# 在 Centos6.6 虚拟机上安装增强功能

# 目录

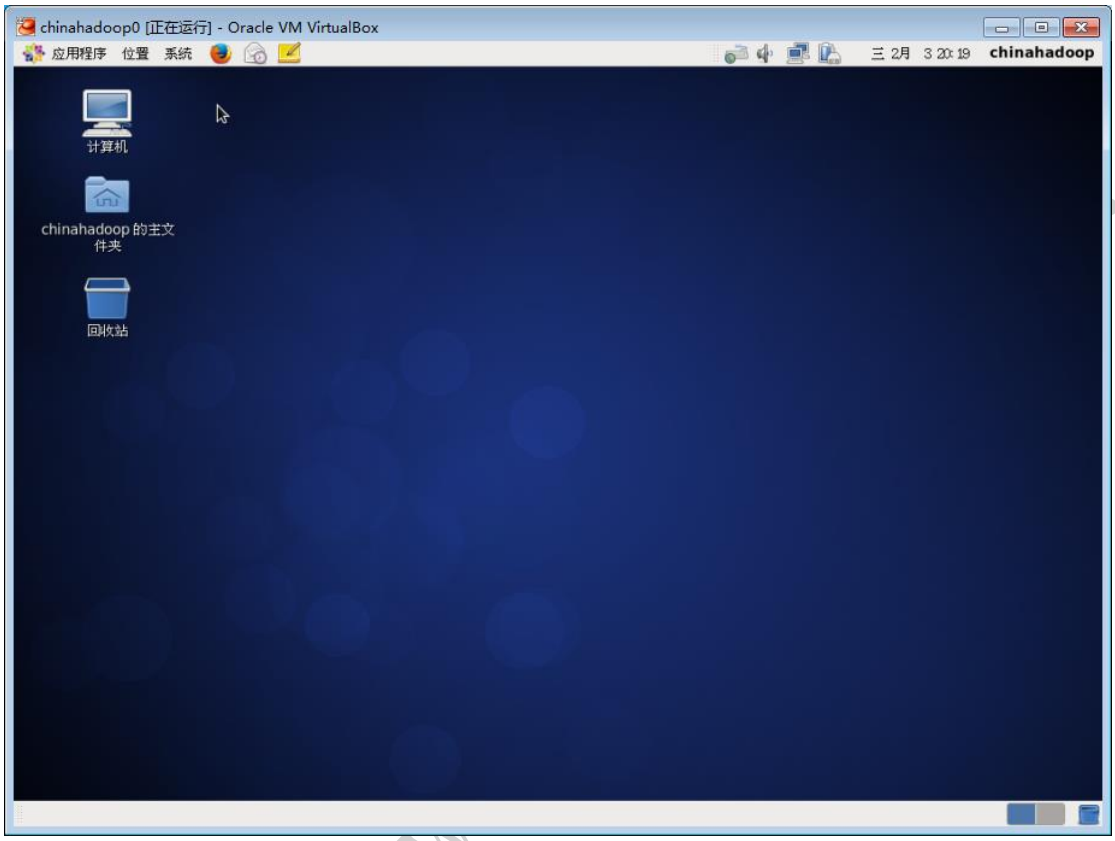






# 1. 切换视图

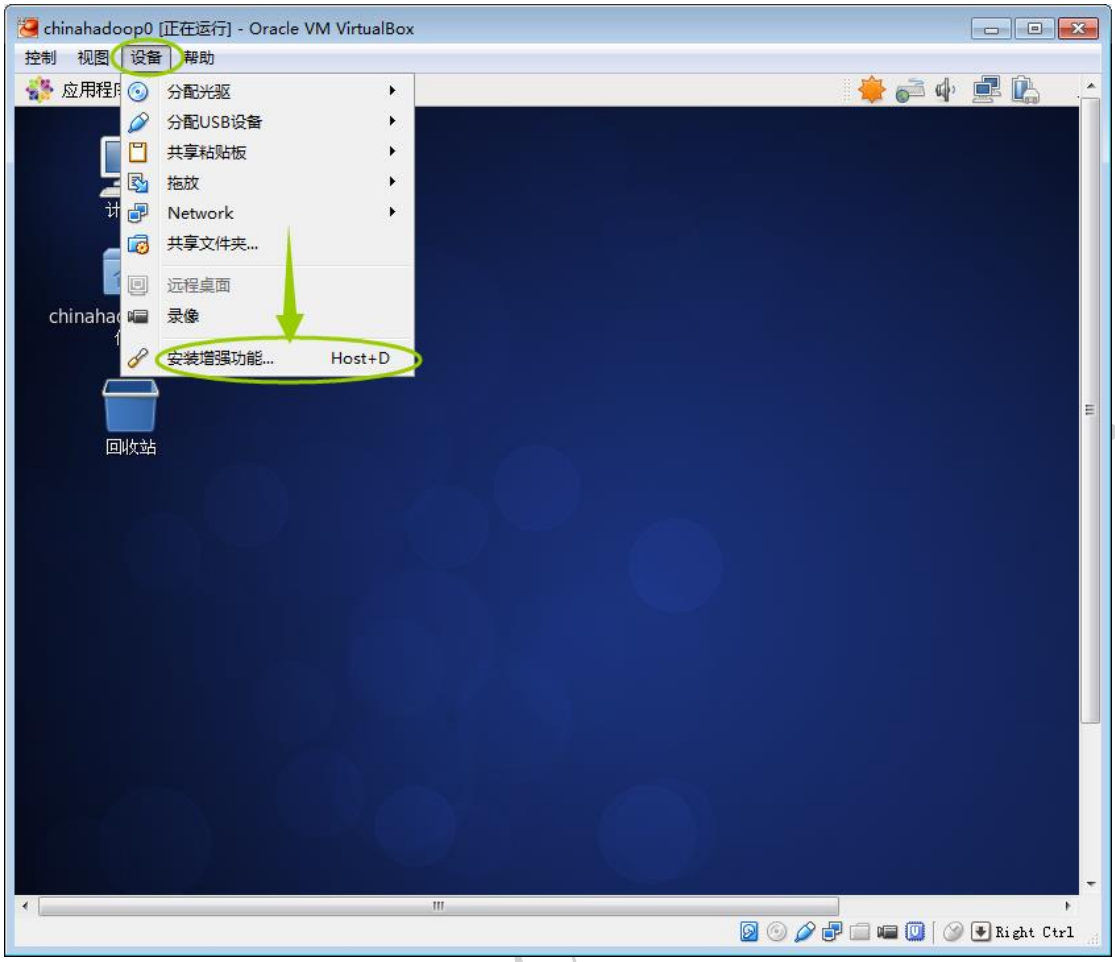
在安装和设置 VirtualBox 的文档中，提到自动缩放模式和全屏模式。
下图是自动缩放模式视图：



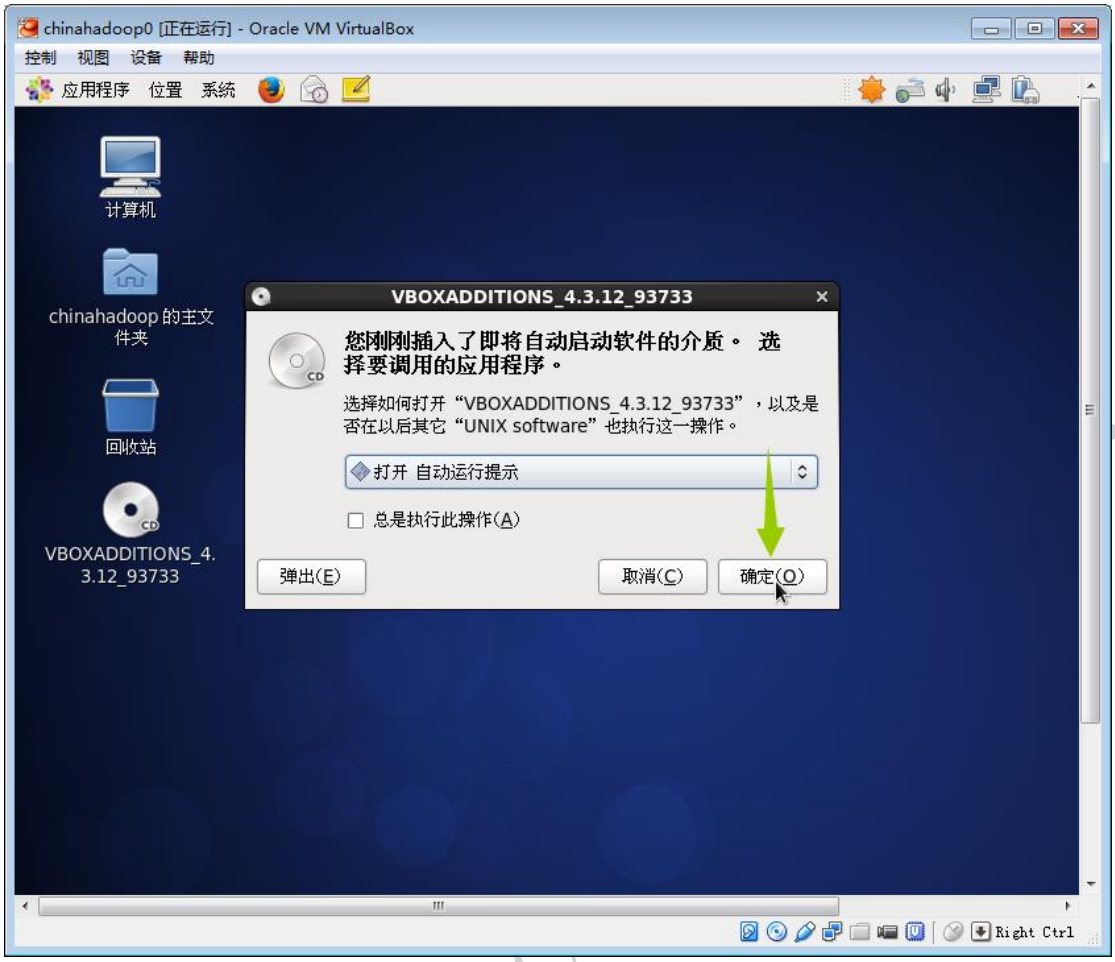

在当前视图下，找不到安装增强功能的按钮。此时，使用快捷键 Host + c 切换视图。

# 2. 安装增强功能

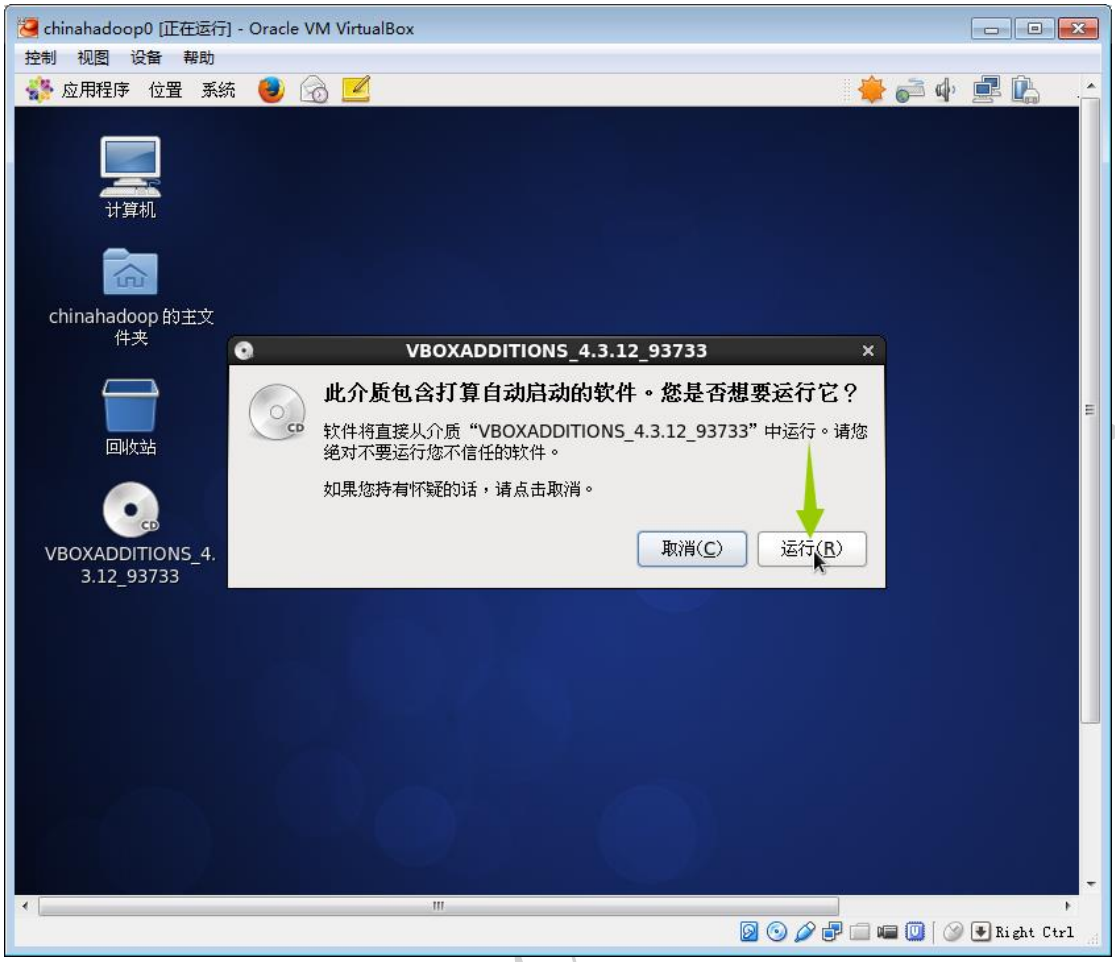
2.1. 点击设备弹出一个菜单，选择安装增强功能。



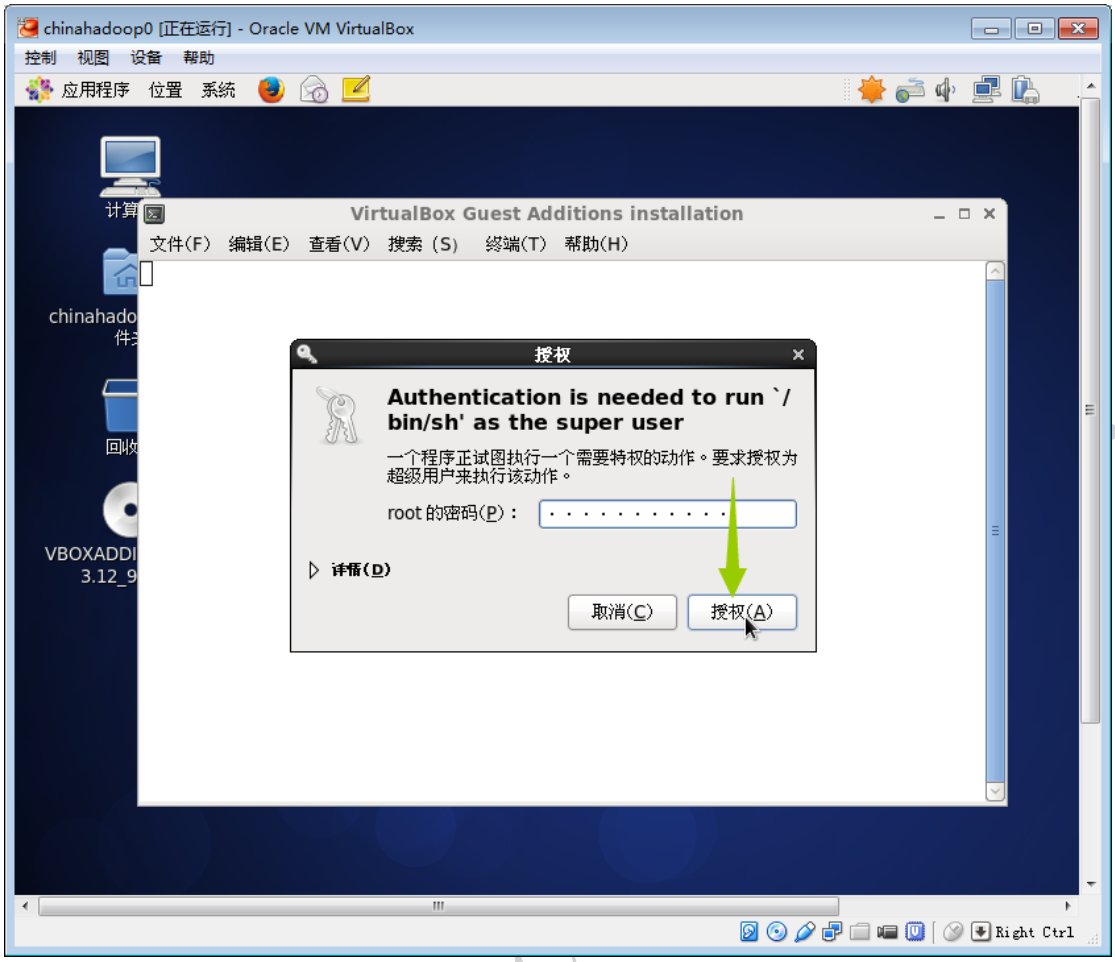

2.2. 弹出一个对话框。点击确定



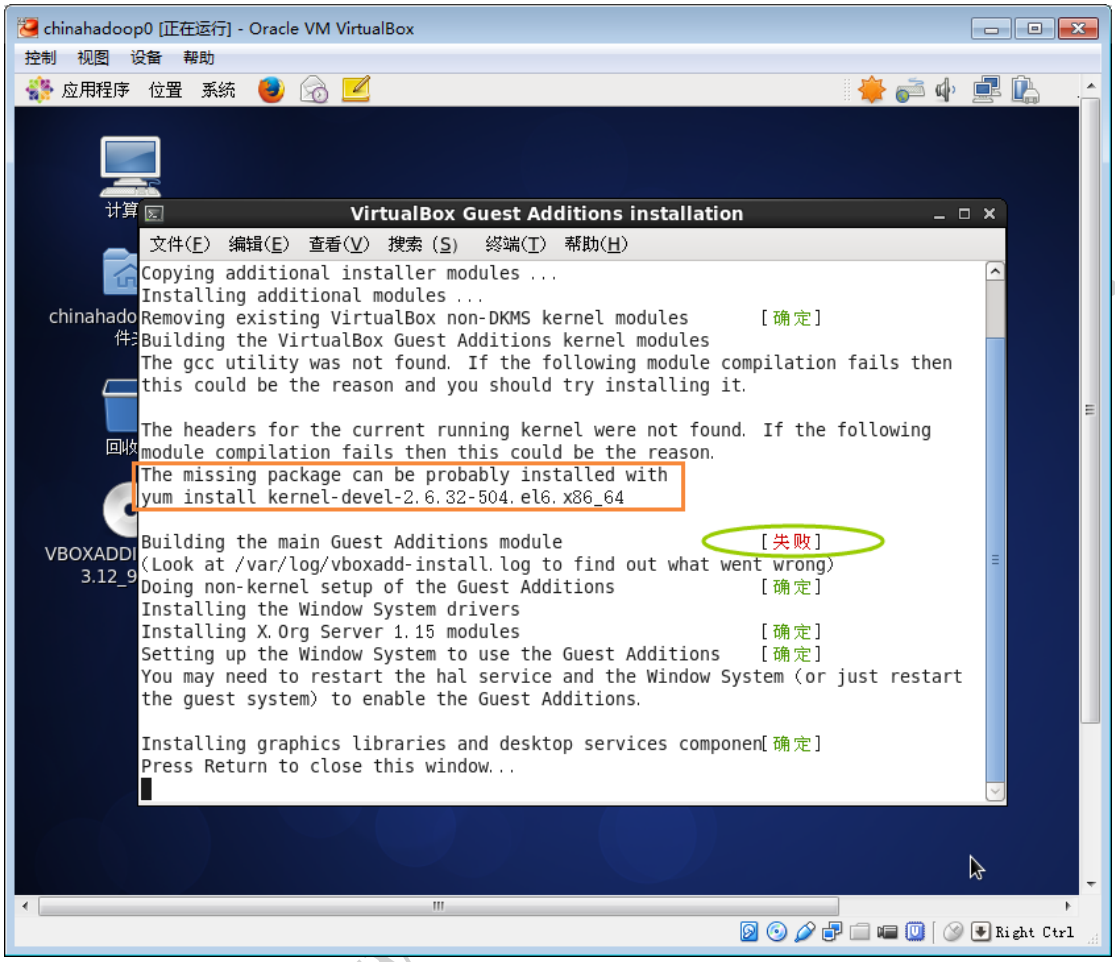

2.3. 点击运行




2.4. 需要 root 用户授权。



# 3. 安装失败




# 4. 解决方法

## 4.1. 查找软件包

根据失败信息

The missing package can be probably installed with

yum install kernel-devel-2.6.32-504.el6.x86_64

切换 root 用户查找软件包，执行命令 yum search kernel-devel-2.6.32-504.el6.x86_64

## 4.2. 列出相关软件包

执行命令 yum list | fgrep kernel-devel
执行命令 yum list | fgrep kernel

```
[root@chinahadoop0 桌面]# yum list | fgrep kernel-devel
kernel-devel.x86_64                    2.6.32-573.12.1.el6            updates
[root@chinahadoop0 桌面]# yum list | fgrep kernel
abrt-addon-kerneloops.x86_64           2.0.8-26.el6.centos            @anaconda-CentOS-2014102
41409.x86_64/6.6
dracut-kernel.noarch                   004-356.el6                    @anaconda-CentOS-2014102
41409.x86_64/6.6
kernel.x86_64                          2.6.32-504.el6                 @anaconda-CentOS-2014102
41409.x86_64/6.6
kernel-firmware.noarch                 2.6.32-504.el6                 @anaconda-CentOS-2014102
41409.x86_64/6.6
kernel-headers.x86_64                  2.6.32-504.el6                 @anaconda-CentOS-2014102
41409.x86_64/6.6
libreport-plugin-kerneloops.x86_64     2.0.9-21.el6.centos            @anaconda-CentOS-2014102
41409.x86_64/6.6
abrt-addon-kerneloops.x86_64           2.0.8-34.el6.centos            base
dracut-kernel.noarch                   004-388.el6                    base
kernel.x86_64                          2.6.32-573.12.1.el6            updates
kernel-abi-whitelists.noarch           2.6.32-573.12.1.el6            updates
kernel-debug.x86_64                    2.6.32-573.12.1.el6            updates
kernel-debug-devel.i686                2.6.32-573.12.1.el6            updates
kernel-debug-devel.x86_64              2.6.32-573.12.1.el6            updates
kernel-devel.x86_64                    2.6.32-573.12.1.el6            updates
kernel-doc.noarch                      2.6.32-573.12.1.el6            updates
kernel-firmware.noarch                 2.6.32-573.12.1.el6            updates
kernel-headers.x86_64                  2.6.32-573.12.1.el6            updates
libreport-plugin-kerneloops.x86_64     2.0.9-25.el6.centos            updates
[root@chinahadoop0 桌面]#
```

## 4.3. 列出已安装的相关软件包

执行命令 yum list installed | fgrep kernel

```
[root@chinahadoop0 桌面]# yum list installed | fgrep kernel
abrt-addon-kerneloops.x86_64
dracut-kernel.noarch    004-356.el6       @anaconda-CentOS-201410241409.x86_64/6.6
kernel.x86_64           2.6.32-504.el6    @anaconda-CentOS-201410241409.x86_64/6.6
kernel-firmware.noarch  2.6.32-504.el6    @anaconda-CentOS-201410241409.x86_64/6.6
kernel-headers.x86_64   2.6.32-504.el6    @anaconda-CentOS-201410241409.x86_64/6.6
libreport-plugin-kerneloops.x86_64
[root@chinahadoop0 桌面]#
```

因为没有安装 kernel-devel 的软件包，所以执行命令 yum list installed | fgrep kernel-devel 查不到信息。

## 4.4. 查看版本信息

4.4.1. 查看可安装 kernel-devel 的版本信息
执行命令 yum info kernel-devel

```
[root@chinahadoop0 桌面]# yum info kernel-devel
已加载插件：fastestmirror, refresh-packagekit, security
Loading mirror speeds from cached hostfile
 * base: mirrors.opencas.cn
 * extras: mirrors.opencas.cn
 * updates: ftp.sjtu.edu.cn
可安装的软件包
Name        : kernel-devel
Arch        : x86_64
Version     : 2.6.32
Release     : 573.12.1.el6
Size        : 10 M
Repo        : updates
Summary     : Development package for building kernel modules to
            :  match the kernel
URL         : http://www.kernel.org/
License     : GPLv2
Description : This package provides kernel headers and makefiles
            : sufficient to build modules against the kernel package.
[root@chinahadoop0 桌面]#
```

4.4.2. 查看 linux 系统内核版本

执行命令 uname -r

```
[root@chinahadoop0 桌面]# uname -r
2.6.32-504.el6.x86_64
[root@chinahadoop0 桌面]#
```

发现当前 kernel-devel 的版本要比系统内核的版本高，说明 2.6.32-504.el6.x86_64 版本没有 kernel-devel 的软件包，但是有 2.6.32-573.12.1.el6. x86_64 版本。

总结：尝试安装新版本的软件包。

## 4.5. 安装新版软件包

4.5.1. 安装软件包

执行命令 yum install make gcc gcc-c++ kernel kernel-devel kernel-headers

```
chinahadoop@chinahadoop0:/home/chinahadoop/桌面
文件(F)  编辑(E)  查看(V)  搜索(S)  终端(T)  帮助(H)
[root@chinahadoop0 桌面]# yum install make gcc gcc-c++ kernel kernel-devel kernel-headers
已加载插件：fastestmirror, refresh-packagekit, security
设置安装进程
Loading mirror speeds from cached hostfile
 * base: mirror.bit.edu.cn
 * extras: mirrors.btte.net
 * updates: mirrors.yun-idc.com
包 1:make-3.81-20.el6.x86_64 已安装并且是最新版本
解决依赖关系
--> 执行事务检查
---> Package gcc.x86_64 0:4.4.7-16.el6 will be 安装
--> 处理依赖关系 libgomp = 4.4.7-16.el6，它被软件包 gcc-4.4.7-16.el6.x86_64 需要
--> 处理依赖关系 cpp = 4.4.7-16.el6，它被软件包 gcc-4.4.7-16.el6.x86_64 需要
--> 处理依赖关系 libgcc >= 4.4.7-16.el6，它被软件包 gcc-4.4.7-16.el6.x86_64 需要
--> 处理依赖关系 cloog-ppl >= 0.15，它被软件包 gcc-4.4.7-16.el6.x86_64 需要
---> Package gcc-c++.x86_64 0:4.4.7-16.el6 will be 安装
--> 处理依赖关系 libstdc++-devel = 4.4.7-16.el6，它被软件包 gcc-c++-4.4.7-16.el6.x86_64 需要
--> 处理依赖关系 libstdc++ = 4.4.7-16.el6，它被软件包 gcc-c++-4.4.7-16.el6.x86_64 需要
--> 处理依赖关系 libmpfr.so.1()(64bit)，它被软件包 gcc-c++-4.4.7-16.el6.x86_64 需要
---> Package kernel.x86_64 0:2.6.32-573.12.1.el6 will be 安装
--> 处理依赖关系 kernel-firmware >= 2.6.32-573.12.1.el6，它被软件包 kernel-2.6.32-573.12.1.el6.x8
6_64 需要
--> 处理依赖关系 dracut-kernel >= 004-388.el6，它被软件包 kernel-2.6.32-573.12.1.el6.x86_64 需要
---> Package kernel-devel.x86_64 0:2.6.32-573.12.1.el6 will be 安装
---> Package kernel-headers.x86_64 0:2.6.32-504.el6 will be 升级
---> Package kernel-headers.x86_64 0:2.6.32-573.12.1.el6 will be an update
--> 执行事务检查
---> Package cloog-ppl.x86_64 0:0.15.7-1.2.el6 will be 安装
--> 处理依赖关系 libppl_c.so.2()(64bit)，它被软件包 cloog-ppl-0.15.7-1.2.el6.x86_64 需要
--> 处理依赖关系 libppl.so.7()(64bit)，它被软件包 cloog-ppl-0.15.7-1.2.el6.x86_64 需要
---> Package cpp.x86_64 0:4.4.7-16.el6 will be 安装
---> Package dracut-kernel.noarch 0:004-356.el6 will be 升级
---> Package dracut-kernel.noarch 0:004-388.el6 will be an update
--> 处理依赖关系 dracut = 004-388.el6，它被软件包 dracut-kernel-004-388.el6.noarch 需要
---> Package kernel-firmware.noarch 0:2.6.32-504.el6 will be 升级
---> Package kernel-firmware.noarch 0:2.6.32-573.12.1.el6 will be an update
---> Package libgcc.x86_64 0:4.4.7-11.el6 will be 升级
---> Package libgcc.x86_64 0:4.4.7-16.el6 will be an update
---> Package libgomp.x86_64 0:4.4.7-11.el6 will be 升级
---> Package libgomp.x86_64 0:4.4.7-16.el6 will be an update
---> Package libstdc++.x86_64 0:4.4.7-11.el6 will be 升级
---> Package libstdc++.x86_64 0:4.4.7-16.el6 will be an update
---> Package libstdc++-devel.x86_64 0:4.4.7-16.el6 will be 安装
---> Package mpfr.x86_64 0:2.4.1-6.el6 will be 安装
--> 执行事务检查
---> Package dracut.noarch 0:004-356.el6 will be 升级
---> Package dracut.noarch 0:004-388.el6 will be an update
---> Package ppl.x86_64 0:0.10.2-11.el6 will be 安装
--> 完成依赖关系计算

依赖关系解决

================================================================================
 软件包                  架构          版本                      仓库          大小
================================================================================
正在安装:
 gcc                    x86_64        4.4.7-16.el6              base          10 M
 gcc-c++                x86_64        4.4.7-16.el6              base         4.7 M
 kernel                 x86_64        2.6.32-573.12.1.el6       updates       30 M
 kernel-devel           x86_64        2.6.32-573.12.1.el6       updates       10 M
正在升级:
 kernel-headers         x86_64        2.6.32-573.12.1.el6       updates      3.9 M
为依赖而安装:
 cloog-ppl              x86_64        0.15.7-1.2.el6            base          93 k
 cpp                    x86_64        4.4.7-16.el6              base         3.7 M
 libstdc++-devel        x86_64        4.4.7-16.el6              base         1.6 M
```

```
 mpfr                    x86_64          2.4.1-6.el6                 base          157 k
 ppl                     x86_64          0.10.2-11.el6               base          1.3 M
为依赖而更新:
 dracut                  noarch          004-388.el6                 base          125 k
 dracut-kernel           noarch          004-388.el6                 base           26 k
 kernel-firmware         noarch          2.6.32-573.12.1.el6         updates        18 M
 libgcc                  x86_64          4.4.7-16.el6                base          103 k
 libgomp                 x86_64          4.4.7-16.el6                base          134 k
 libstdc++               x86_64          4.4.7-16.el6                base          295 k

事务概要
================================================================================
Install       9 Package(s)
Upgrade       7 Package(s)

总下载量：85 M
确定吗？[y/N]：y
下载软件包：
(1/16): cloog-ppl-0.15.7-1.2.el6.x86_64.rpm                |  93 kB     00:00
(2/16): cpp-4.4.7-16.el6.x86_64.rpm                        | 3.7 MB     00:01
(3/16): dracut-004-388.el6.noarch.rpm                      | 125 kB     00:00
(4/16): dracut-kernel-004-388.el6.noarch.rpm               |  26 kB     00:00
(5/16): gcc-4.4.7-16.el6.x86_64.rpm                        |  10 MB     00:04
(6/16): gcc-c++-4.4.7-16.el6.x86_64.rpm                    | 4.7 MB     00:01
(7/16): kernel-2.6.32-573.12.1.el6.x86_64.rpm              |  30 MB     00:08
(8/16): kernel-devel-2.6.32-573.12.1.el6.x86_64.rpm        |  10 MB     00:03
(9/16): kernel-firmware-2.6.32-573.12.1.el6.noarch.rpm     |  18 MB     00:04
(10/16): kernel-headers-2.6.32-573.12.1.el6.x86_64.rpm     | 3.9 MB     00:01
(11/16): libgcc-4.4.7-16.el6.x86_64.rpm                    | 103 kB     00:00
(12/16): libgomp-4.4.7-16.el6.x86_64.rpm                   | 134 kB     00:00
(13/16): libstdc++-4.4.7-16.el6.x86_64.rpm                 | 295 kB     00:00
(14/16): libstdc++-devel-4.4.7-16.el6.x86_64.rpm           | 1.6 MB     00:00
(15/16): mpfr-2.4.1-6.el6.x86_64.rpm                       | 157 kB     00:00
(16/16): ppl-0.10.2-11.el6.x86_64.rpm                      | 1.3 MB     00:00
--------------------------------------------------------------------------------
总计                                              3.0 MB/s |  85 MB     00:28
warning: rpmts_HdrFromFdno: Header V3 RSA/SHA1 Signature, key ID c105b9de: NOKEY
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-6
Importing GPG key 0xC105B9DE:
 Userid : CentOS-6 Key (CentOS 6 Official Signing Key) <centos-6-key@centos.org>
 Package: centos-release-6-6.el6.centos.12.2.x86_64 (@anaconda-CentOS-201410241409.x86_64/6.6)
 From   : /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-6
确定吗？[y/N]：y
运行 rpm_check_debug
执行事务测试
事务测试成功
执行事务
  正在升级    : libgcc-4.4.7-16.el6.x86_64                                1/23
  正在升级    : libstdc++-4.4.7-16.el6.x86_64                             2/23
  正在安装    : mpfr-2.4.1-6.el6.x86_64                                   3/23
  正在安装    : cpp-4.4.7-16.el6.x86_64                                   4/23
  正在安装    : ppl-0.10.2-11.el6.x86_64                                  5/23
  正在安装    : cloog-ppl-0.15.7-1.2.el6.x86_64                           6/23
  正在安装    : libstdc++-devel-4.4.7-16.el6.x86_64                       7/23
  正在升级    : dracut-004-388.el6.noarch                                 8/23
  正在升级    : dracut-kernel-004-388.el6.noarch                          9/23
  正在升级    : kernel-firmware-2.6.32-573.12.1.el6.noarch               10/23
  正在升级    : libgomp-4.4.7-16.el6.x86_64                              11/23
  正在安装    : gcc-4.4.7-16.el6.x86_64                                  12/23
  正在安装    : gcc-c++-4.4.7-16.el6.x86_64                              13/23
  正在安装    : kernel-2.6.32-573.12.1.el6.x86_64                        14/23
  正在安装    : kernel-devel-2.6.32-573.12.1.el6.x86_64                  15/23
  正在升级    : kernel-headers-2.6.32-573.12.1.el6.x86_64                16/23
  清理        : dracut-kernel-004-356.el6.noarch                         17/23
  清理        : dracut-004-356.el6.noarch                                18/23
  清理        : kernel-headers-2.6.32-504.el6.x86_64                     19/23
  清理        : kernel-firmware-2.6.32-504.el6.noarch                    20/23
  清理        : libstdc++-4.4.7-11.el6.x86_64                            21/23
  清理        : libgcc-4.4.7-11.el6.x86_64                               22/23
  清理        : libgomp-4.4.7-11.el6.x86_64                              23/23
```



```
  Verifying  : libgomp-4.4.7-16.el6.x86_64                                  1/23
  Verifying  : gcc-c++-4.4.7-16.el6.x86_64                                  2/23
  Verifying  : kernel-firmware-2.6.32-573.12.1.el6.noarch                   3/23
  Verifying  : kernel-headers-2.6.32-573.12.1.el6.x86_64                    4/23
  Verifying  : dracut-004-388.el6.noarch                                    5/23
  Verifying  : ppl-0.10.2-11.el6.x86_64                                     6/23
  Verifying  : mpfr-2.4.1-6.el6.x86_64                                      7/23
  Verifying  : libstdc++-4.4.7-16.el6.x86_64                                8/23
  Verifying  : cpp-4.4.7-16.el6.x86_64                                      9/23
  Verifying  : cloog-ppl-0.15.7-1.2.el6.x86_64                             10/23
  Verifying  : dracut-kernel-004-388.el6.noarch                            11/23
  Verifying  : gcc-4.4.7-16.el6.x86_64                                     12/23
  Verifying  : kernel-2.6.32-573.12.1.el6.x86_64                           13/23
  Verifying  : kernel-devel-2.6.32-573.12.1.el6.x86_64                     14/23
  Verifying  : libstdc++-devel-4.4.7-16.el6.x86_64                         15/23
  Verifying  : libgcc-4.4.7-16.el6.x86_64                                  16/23
  Verifying  : dracut-004-356.el6.noarch                                   17/23
  Verifying  : kernel-firmware-2.6.32-504.el6.noarch                       18/23
  Verifying  : libstdc++-4.4.7-11.el6.x86_64                               19/23
  Verifying  : libgomp-4.4.7-11.el6.x86_64                                 20/23
  Verifying  : libgcc-4.4.7-11.el6.x86_64                                  21/23
  Verifying  : dracut-kernel-004-356.el6.noarch                            22/23
  Verifying  : kernel-headers-2.6.32-504.el6.x86_64                        23/23

已安装:
  gcc.x86_64 0:4.4.7-16.el6                    gcc-c++.x86_64 0:4.4.7-16.el6
  kernel.x86_64 0:2.6.32-573.12.1.el6          kernel-devel.x86_64 0:2.6.32-573.12.1.el6

作为依赖被安装:
  cloog-ppl.x86_64 0:0.15.7-1.2.el6                cpp.x86_64 0:4.4.7-16.el6
  libstdc++-devel.x86_64 0:4.4.7-16.el6            mpfr.x86_64 0:2.4.1-6.el6
  ppl.x86_64 0:0.10.2-11.el6

更新完毕:
  kernel-headers.x86_64 0:2.6.32-573.12.1.el6

作为依赖被升级:
  dracut.noarch 0:004-388.el6                  dracut-kernel.noarch 0:004-388.el6
  kernel-firmware.noarch 0:2.6.32-573.12.1.el6 libgcc.x86_64 0:4.4.7-16.el6
  libgomp.x86_64 0:4.4.7-16.el6                libstdc++.x86_64 0:4.4.7-16.el6

完毕！
[root@chinahadoop0 桌面]#
```

安装完毕。

4.5.2. 重启电脑

4.5.3. 再次查看版本信息

切换 root 用户，查看系统内核版本信息。

```
chinahadoop@chinahadoop0:/home/chinahadoop/桌面
文件(F)  编辑(E)  查看(V)  搜索(S)  终端(T)  帮助(H)
[chinahadoop@chinahadoop0 桌面]$ su root
密码：
[root@chinahadoop0 桌面]# uname -r
2.6.32-573.12.1.el6.x86_64
[root@chinahadoop0 桌面]#
```

查看已经安装的 kernel-devel 软件包。

```
[root@chinahadoop0 桌面]# yum list installed | fgrep kernel-devel
kernel-devel.x86_64     2.6.32-573.12.1.el6
[root@chinahadoop0 桌面]#
```

查看 kernel-devel 软件包信息



```
[root@chinahadoop0 桌面]# yum info kernel-devel
已加载插件：fastestmirror, refresh-packagekit, security
Loading mirror speeds from cached hostfile
 * base: mirror.bit.edu.cn
 * extras: mirrors.btte.net
 * updates: mirrors.yun-idc.com
已安装的软件包
Name        : kernel-devel
Arch        : x86_64
Version     : 2.6.32
Release     : 573.12.1.el6
Size        : 25 M
Repo        : installed
From repo   : updates
Summary     : Development package for building kernel modules to match the kernel
URL         : http://www.kernel.org/
License     : GPLv2
Description : This package provides kernel headers and makefiles sufficient to build
            : modules against the kernel package.

[root@chinahadoop0 桌面]#
```

## 4.6. 命令行安装增强功能

进入目录，启动安装增强功能。

```
chinahadoop@chinahadoop0:/media/VBOXADDITIONS_4.3.12_93733
文件(F)  编辑(E)  查看(V)  搜索(S)  终端(T)  帮助(H)

[root@chinahadoop0 桌面]# cd /media/VBOXADDITIONS_4.3.12_93733/
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]# pwd
/media/VBOXADDITIONS_4.3.12_93733
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]# ls
32Bit         autorun.sh  runasroot.sh              VBoxWindowsAdditions-amd64.exe
64Bit         cert        VBoxLinuxAdditions.run    VBoxWindowsAdditions.exe
AUTORUN.INF   OS2         VBoxSolarisAdditions.pkg  VBoxWindowsAdditions-x86.exe
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]# ./VBoxLinuxAdditions.run
Verifying archive integrity... All good.
Uncompressing VirtualBox 4.3.12 Guest Additions for Linux............
VirtualBox Guest Additions installer
Removing installed version 4.3.12 of VirtualBox Guest Additions...
Copying additional installer modules ...
Installing additional modules ...
Removing existing VirtualBox non-DKMS kernel modules       [确定]
Building the VirtualBox Guest Additions kernel modules
Building the main Guest Additions module                   [确定]
Building the shared folder support module                  [确定]
Building the OpenGL support module                         [失败]
(Look at /var/log/vboxadd-install.log to find out what went wrong)
Doing non-kernel setup of the Guest Additions              [确定]
Installing the Window System drivers
Installing X.Org Server 1.15 modules                       [确定]
Setting up the Window System to use the Guest Additions    [确定]
You may need to restart the hal service and the Window System (or just restart
the guest system) to enable the Guest Additions.

Installing graphics libraries and desktop services componen[确定]
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]#
```

发现安装失败，根据提示查看日志文件。

使用命令 vim /var/log/vboxadd-install.log 查看下日志文件中的报错信息。查看最后一页内容。



```
chinahadoop@chinahadoop0:/home/chinahadoop/桌面
文件(F)  编辑(E)  查看(V)  搜索(S)  终端(T)  帮助(H)
In file included from include/drm/drmP.h:69,
                 from /tmp/vbox.0/vboxvideo_drm.c:79:
include/drm/drm_crtc.h: 在文件层：
include/drm/drm_crtc.h:118: 错误： 'DRM_DISPLAY_INFO_LEN'未声明(不在函数内)
include/drm/drm_crtc.h:206: 错误： 'DRM_PROP_NAME_LEN'未声明(不在函数内)
include/drm/drm_crtc.h:715: 警告： 'struct drm_mode_fb_cmd2'在形参表内部声明
include/drm/drm_crtc.h: 在函数 'drm_property_type_is'中：
include/drm/drm_crtc.h:989: 错误： 'DRM_MODE_PROP_EXTENDED_TYPE'未声明(在此函数内第一次使用
)
include/drm/drm_crtc.h: 在函数 'drm_property_type_valid'中：
include/drm/drm_crtc.h:996: 错误： 'DRM_MODE_PROP_EXTENDED_TYPE'未声明(在此函数内第一次使用
)
include/drm/drm_crtc.h:997: 错误： 'DRM_MODE_PROP_LEGACY_TYPE'未声明(在此函数内第一次使用)
/tmp/vbox.0/vboxvideo_drm.c: 在文件层：
/tmp/vbox.0/vboxvideo_drm.c:122: 错误： 'drm_mmap'未声明(不在函数内)
/tmp/vbox.0/vboxvideo_drm.c:159: 错误：初始值设定项里有未知的字段 'pci_driver'
/tmp/vbox.0/vboxvideo_drm.c:161: 错误：初始值设定项里有未知的字段 'name'
/tmp/vbox.0/vboxvideo_drm.c:161: 警告：从不兼容的指针类型初始化
/tmp/vbox.0/vboxvideo_drm.c:162: 错误：初始值设定项里有未知的字段 'id_table'
/tmp/vbox.0/vboxvideo_drm.c:162: 警告：从不兼容的指针类型初始化
/tmp/vbox.0/vboxvideo_drm.c: 在函数 'vboxvideo_init'中：
/tmp/vbox.0/vboxvideo_drm.c:184: 错误：隐式声明函数 'drm_init'
/tmp/vbox.0/vboxvideo_drm.c: 在函数 'vboxvideo_exit'中：
/tmp/vbox.0/vboxvideo_drm.c:193: 错误：隐式声明函数 'drm_exit'
make[2]: *** [/tmp/vbox.0/vboxvideo_drm.o] 错误 1
make[1]: *** [_module_/tmp/vbox.0] 错误 2
make: *** [vboxvideo] 错误 2
Creating user for the Guest Additions.
Creating udev rule for the Guest Additions kernel module.
                                                          292,57        底端
```

解决方法，需要引入 MAKE 变量，操作如下：

```
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]# vim /var/log/vboxadd-install.log
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]# export MAKE='/usr/bin/gmake -i'
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]# ./VBoxLinuxAdditions.run
Verifying archive integrity... All good.
Uncompressing VirtualBox 4.3.12 Guest Additions for Linux............
VirtualBox Guest Additions installer
Removing installed version 4.3.12 of VirtualBox Guest Additions...
Copying additional installer modules ...
Installing additional modules ...
Removing existing VirtualBox non-DKMS kernel modules       [确定]
Building the VirtualBox Guest Additions kernel modules
Building the main Guest Additions module                   [确定]
Building the shared folder support module                  [确定]
Building the OpenGL support module                         [确定]
Doing non-kernel setup of the Guest Additions              [确定]
You should restart your guest to make sure the new modules are actually used

Installing the Window System drivers
Installing X.Org Server 1.15 modules                       [确定]
Setting up the Window System to use the Guest Additions    [确定]
You may need to restart the hal service and the Window System (or just restart
the guest system) to enable the Guest Additions.

Installing graphics libraries and desktop services componen[确定]
[root@chinahadoop0 VBOXADDITIONS_4.3.12_93733]#
```

安装好后重启虚拟机，发现 win7 和 centos6.6 虚拟机就可以相互的粘贴和拖放文件。