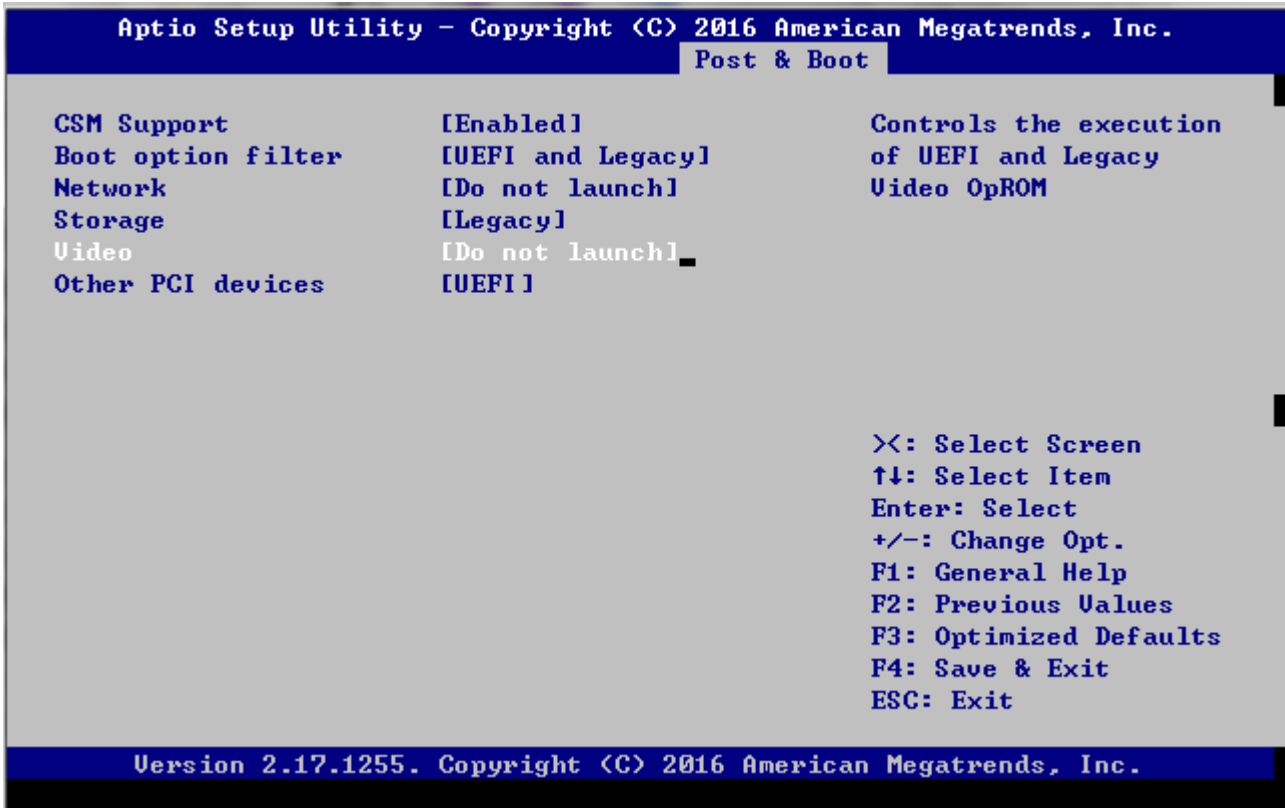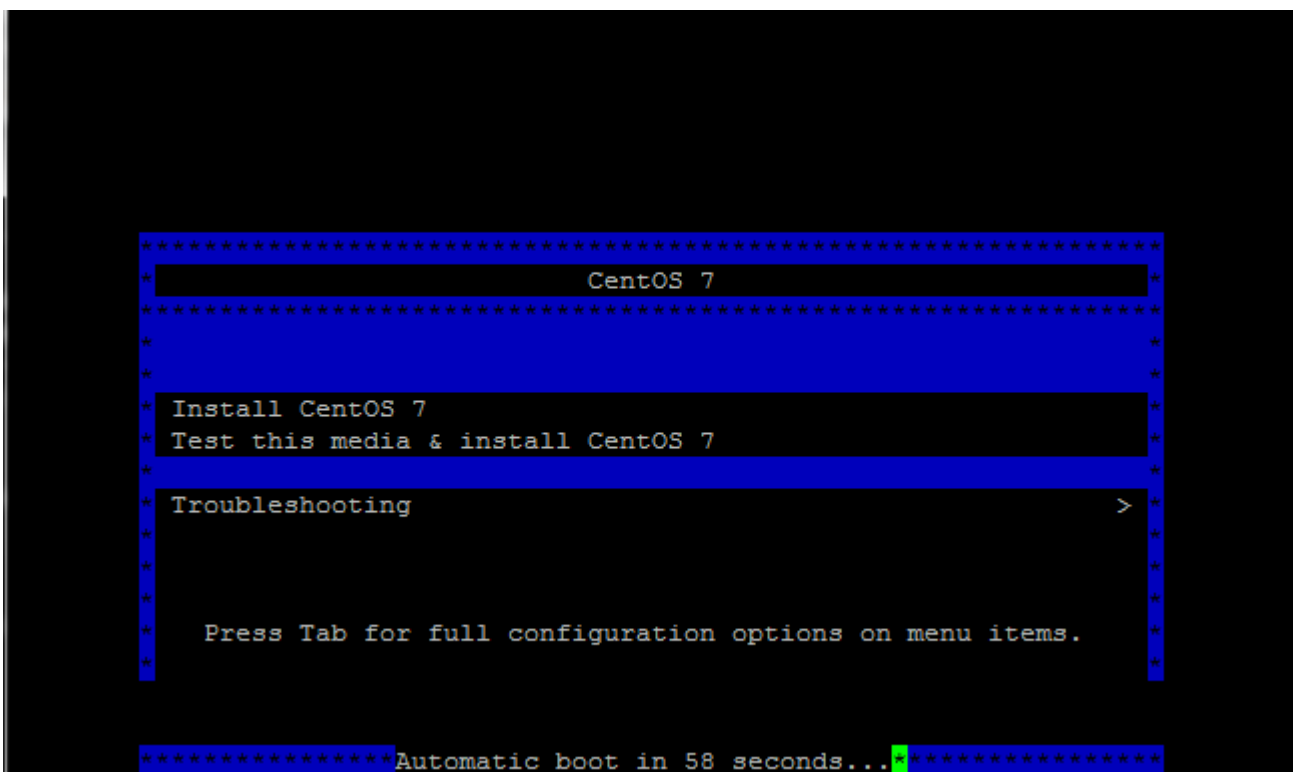# How to install CentOS 7 by console redirection

1. Kindly press del key into BIOS, and set "Post & Boot"-> CSM support-> Video as Do not launch
   The step is disable VGA ROM

2. Please set CentOS 7 installation media device as first boot device, and console-redirection will show following message.

3. Please press "UP" key, and then press "TAB" key, it will show "Install CentOS 7" installation command.


```
                  CentOS 7

   Install CentOS 7
   Test this media & install CentOS 7

   Troubleshooting                                    >

> vmlinuz initrd=initrd.img inst.stage2=hd:LABEL=CENTOS\x207\x20X8 quiet
```

4. Please add "console=ttyS0,115200" in installation command , and then press "Enter key"


```
                  CentOS 7

   Install CentOS 7
   Test this media & install CentOS 7

   Troubleshooting                                    >

> vmlinuz initrd=initrd.img inst.stage2=hd:LABEL=CENTOS\x207\x20X8 quiet console
=ttyS0,115200
```

5. When console redirection function sets is OK. The console utility will show boot message

```
[  OK  ] Stopped target Swap.
[  OK  ] Stopped target Local File Systems.
[  OK  ] Stopped target Slices.
[  OK  ] Stopped target Paths.
[  OK  ] Stopped udev Kernel Device Manager.
[  OK  ] Started Plymouth switch root service.
[  OK  ] Stopped Open-iSCSI.
         Stopping Device-Mapper Multipath Device Controller...
[  OK  ] Stopped dracut pre-udev hook.
         Stopping dracut pre-udev hook...
[  OK  ] Stopped dracut cmdline hook.
         Stopping dracut cmdline hook...
[  OK  ] Stopped Create Static Device Nodes in /dev.
         Stopping Create Static Device Nodes in /dev...
[  OK  ] Stopped Create list of required sta...ce nodes for the current kernel.
         Stopping Create list of required st... nodes for the current kernel...
[  OK  ] Closed udev Kernel Socket.
[  OK  ] Closed udev Control Socket.
         Starting Cleanup udevd DB...
[  OK  ] Stopped Device-Mapper Multipath Device Controller.
[  OK  ] Started Cleanup udevd DB.
[  OK  ] Reached target Switch Root.
         Starting Switch Root...
```

6. Following message is "CentOS-1511" console installation, it needs sting all [!] items (item 1, 2, 3, 4, 5, 8, 9)

```
Starting installer, one moment...
anaconda 21.48.22.56-1 for CentOS 7 started.
 * installation log files are stored in /tmp during the installation
 * shell is available on TTY2
 * when reporting a bug add logs from /tmp as separate text/plain attachments
11:23:36 Not asking for VNC because we don't have a network
================================================================================
================================================================================
Installation

 1) [x] Language settings              2) [!] Timezone settings
        (English (United States))             (Timezone is not set.)
 3) [!] Installation source            4) [!] Software selection
        (Processing...)                       (Processing...)
 5) [!] Installation Destination       6) [x] Kdump
        (No disks selected)                   (Kdump is enabled)
 7) [ ] Network configuration          8) [!] Root password
        (Not connected)                       (Password is not set.)
 9) [!] User creation
        (No user will be created)
  Please make your choice from above ['q' to quit | 'b' to begin installation |
  'r' to refresh]:

[anaconda] 1:main* 2:shell  3:log  4:storage-lo> Switch tab: Alt+Tab | Help: F1
```

7. Please choose item2 to set Timezone ,

```
Please make your choice from above ['q' to quit | 'b' to begin installation |
  'r' to refresh]: 2
==================================================================================

==================================================================================
Timezone settings


Available regions
 1)  Africa              6)  Atlantic           10)  Pacific
 2)  America             7)  Australia          11)  US
 3)  Antarctica          8)  Europe             12)  Etc
 4)  Arctic              9)  Indian
 5)  Asia
Please select the timezone.
Use numbers or type names directly [b to region list, q to quit]:
```

we may choose 5 (Asia)

```
Use numbers or type names directly [b to region list, q to quit]: 5
==================================================================================

==================================================================================
Timezone settings


Available timezones in region Asia
 1)  Aden              28)  Irkutsk           54)  Pyongyang
 2)  Almaty            29)  Jakarta           55)  Qatar
 3)  Amman             30)  Jayapura          56)  Qyzylorda
 4)  Anadyr            31)  Jerusalem         57)  Rangoon
 5)  Aqtau             32)  Kabul             58)  Riyadh
 6)  Aqtobe            33)  Kamchatka         59)  Sakhalin
 7)  Ashgabat          34)  Karachi           60)  Samarkand
 8)  Baghdad           35)  Kathmandu         61)  Seoul
 9)  Bahrain           36)  Khandyga          62)  Shanghai
10)  Baku              37)  Kolkata           63)  Singapore
11)  Bangkok           38)  Krasnoyarsk       64)  Srednekolymsk
12)  Beirut            39)  Kuala_Lumpur      65)  Taipei
13)  Bishkek           40)  Kuching           66)  Tashkent
14)  Brunei            41)  Kuwait            67)  Tbilisi
15)  Chita             42)  Macau             68)  Tehran
16)  Choibalsan        43)  Magadan           69)  Thimphu
17)  Colombo           44)  Makassar          70)  Tokyo
18)  Damascus          45)  Manila            71)  Ulaanbaatar
19)  Dhaka             46)  Muscat            72)  Urumqi
```

```
20)  Dili                47)  Nicosia            73)  Ust-Nera
21)  Dubai               48)  Novokuznetsk       74)  Vientiane
22)  Dushanbe            49)  Novosibirsk        75)  Vladivostok
Press ENTER to continue
```

It needs pressing "Enter key" to continue message

```
23)  Gaza                50)  Omsk               76)  Yakutsk
24)  Hebron              51)  Oral               77)  Yekaterinburg
25)  Ho_Chi_Minh         52)  Phnom_Penh         78)  Yerevan
26)  Hong_Kong           53)  Pontianak
27)  Hovd
Please select the timezone.
Use numbers or type names directly [b to region list, q to quit]:
```

We may choose 61 (Seoul) to finish Timezone setting

```
Please select the timezone.
Use numbers or type names directly [b to region list, q to quit]: 61
========================================================================
========================================================================
Installation

 1) [x] Language settings          2) [x] Timezone settings
        (English (United States))         (Asia/Seoul timezone)
 3) [x] Installation source        4) [!] Software selection
        (Local media)                     (Minimal Install)
 5) [!] Installation Destination   6) [x] Kdump
        (No disks selected)               (Kdump is enabled)
 7) [ ] Network configuration      8) [!] Root password
        (Not connected)                   (Password is not set.)
 9) [!] User creation
        (No user will be created)
 Please make your choice from above ['q' to quit | 'b' to begin installation |
  'r' to refresh]:
```

9. Please choose item3 to set Installation source , if your installation source is CD/DVD, please press 1

```
Please make your choice from above ['q' to quit | 'b' to begin installation |
   'r' to refresh]: 3
================================================================================
================================================================================
Installation source

Choose an installation source type.
 1)  CD/DVD
 2)  local ISO file
 3)  Network
  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]: 1
================================================================================
================================================================================
Installation
```

10. Please choose item4 to set Software selection

```
Please make your choice from above ['q' to quit | 'b' to begin installation |
   'r' to refresh]: 4
================================================================================
================================================================================
Base environment
Software selection

Base environment

 1)  [x] Minimal Install          7)  [ ] Server with GUI
 2)  [ ] Compute Node             8)  [ ] GNOME Desktop
 3)  [ ] Infrastructure Server    9)  [ ] KDE Plasma Workspaces
 4)  [ ] File and Print Server   10)  [ ] Development and Creative Work
 5)  [ ] Basic Web Server                 station
 6)  [ ] Virtualization Host
  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]:
```

Recommending choose "10" to install Development and Creative Work station

```
Please make your choice from above ['q' to quit | 'c' to continue |
 'r' to refresh]: 10
=====================================================================
=====================================================================
Base environment
Software selection

Base environment

 1)  [ ] Minimal Install            7)  [ ] Server with GUI
 2)  [ ] Compute Node               8)  [ ] GNOME Desktop
 3)  [ ] Infrastructure Server      9)  [ ] KDE Plasma Workspaces
 4)  [ ] File and Print Server     10)  [x] Development and Creative Work
 5)  [ ] Basic Web Server                    station
 6)  [ ] Virtualization Host
  Please make your choi
```

Please press "c" to continue installation, item 4 needs some time to finish setting,

```
Please make your choice from above ['q' to quit | 'c' to continue |
 'r' to refresh]: c
=====================================================================
=====================================================================
Installation

 1) [x] Language settings          2) [x] Timezone settings
        (English (United States))         (Asia/Seoul timezone)
 3) [!] Installation source        4) [!] Software selection
        (Processing...)                   (Processing...)
 5) [!] Installation Destination   6) [x] Kdump
        (No disks selected)               (Kdump is enabled)
 7) [ ] Network configuration      8) [!] Root password
        (Not connected)                   (Password is not set.)
 9) [!] User creation
        (No user will be created)
  Please make your choice from above ['q' to quit | 'b' to begin installation |
 'r' to refresh]:
```

11. Please choose item5 to set Installation Destination, my system is installing a WDC 750G HDD,

```
Please make your choice from above ['q' to quit | 'b' to begin installation |
   'r' to refresh]: 5
======================================================================
======================================================================
Probing storage...
Installation Destination

[ ] 1) WDC WD7500BPKX-0: 698.64 GiB (sda)

[ ] 2) SanDisk Ultra: 14.44 GiB (sdb)

[ ] 3) Select all

No disks selected; please select at least one disk to install to.

   Please make your choice from above ['q' to quit | 'c' to continue |
```

I choose WDC 750G as Installation Destination

```
   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: 1
======================================================================
======================================================================
Probing storage...
Installation Destination

[x] 1) WDC WD7500BPKX-0: 698.64 GiB (sda)

[ ] 2) SanDisk Ultra: 14.44 GiB (sdb)

[ ] 3) Select all

1 disk selected; 698.64 GiB capacity; 1880.5 KiB free ...

   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]:
```

Please press c to continue to install, and then installation will show following message,
Recommending user choose item 2 (Use All Space)

```
Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]:c

Autopartitioning Options

[ ] 1) Replace Existing Linux system(s)

[x] 2) Use All Space

[ ] 3) Use Free Space

Installation requires partitioning of your hard drive. Select what space to use
for the install target.

  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]:
```

Autopartitioning Options chooses finish, please press "c" to continue to install OS.

```
Autopartitioning Options

[ ] 1) Replace Existing Linux system(s)

[x] 2) Use All Space

[ ] 3) Use Free Space

Installation requires partitioning of your hard drive. Select what space to use
for the install target.

  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]:c
```

The next step is choose Partition Scheme,

```
=
Partition Scheme Options

[ ] 1) Standard Partition

[ ] 2) Btrfs

[x] 3) LVM

[ ] 4) LVM Thin Provisioning

Select a partition scheme configuration.

  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]:
```

For test, I recommend your choosing item 1 "Standard Partition". and press " c" to continue OS installation,

```
Partition Scheme Options

[x] 1) Standard Partition

[ ] 2) Btrfs

[ ] 3) LVM

[ ] 4) LVM Thin Provisioning

Select a partition scheme configuration.

  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]:c
Generating updated storage configuration
```

12. Please choose item8 to set Root password.

```
Installation

1) [x] Language settings          2) [x] Timezone settings
       (English (United States))          (Asia/Seoul timezone)
3) [!] Installation source        4) [!] Software selection
       (Processing...)                    (Processing...)
5) [x] Installation Destination   6) [x] Kdump
       (Automatic partitioning selecte    (Kdump is enabled)
       d)                         8) [!] Root password
7) [ ] Network configuration             (Password is not set.)
       (Not connected)
9) [!] User creation
       (No user will be created)
 Please make your choice from above ['q' to quit | 'b' to begin installation |
 'r' to refresh]: 8
```

Please keyin password & confirm again.

```
================================================================================
================================================================================
Please select new root password. You will have to type it twice.

Password:
Password (confirm):

================================================================================
================================================================================
```

When password is weak, it will ask customer to double confirm, if you agree weak password, please key-in "yes".

```
Question

You have provided a weak password: The password fails the dictionary check - it
is based on a dictionary word
Would you like to use it anyway?

Please respond 'yes' or 'no': yes
```

13. Please choose item9 to set user account.

```
1) [x] Language settings          2) [x] Timezone settings
       (English (United States))         (Asia/Seoul timezone)
3) [!] Installation source        4) [!] Software selection
       (Processing...)                   (Processing...)
5) [x] Installation Destination   6) [x] Kdump
       (Automatic partitioning selecte        (Kdump is enabled)
       d)                         8) [x] Root password
7) [ ] Network configuration             (Password is set.)
       (Not connected)
9) [ ] User creation
       (No user will be created)
 Please make your choice from above ['q' to quit | 'b' to begin installation |
 'r' to refresh]: 9
================================================================
================================================================
User creation


1) [ ] Create user
 Please make your choice from above ['q' to quit | 'c' to continue |
 'r' to refresh]:
```

Please press "1" to set user account.

```
User creation

1) [ ] Create user
 Please make your choice from above ['q' to quit | 'c' to continue |
 'r' to refresh]: 1
================================================================
================================================================
User creation

1) [x] Create user
2) Fullname
3) Username
4) [ ] Use password
5) [ ] Administrator
6) Groups
```

Please press "2" and key in user name.

```
   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: 2
   =======================================================================
   =======================================================================
Enter new value for 'Fullname' and press enter
ae
   =======================================================================
   =======================================================================
User creation

 1) [x] Create user
 2) Fullname
    ae
 3) Username
    ae
 4) [ ] Use password
 5) [ ] Administrator
 6) Groups
```

Please press 4 to set user password

```
   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: 4
   =======================================================================
   =======================================================================
User creation

 1) [x] Create user
 2) Fullname
    ae
 3) Username
    ae
 4) [x] Use password
 5) Password
 6) [ ] Administrator
 7) Groups
```

Please press "5"and key-in user password.

```
  Please make your choice from above ['q' to quit | 'c' to continue |
  'r' to refresh]: 5

==================================================================

==================================================================
Password:
Password (confirm):

==================================================================

==================================================================
```

When user password is weak, it will ask customer the same question, if you agree weak password, please key-in "yes".

```
Question

You have provided a weak password: The password fails the dictionary check - it
is based on a dictionary word
Would you like to use it anyway?

Please respond 'yes' or 'no': yes

==================================================================

==================================================================
User creation

 1) [x] Create user
 2) Fullname
    ae
 3) Username
    ae
 4) [x] Use password
 5) Password
    Password set.
 6) [ ] Administrator
 7) Groups
```

14 When user finishes user account setting, please press "c" to continue. When item 1,2,3,4,5,6,8,9,
are setting finish, please press "b" to begin installation

```
   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: c
==============================================================================
==============================================================================
Installation

 1) [x] Language settings              2) [x] Timezone settings
        (English (United States))             (Asia/Seoul timezone)
 3) [x] Installation source            4) [x] Software selection
        (Local media)                         (Development and Creative Works
 5) [x] Installation Destination              tation)
        (Automatic partitioning selecte  6) [x] Kdump
        d)                                    (Kdump is enabled)
 7) [ ] Network configuration          8) [x] Root password
        (Not connected)                       (Password is set.)
 9) [x] User creation
        (User ae will be created)
   Please make your choice from above ['q' to quit | 'b' to begin installation |
   'r' to refresh]: b
```

The installation will format HDD & install OS's package in HDD,

```
Progress
Setting up the installation environment
.
Creating disklabel on /dev/sda
.
Creating swap on /dev/sda2
.
Creating xfs on /dev/sda5
.
Creating xfs on /dev/sda3
.
Creating xfs on /dev/sda1
.
Starting package installation process
```

15. When OS's package installs finish, it will show following message, please press Enter key to complete installation

```
Performing post-installation setup tasks

Installing boot loader
.
Performing post-installation setup tasks
.

Configuring installed system
.
Writing network configuration
.
Creating users
.
Configuring addons
.
Generating initramfs
.
Running post-installation scripts
.
        Use  of  this  product  is  subject  to  the  license  agreement  found  at
/usr/share/centos-release/EULA

        Installation complete.  Press return to quit
```

And system will auto reboot.

```
[  OK  ] Stopped Remount Root and Kernel File Systems.
          Stopping Remount Root and Kernel File Systems...
[  OK  ] Started Restore /run/initramfs.
[  OK  ] Reached target Shutdown.
dracut Warning: Killing all remaining processes
Rebooting.
```

16. When system reboot, please remove installation media source, or into BIOS sets HDD as boot device,

17. Console utility will show following message at next boot. Please choose "CentOS Linux (3.10.0-327.el7.x86_64) 7 (Core)" to boot in linux

```
        CentOS Linux (3.10.0-327.el7.x86_64) 7 (Core)
        CentOS Linux (0-rescue-6b17402f2d4b487caf2ae010314a14e3) 7 (Core)




        Use the ^ and v keys to change the selection.
        Press 'e' to edit the selected item, or 'c' for a command prompt.
```

When OS first boot up, it needs user to agree License, please press "1"

```
Initial setup of CentOS Linux 7 (Core)

 1) [!] License information
        (License not accepted)
   Please make your choice from [ '1' to enter the License information spoke | 'q' to
quit |  'c' to continue | 'r' to refresh]:1
```

And "2" to agree License , and then press "c" to continue

```
====================================================================================
License information

    1) Read the License Agreement

[ ] 2) I accept the license agreement.

   Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: 2
Please make your choice from above ['q' to quit | 'c' to continue |
   'r' to refresh]: c
```

The last step, key-in username & password to login centOS 7-1511

```
[  OK  ] Reached target Multi-User System.
          Starting Update UTMP about System Runlevel Changes...
[  OK  ] Started Update UTMP about System Runlevel Changes.


CentOS Linux 7 (Core)
Kernel 3.10.0-327.el7.x86_64 on an x86_64


localhost login: root
Password:
[root@localhost ~]#
```