine-grained access controls that keep your code secure. Perform code reviews and enhance collaboration with merge requests. Each project can also have an issue tracker and a wiki.

Change your password

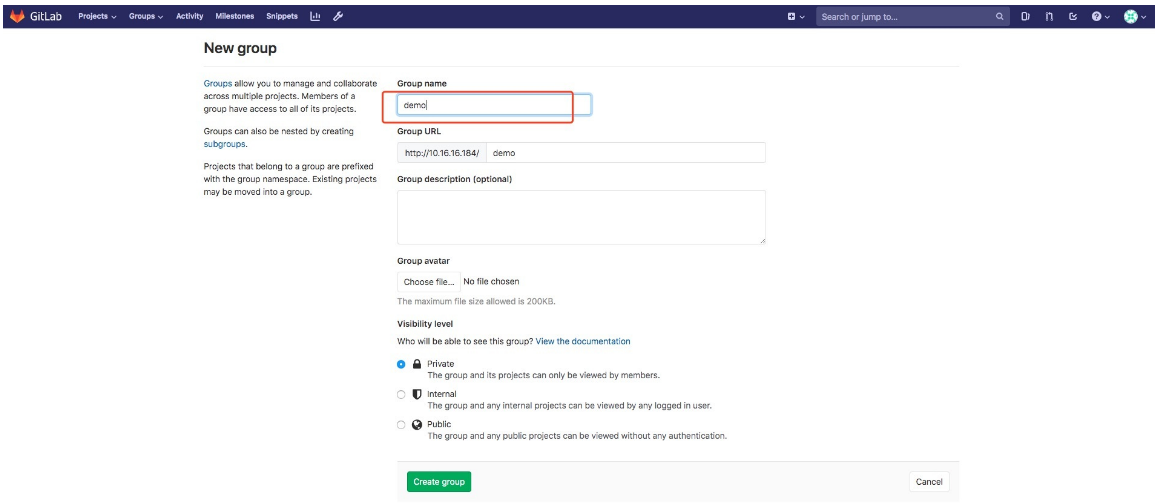
New password

Confirm new password

Didn't receive a confirmation email? Request a new one

Already have login and password? Sign in

- 创建demo组。



New group

Groups allow you to manage and collaborate across multiple projects. Members of a group have access to all of its projects.

Groups can also be nested by creating subgroups.

Projects that belong to a group are prefixed with the group namespace. Existing projects may be moved into a group.

Group name: demo

Group URL: http://10.16.16.184/ demo

Group description (optional)

Group avatar: No file chosen

The maximum file size allowed is 200KB.

Visibility level

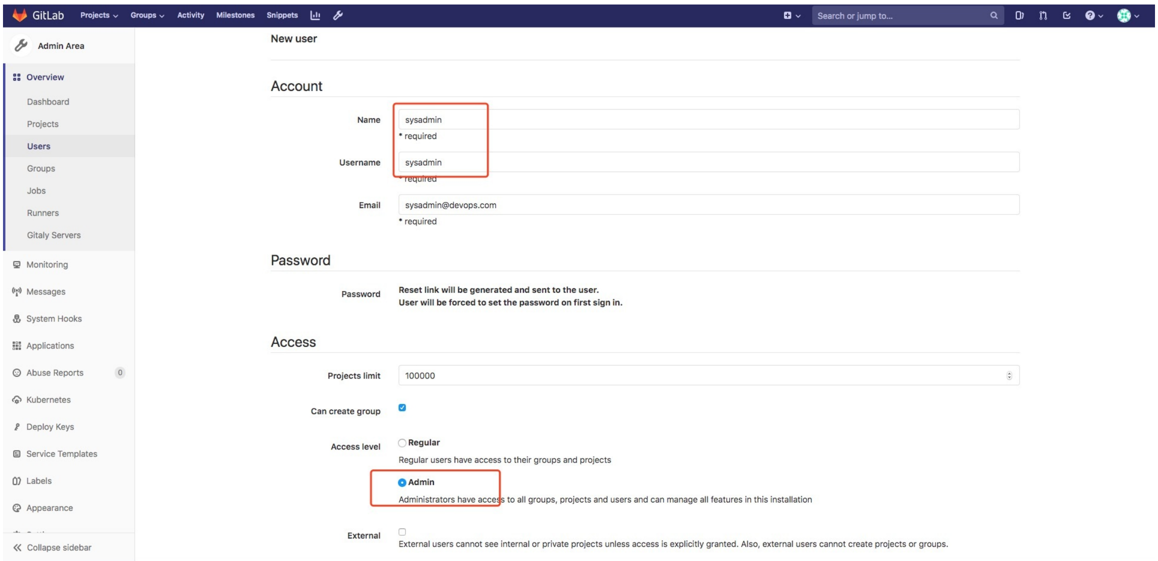
Who will be able to see this group? View the documentation

● Private
The group and its projects can only be viewed by members.

○ Internal
The group and any internal projects can be viewed by any logged in user.

○ Public
The group and any public projects can be viewed without any authentication.

- 创建sysadmin用户。



New user

Account

Name: sysadmin
* required

Username: sysadmin
* required

Email: sysadmin@devops.com
* required

Password

Password: Reset link will be generated and sent to the user.
User will be forced to set the password on first sign in.

Access

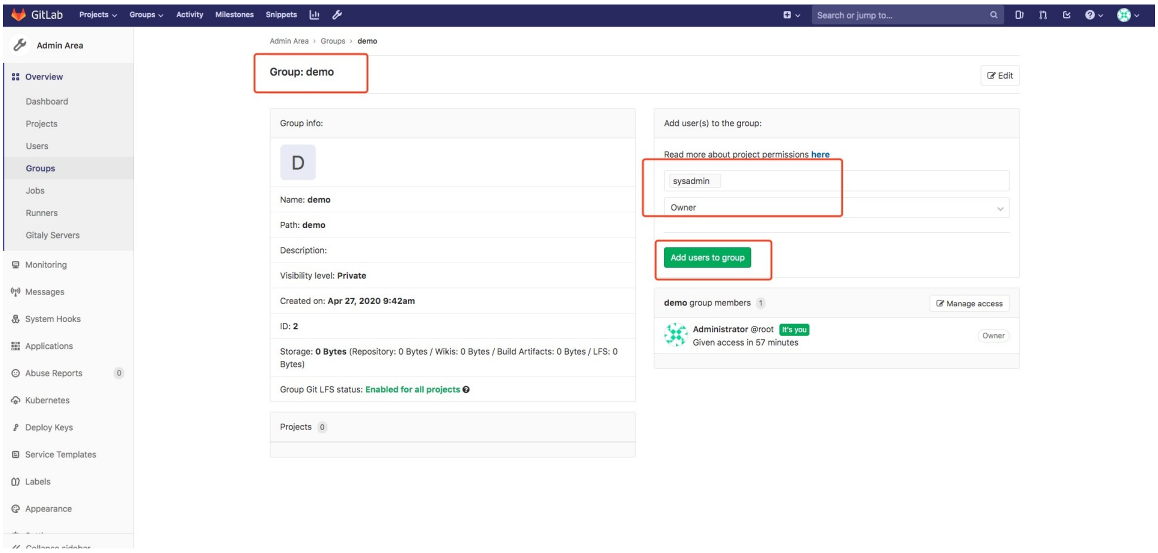
Projects limit: 100000

Can create group: ☑

Access level:
○ Regular
Regular users have access to their groups and projects
● Admin
Administrators have access to all groups, projects and users and can manage all features in this installation

External: □
External users cannot see internal or private projects unless access is explicitly granted. Also, external users cannot create projects or groups.

- 将sysadmin加入到demo组并配置成组所有者。



Admin Area › Groups › demo

Group: demo

Group info:

D

Name: demo

Path: demo

Description:

Visibility level: Private

Created on: Apr 27, 2020 9:42am

ID: 2

Storage: 0 Bytes (Repository: 0 Bytes / Wikis: 0 Bytes / Build Artifacts: 0 Bytes / LFS: 0 Bytes)

Group Git LFS status: Enabled for all projects

Projects 0

Add user(s) to the group:

Read more about project permissions here

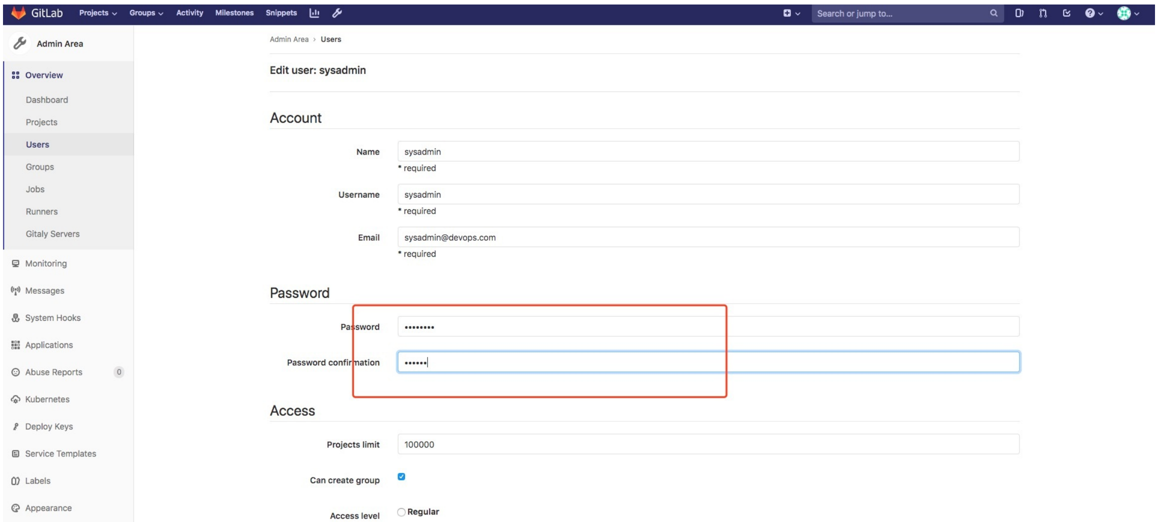
sysadmin

Owner

demo group members 1

Administrator @root It's you
Given access in 57 minutes
Owner

- 设置sysadmin默认密码，并unlock使其可以正常登陆。



Admin Area › Users

Edit user: sysadmin

Account

Name: sysadmin
* required

Username: sysadmin
* required

Email: sysadmin@devops.com
* required

Password

Password: ••••••••

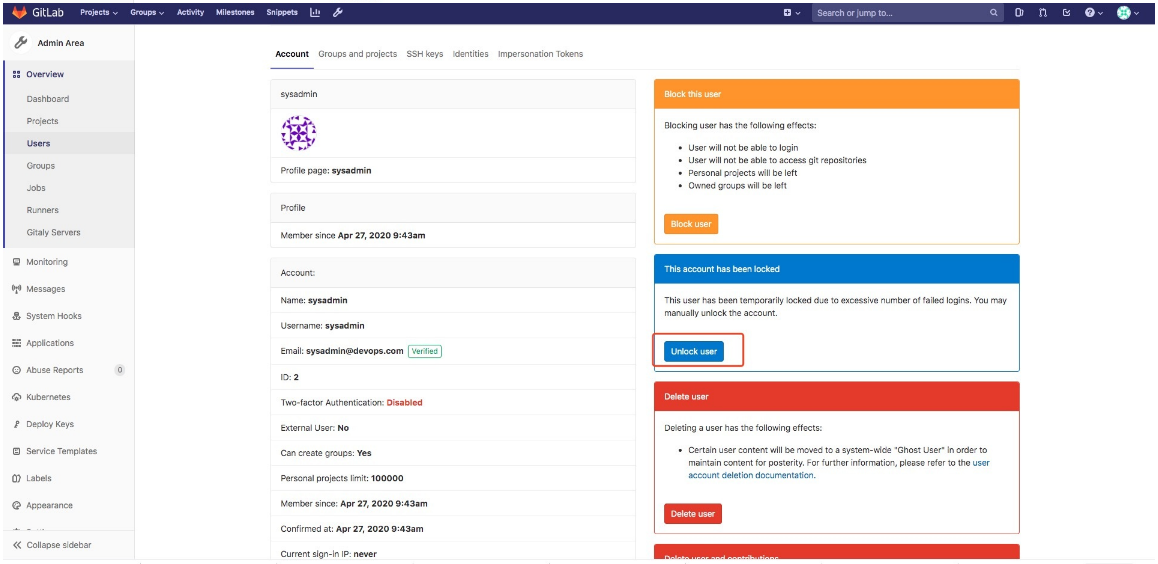
Password confirmation: ••••••

Access

Projects limit: 100000

Can create group: ☑

Access level: ○ Regular



sysadmin

Profile page: sysadmin

Profile

Member since Apr 27, 2020 9:43am

Account:

Name: sysadmin

Username: sysadmin

Email: sysadmin@devops.com Verified

ID: 2

Two-factor Authentication: Disabled

External User: No

Can create groups: Yes

Personal projects limit: 100000

Member since: Apr 27, 2020 9:43am

Confirmed at: Apr 27, 2020 9:43am

Current sign-in IP: never

Block this user

Blocking user has the following effects:

- User will not be able to login
- User will not be able to access git repositories
- Personal projects will be left
- Owned groups will be left

Block user

This account has been locked

This user has been temporarily locked due to excessive number of failed logins. You may manually unlock the account.

Unlock user

Delete user

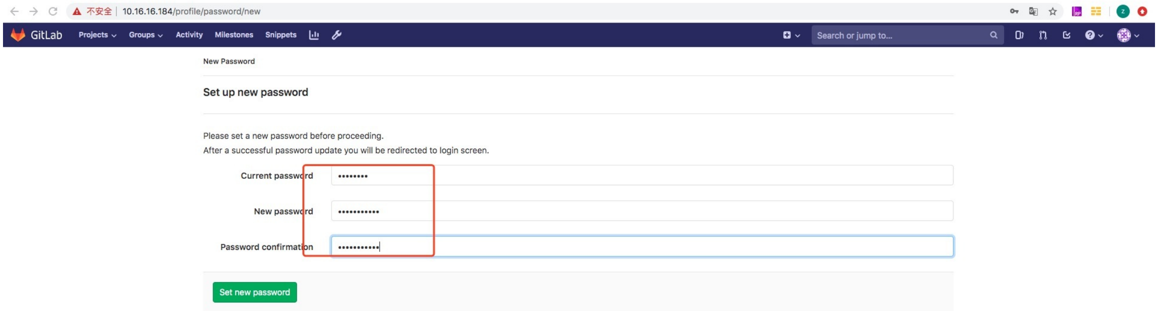
Deleting a user has the following effects:

- Certain user content will be moved to a system-wide "Ghost User" in order to maintain content for posterity. For further information, please refer to the user account deletion documentation.

Delete user

Delete user and contributions

- 使用sysadmin登陆并修改默认密码。



New Password

Set up new password

Please set a new password before proceeding.
After a successful password update you will be redirected to login screen.

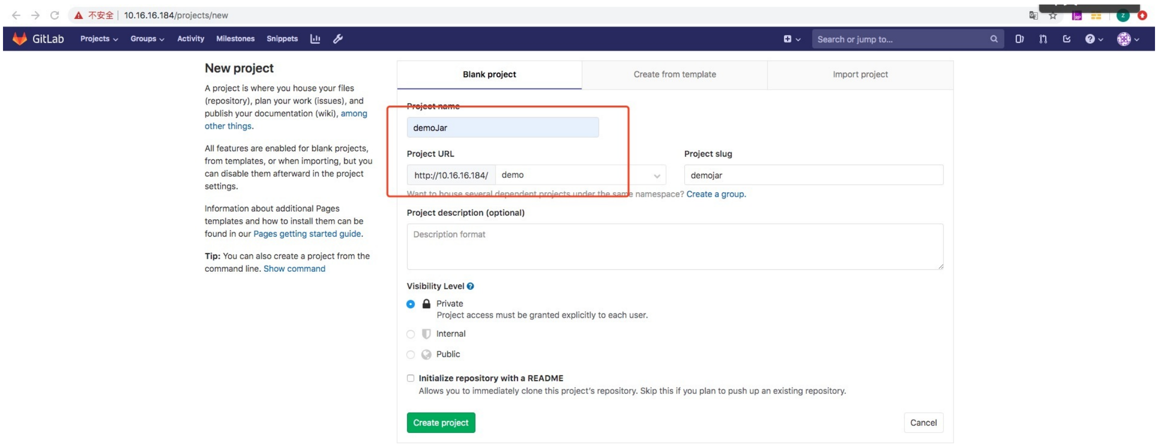
Current password: ••••••••

New password: •••••••••••

Password confirmation: •••••••••••

Set new password

- 在demo组中创建project，peoject名称为demoJar。



New project

A project is where you house your files (repository), plan your work (issues), and publish your documentation (wiki), among other things.

All features are enabled for blank projects, from templates, or when importing, but you can disable them afterward in the project settings.

Information about additional Pages templates and how to install them can be found in our Pages getting started guide.

Tip: You can also create a project from the command line. Show command

Project name: demoJar

Project URL: http://10.16.16.184/ demo

Project slug: demojar

Want to house several dependent projects under the same namespace? Create a group.

Project description (optional): Description format

Visibility Level

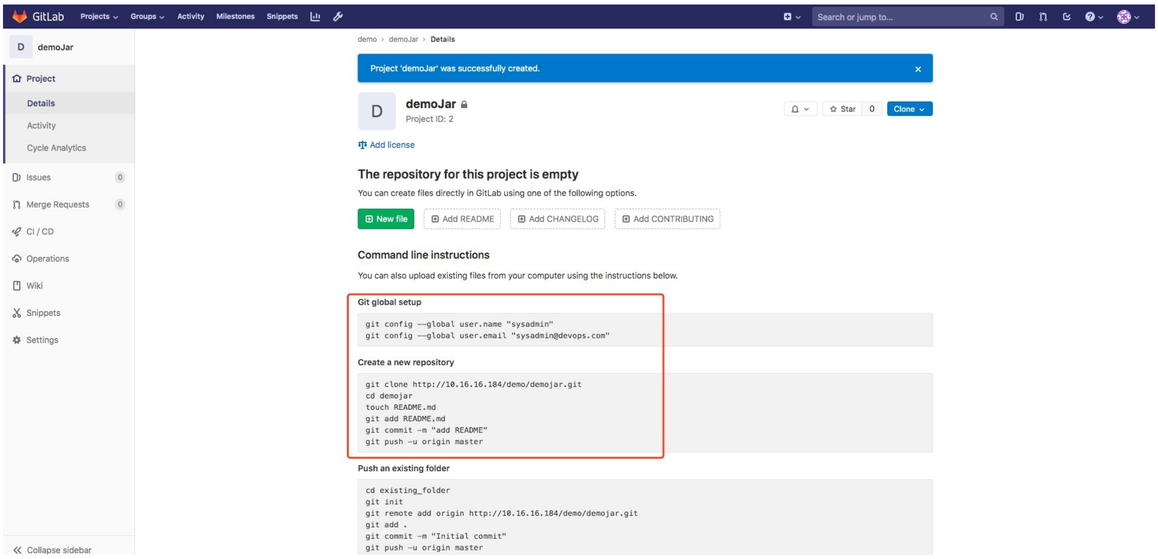
● Private
Project access must be granted explicitly to each user.

○ Internal

○ Public

□ Initialize repository with a README
Allows you to immediately clone this project's repository. Skip this if you plan to push up an existing repository.

- 参考代码库中提示信息上传示例代码，示例代码库位于安装包解压后的sample目录(/opt/mirrors/sample)。



Project 'demoJar' was successfully created.

demoJar
Project ID: 2

The repository for this project is empty

You can create files directly in GitLab using one of the following options.

Command line instructions

You can also upload existing files from your computer using the instructions below.

Git global setup

```
git config --global user.name "sysadmin"
git config --global user.email "sysadmin@devops.com"
```

Create a new repository

```
git clone http://10.16.16.184/demo/demojar.git
cd demojar
touch README.md
git add README.md
git commit -m "add README"
git push -u origin master
```

Push an existing folder

```
cd existing_folder
git init
git remote add origin http://10.16.16.184/demo/demojar.git
git add .
git commit -m "Initial commit"
git push -u origin master
```