
Cobbler Documentation Documentation

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Personal notes on the tool [Cobbler](#).

Cobbler Installation on Centos/Redhat 7

Cobbler version 2.6.0

Linux version Centos/Redhat 7.0

Note: Official installation doc: http://cobbler.github.io/manuals/2.6.0/2/2/2_-_RHEL_and_CentOS.html

1.1 Steps

1. Set SELinux to “permissive” mode (Doc)
2. EPEL repo configuration:

```
sudo rpm -Uvh http://mir01.syntis.net/epel//7/x86_64/e/epel-release-7-5.noarch.rpm
```

3. Installation

```
yum install pykickstart cobbler cobbler-web
```

4. Activate TFTP

```
vim /etc/xinetd.d/tftp
#  disable = yes                <- Change this line to "no"
chkconfig tftp on
```

Note: Configuration may be different according to Linux breed

5. Configure the firewall:

```
# For TFTP:
firewall-cmd --direct --permanent --add-rule ipv4 filter INPUT 0 -p tcp --dport 69 -j ACCEPT
firewall-cmd --direct --permanent --add-rule ipv4 filter INPUT 0 -p udp --dport 69 -j ACCEPT
# For HTTP
firewall-cmd --direct --permanent --add-rule ipv4 filter INPUT 0 -p tcp --dport 80 -j ACCEPT
firewall-cmd --direct --permanent --add-rule ipv4 filter INPUT 0 -p tcp --dport 443 -j ACCEPT
# For Cobbler XML-RPC
firewall-cmd --direct --permanent --add-rule ipv4 filter INPUT 0 -p tcp --dport 25150 -j ACCEPT
firewall-cmd --direct --permanent --add-rule ipv4 filter INPUT 0 -p tcp --dport 25151 -j ACCEPT

firewall-cmd --reload
```

Note: If you want to check these rules are correctly saved:

```
firewall-cmd --permanent --direct --get-rules ipv4 filter INPUT
```

6. (optional) If you want to use command “cobbler replicate”, you have to configure rsync

```
$ vi /etc/xinetd.d/rsync

# default: off
# description: The rsync server is a good addition to an ftp server, as it \
#     allows crc checksumming etc.
service rsync
{
    disable= no # change
    flags= IPv6
    socket_type= stream
    wait= no
    user= root
    server= /usr/bin/rsync
    server_args= --daemon
    log_on_failure+= USERID
}

$ chkconfig rsync on
```

Note: Help here: http://www.server-world.info/en/note?os=CentOS_6&p=rsync

7. Cobbler configuration:

```
vim /etc/cobbler/settings
```

Change following lines:

```
# manage_rsync: 0 <---- set to 1 to enable Cobbler's RSYNC management features.
# server: 127.0.0.1 <---- set to the real Cobbler ip address.
# anamon_enabled: 0 <---- set to 1 to enable Anamon log.
# next_server: 127.0.0.1 <---- set to the real Cobbler ip address.
```

8. Start Cobbler service:

```
service cobblerd start
chkconfig cobblerd on

service httpd start
chkconfig httpd on
```

9. Download loaders:

```
cobbler get-loaders
```

10. (optional) If you want to change the WEB interface password (cobbler/cobbler):

```
openssl passwd -1 -salt 'random-phrase-here' 'your-password-here'
```

And put the key in /etc/cobbler/settings:


```
# default_password_crypted: "$1$company$prqgnhJ6izx5.S9FVItCB/"
```

Then change the web user interface setting:

```
htdigest /etc/cobbler/users.digest "Cobbler" cobbler
```

11. Sync all:

```
cobbler sync
```

Note: You can check your installation with:

```
cobbler check
```

Cobbler usage

Warning: If you are not familiar with the Cobbler terminology, we strongly advise you to read the *glossary* :)

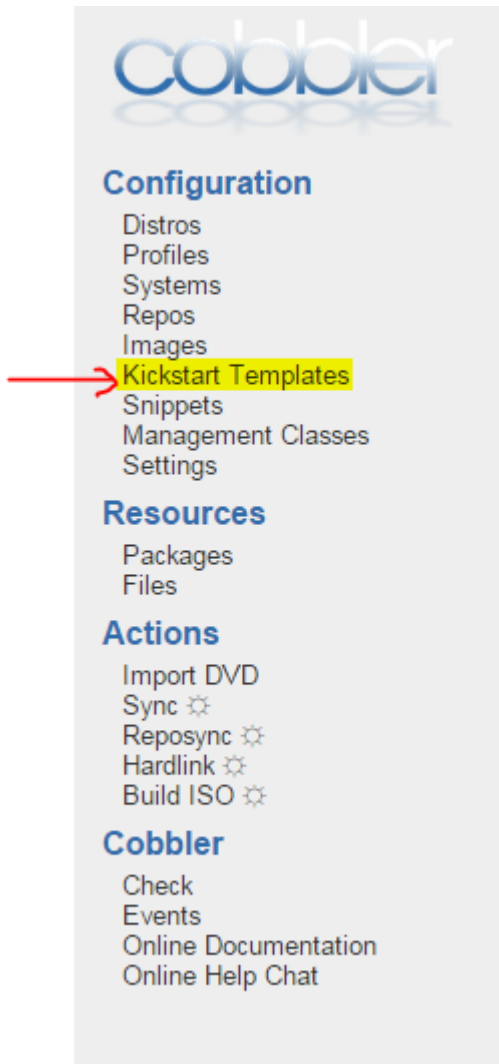
2.1 General usage

When you create a new “system”, Cobbler makes the following operations:

- Reads the *profile* used by the *system* to create the installation ISO. The distribution (*distro*) is defined in the profile.
- Generates the *kickstart*. The kickstart template is defined in the profile. The template is instantiated with the “profile” and the “system” informations.
- The kickstart template may refer to several *snippets*.

2.2 How to view/modify a profile?

1. Go to Cobbler
2. Open the “profiles” view:



3. Choose the kickstart
4. Edit the kickstart:

Editing a Kickstart Template

Editing:

/var/lib/cobbler/kickstarts/~~XXXXXXXXXXXX~~.ks

```
#platform=x86, AMD64, or Intel EM64T
# System authorization information
authconfig --enablesshadow --passalgo=sha512

# System bootloader configuration
bootloader --location=mbr --driveorder=sda --append="crashkernel=auto rhgb quiet"

# Partition clearing information
clearpart --all --initlabel

# Use text mode install
text

# Firewall configuration
firewall --service=ssh

# Run the Setup Agent on first boot
firstboot --disable

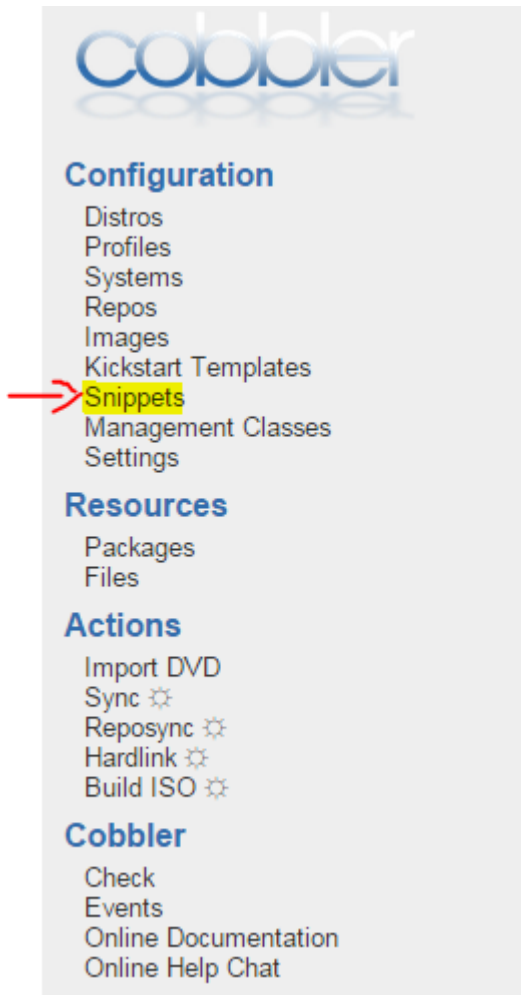
# System keyboard
keyboard us

# System language
lang en_US
```

NOTE: This kickstart template is currently in-use.

2.4 How to view/modify a snippet?

1. Go to Cobbler
2. Open the “Snippets” view:



3. Choose a snippet `partitioning.conf`
4. Edit the snippet:

Editing a Snippet

Snippet:

/var/lib/cobbler/snippets/~~XXXXXXXXXX~~partitioning.conf

```
## -----
## Partitioning
## -----

## -----
## Standard partitions
## -----
part / --fstype ext4 --size 10000
part /opt --fstype ext4 --size 10000
part /home --fstype ext4 --size 10000
part /var --fstype ext4 --size 5000
part /tmp --fstype ext4 --size 5000
part swap --fstype ext4 --size 4000
```

Delete

Really?

Save

Reset

2.5 Glossary

distro According to the Cobbler terminology, a “distro” is the configuration of an operating system. Ex: RHEL 6.5, Centos 7.2

kickstart A file containing the answers to all the questions that would normally be asked during a typical OS installation (RHEL Linux type). Kickstart provides a way for users to automate any OS installation.

profile A profile contains all configurations of the infrastructure and the platform (*distro*, CPU, RAM, Disk...). It’s like a model/template that can be referred by a *system*.

snippet Snippets are a way of reusing common blocks of code between kickstarts. Its may be seen as function/macro. A snippet is saved in a separate file.

system According the Cobbler terminology, a “system” contains the configuration of a particular machine. In other terms, it is an instance of a *profile*. For example, it contains specific network informations of a machine (IP, gateway, hostname...)

Useful links for Cobbler installation/configuration

3.1 Installation/Configuration

- Installation on Redhat : https://access.redhat.com/documentation/en-US/Red_Hat_Network_Satellite/5.3/html/Reference_Guide/cobbler.html#s2-cobbler-reqs-check
- Update Cobbler : <http://sappyit.blogspot.fr/2015/03/update-cobbler-server.html>
- Managing DHCP: http://cobbler.github.io/manuals/2.6.0/3/4/1_-_Managing_DHCP.html
- Importing a distribution: http://docs.fedoraproject.org/en-US/Fedora/13/html/Installation_Guide/sn-cobbler-import.html
- Usage with Subversion:
 - http://consultancy.edvoncken.net/index.php/HOWTO_Set_up_a_Subversion_repository_for_provisioning
 - **Keyring:**
 - * <http://technicalprose.blogspot.fr/2011/06/using-subversion-with-gnome-keyring.html>
 - * <http://kenneho.net/2011/01/30/using-svn-client-and-gnome-keyring-in-ssh-sessions/>
 - * <http://blog.purplecarrot.co.uk/2013/10/subversion-and-gnome-keyring-daemon.html>
 - * <http://unix.stackexchange.com/questions/89550/subversion-svn-doesnt-store-passwords-in-gnome-keyring>
 - * <http://stackoverflow.com/questions/3824513/svn-encrypted-password-store>

3.2 Usage

- **Kickstart:**
 - Doc: http://cobbler.github.io/manuals/2.6.0/3/5_-_Kickstart_Templating.html
 - Making the kickstart file available: https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux/5/html/Installation_Guide/s1-kickstart2-putkickstarthere.html
 - Tips and tricks for anaconda and kickstart: <http://wiki.centos.org/fr/TipsAndTricks/KickStart>
- **Trigger:**
 - Doc: http://cobbler.github.io/manuals/2.6.0/4/4/1_-_Triggers.html
 - Writing a trigger: <http://www.ithiriel.com/content/2010/03/29/writing-install-triggers-cobbler>

- **API:**
 - API XMLRPC: <https://fedorahosted.org/cobbler/wiki/CobblerXmlrpc>
 - API Python: <https://fedorahosted.org/cobbler/wiki/CobblerApi>

Advice for Software Testing

As a tester, if you need to often deploy OS for your testing activity then you shall use Cobbler :-)

Cobbler is a good tool to quickly OS-based test environments and manage their different versions/breeds/configurations.

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