

## live\_CD 定制项目书

描述:

我们所设计的 Live\_CD 基于 Asianux Workstation3, 里面收集了一些 Linux 软件, 添加永中 Office2009 个人版, 精简了大部分不常用的 Server 软件。集成了自动硬件识别以及对许多图形显示卡、声卡、SCSI 和 USB 设备以及其他外围设备的支持。Live\_CD 可以用于 Linux 演示、教学光盘、应急系统, 或者被用来作为商用软件产品的演示平台。Live\_CD 默认使用中文 UTF-8 编码, 以及其他一些类似 Windows 设置, 十分适合从 MS Windows 平台转移到 Linux 平台的用户, 或有兴趣尝试使用 Linux 的用户, 以及进行 Linux 发行版开发和定制 (custom) 的用户, 所设计 live\_CD 是一个跟网络相结合, 并主要用于网络的平台。

### 一、主要优点

- 1) 无需安装到硬盘, 光盘启动直接运行, 它只需要在启动 windows 前进入界面即可;
- 2) 图形用户界面 (GUI), 使用 MS Windows 的用户能快速掌握;
- 3) 支持绝大多数 INTEL 架构的硬件设备, 支持优盘、ADSL 拨号等;
- 4) 兼容 NTFS、FAT32 格式的分区, 自动加载 (mount) 硬盘分区, 自动加载 USB 设备;
- 5) 适合做硬件检测工具, 适合做硬盘数据备份的第三方软件, 适合软/硬件工程师外出工作备用。

### 二、启动过程

很简单。只要在启动电脑前。先将光盘插入光驱, 在进入 windows 前选择启动方式, 光盘启动即可。

登录系统用户名: root

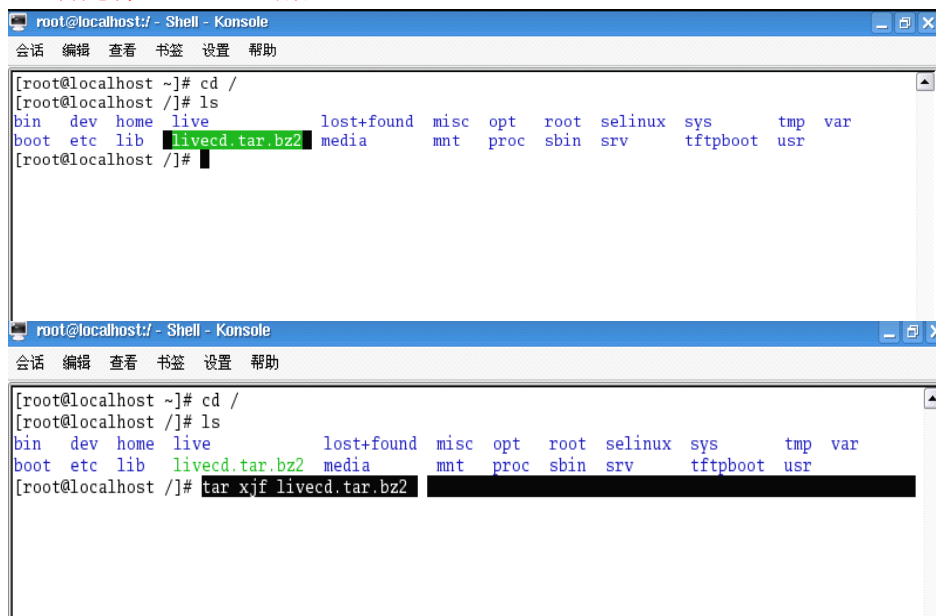
密码: 123456

### 三、制作过程

## 红旗 Asianux Workstation 3 环境的

## livecd 制作过程

### 1、首先将 livecd.tar 解压



```
root@localhost:~ - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# cd /
[root@localhost /]# ls
bin  dev  home  live          lost+found  misc  opt  root  selinux  sys      tmp  var
boot  etc  lib   livecd.tar.bz2 media      mnt  proc  sbin  srv    tftpboot  usr

[root@localhost /]#

root@localhost:~ - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# cd /
[root@localhost /]# ls
bin  dev  home  live          lost+found  misc  opt  root  selinux  sys      tmp  var
boot  etc  lib   livecd.tar.bz2 media      mnt  proc  sbin  srv    tftpboot  usr
[root@localhost /]# tar xjf livecd.tar.bz2
```

```
root@localhost:livecd - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# cd /
[root@localhost /]# ls
bin  dev  home  live          lost+found  misc  opt  root  selinux  sys  tmp  var
boot  etc  lib  livecd.tar.bz2  media  mnt  proc  sbin  srv  tftpboot  usr
[root@localhost /]# tar xjf livecd.tar.bz2
[root@localhost /]# ls
bin  dev  home  live  livecd.tar.bz2  media  mnt  proc  sbin  srv  tftpboot  usr
boot  etc  lib  livecd  lost+found  misc  opt  root  selinux  sys  tmp  var
[root@localhost /]# cd livecd
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm      linux-live-6.2.3--for-redflag.tar.bz2
kernel-live-devel-2.6.24.3-3.i686.rpm
[root@localhost livecd]#
```

2、解压后有两个内核文件和一个压缩文件，再将这个压缩文件解压，如图：

```
root@localhost:livecd - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# cd /
[root@localhost /]# ls
bin  dev  home  live          lost+found  misc  opt  root  selinux  sys  tmp  var
boot  etc  lib  livecd.tar.bz2  media  mnt  proc  sbin  srv  tftpboot  usr
[root@localhost /]# tar xjf livecd.tar.bz2
[root@localhost /]# ls
bin  dev  home  live  livecd.tar.bz2  media  mnt  proc  sbin  srv  tftpboot  usr
boot  etc  lib  livecd  lost+found  misc  opt  root  selinux  sys  tmp  var
[root@localhost /]# cd livecd
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm      linux-live-6.2.3--for-redflag.tar.bz2
kernel-live-devel-2.6.24.3-3.i686.rpm
[root@localhost livecd]# tar xjf linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm      linux-live-6.2.3--for-redflag
kernel-live-devel-2.6.24.3-3.i686.rpm  linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]#
```

3、以下是解压后看到的运行脚本：

```
root@localhost:livecd - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# cd /
[root@localhost /]# ls
bin  dev  home  live          lost+found  misc  opt  root  selinux  sys  tmp  var
boot  etc  lib  livecd.tar.bz2  media  mnt  proc  sbin  srv  tftpboot  usr
[root@localhost /]# tar xjf livecd.tar.bz2
[root@localhost /]# ls
bin  dev  home  live  livecd.tar.bz2  media  mnt  proc  sbin  srv  tftpboot  usr
boot  etc  lib  livecd  lost+found  misc  opt  root  selinux  sys  tmp  var
[root@localhost /]# cd livecd
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm      linux-live-6.2.3--for-redflag.tar.bz2
kernel-live-devel-2.6.24.3-3.i686.rpm
[root@localhost livecd]# tar xjf linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm      linux-live-6.2.3--for-redflag
kernel-live-devel-2.6.24.3-3.i686.rpm  linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]# ls linux-live-6.2.3--for-redflag
build  cd-root  DOC  initrd  install  README  TODO  tools  uninstall
[root@localhost livecd]#
```

安装两个内核文件 `rpm -ivh k*.rpm --nodeps --force`

```
root@localhost:livecd - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# cd /livecd/
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm      linux-live-6.2.3--for-redflag
kernel-live-devel-2.6.24.3-3.i686.rpm  linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]# rpm -Uvh *.rpm --nodeps --force
Preparing... ##### [100%]
 1:kernel-live-devel ##### [ 50%]
 2:kernel-live      ##### [100%]
[root@localhost livecd]#
```

用安装的 **kernel** 启动系统

并在 **reboot** 选择新内核来引导系统



## 查看 aufs 文件和 squashfs 文件

```
root@localhost:/lib/modules/2.6.24.4-live/kernel/fs - Shell - Konsole <2>
会话 编辑 查看 书签 设置 帮助

[root@localhost ~]# uname -r
2.6.24.4-live
[root@localhost ~]# cd /boot
[root@localhost boot]# ls
config-2.6.18-8.10WS      initrd-2.6.24.4-live.img  System.map-2.6.18-8.10WS
config-2.6.24.4-live     lost+found               System.map-2.6.24.4-live
efi                      memtest86+-1.65         vmlinuz-2.6.18-8.10WS
grub                     module-info              vmlinuz-2.6.24.4-live
initrd-2.6.18-8.10WS.img symvers-2.6.18-8.10WS.gz vmlinuz
[root@localhost boot]# ln -s vmlinuz-2.6.24.4-live vmlinuz
[root@localhost boot]# ls
config-2.6.18-8.10WS      initrd-2.6.24.4-live.img  System.map-2.6.18-8.10WS
config-2.6.24.4-live     lost+found               System.map-2.6.24.4-live
efi                      memtest86+-1.65         vmlinuz
grub                     module-info              vmlinuz-2.6.18-8.10WS
initrd-2.6.18-8.10WS.img symvers-2.6.18-8.10WS.gz vmlinuz-2.6.24.4-live
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# cd /lib/modules/2.6.24.4-live/kernel/fs
[root@localhost fs]# ls
aufs      autofs4  cifs     dlm       freevxfs  hfs       msdos    nls       squashfs
aufs      befs     coda     efs       fuse      hfsplus  ncpfs    qnx4      sysv
autofs    bfs      cramfs   exportfs  gfs2      jffs2    nfsd     romfs     ufs
[root@localhost fs]# ls aufs
aufs.ko
[root@localhost fs]# ls squashfs/
sqlzma.ko squashfs.ko unlzma.ko
[root@localhost fs]#
```

## 准备工作已做好，运行 build 脚本 ./build 并命名、指定路径

```
root@localhost:/livecd/linux-live-6.2.3--for-redflag - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

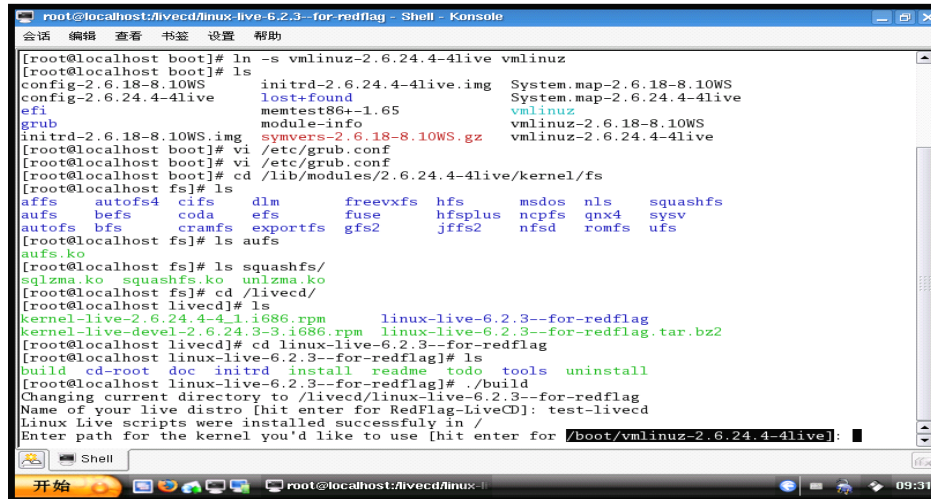
config-2.6.24.4-live      lost+found               System.map-2.6.24.4-live
efi                      memtest86+-1.65         vmlinuz-2.6.18-8.10WS
grub                     module-info              vmlinuz-2.6.24.4-live
initrd-2.6.18-8.10WS.img symvers-2.6.18-8.10WS.gz vmlinuz
[root@localhost boot]# ln -s vmlinuz-2.6.24.4-live vmlinuz
[root@localhost boot]# ls
config-2.6.18-8.10WS      initrd-2.6.24.4-live.img  System.map-2.6.18-8.10WS
config-2.6.24.4-live     lost+found               System.map-2.6.24.4-live
efi                      memtest86+-1.65         vmlinuz
grub                     module-info              vmlinuz-2.6.18-8.10WS
initrd-2.6.18-8.10WS.img symvers-2.6.18-8.10WS.gz vmlinuz-2.6.24.4-live
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# cd /lib/modules/2.6.24.4-live/kernel/fs
[root@localhost fs]# ls
aufs      autofs4  cifs     dlm       freevxfs  hfs       msdos    nls       squashfs
aufs      befs     coda     efs       fuse      hfsplus  ncpfs    qnx4      sysv
autofs    bfs      cramfs   exportfs  gfs2      jffs2    nfsd     romfs     ufs
[root@localhost fs]# ls aufs
aufs.ko
[root@localhost fs]# ls squashfs/
sqlzma.ko squashfs.ko unlzma.ko
[root@localhost fs]# cd /livecd/
[root@localhost livecd]# ls
kernel-live-2.6.24.4-1.i686.rpm  linux-live-6.2.3--for-redflag
kernel-live-devel-2.6.24.3-3.i686.rpm  linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]# cd linux-live-6.2.3--for-redflag
[root@localhost linux-live-6.2.3--for-redflag]# ls
build cd-root doc initrd install readme todo tools uninstall
[root@localhost linux-live-6.2.3--for-redflag]# ./build
```

## 命名: test-livecd

```
root@localhost:/livecd/linux-live-6.2.3--for-redflag - Shell - Konsole
会话 编辑 查看 书签 设置 帮助

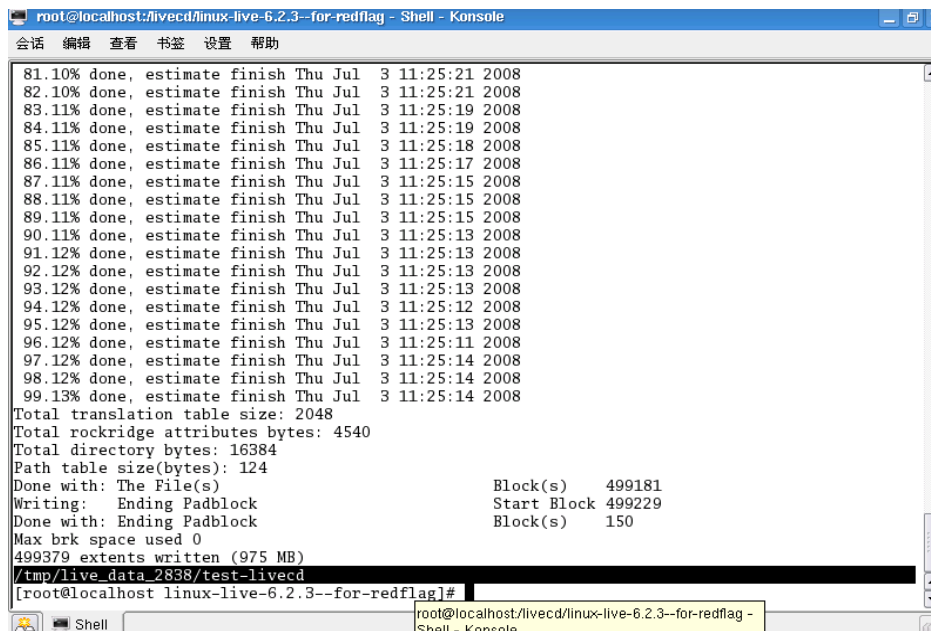
grub                     module-info              vmlinuz-2.6.24.4-live
initrd-2.6.18-8.10WS.img symvers-2.6.18-8.10WS.gz vmlinuz
[root@localhost boot]# ln -s vmlinuz-2.6.24.4-live vmlinuz
[root@localhost boot]# ls
config-2.6.18-8.10WS      initrd-2.6.24.4-live.img  System.map-2.6.18-8.10WS
config-2.6.24.4-live     lost+found               System.map-2.6.24.4-live
efi                      memtest86+-1.65         vmlinuz
grub                     module-info              vmlinuz-2.6.18-8.10WS
initrd-2.6.18-8.10WS.img symvers-2.6.18-8.10WS.gz vmlinuz-2.6.24.4-live
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# cd /lib/modules/2.6.24.4-live/kernel/fs
[root@localhost fs]# ls
aufs      autofs4  cifs     dlm       freevxfs  hfs       msdos    nls       squashfs
aufs      befs     coda     efs       fuse      hfsplus  ncpfs    qnx4      sysv
autofs    bfs      cramfs   exportfs  gfs2      jffs2    nfsd     romfs     ufs
[root@localhost fs]# ls aufs
aufs.ko
[root@localhost fs]# ls squashfs/
sqlzma.ko squashfs.ko unlzma.ko
[root@localhost fs]# cd /livecd/
[root@localhost livecd]# ls
kernel-live-2.6.24.4-1.i686.rpm  linux-live-6.2.3--for-redflag
kernel-live-devel-2.6.24.3-3.i686.rpm  linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost livecd]# cd linux-live-6.2.3--for-redflag
[root@localhost linux-live-6.2.3--for-redflag]# ls
build cd-root doc initrd install readme todo tools uninstall
[root@localhost linux-live-6.2.3--for-redflag]# ./build
Changing current directory to /livecd/linux-live-6.2.3--for-redflag
Name of your live distro [hit enter for RedFlag-LiveCD]: test-livecd
```

使用的内核路径必须指向新内核，如图：



```
[root@localhost boot]# ln -s vmlinuz-2.6.24.4-4live vmlinuz
[root@localhost boot]# ls
config-2.6.18-8.10WS      initrd-2.6.24.4-4live.img  System.map-2.6.18-8.10WS
config-2.6.24.4-4live    memtest86+-1.65           vmlinuz
efi                      module-info                vmlinuz-2.6.18-8.10WS
grub                     symvers-2.6.18-8.10WS.gz  vmlinuz-2.6.24.4-4live
initrd-2.6.18-8.10WS.img /etc/grub.conf
[root@localhost boot]# vi /etc/grub.conf
[root@localhost boot]# cd /lib/modules/2.6.24.4-4live/kernel/fs
[root@localhost fs]# ls
aufs      autofs4  cifs     dlm       freevxfs  hfs       msdos    nls       squashfs
aufs      befs     coda     efs       fuse      hfsplus  ncpfs    qnx4      sysv
autofs    bfs      cramfs   exportfs  gfs2      jffs2    nfsd     romfs     ufs
[root@localhost fs]# ls aufs
aufs.ko
[root@localhost fs]# ls squashfs/
sqlzma.ko squashfs.ko unlzma.ko
[root@localhost fs]# cd /livecd/
[root@localhost livecd]# ls
kernel-live-2.6.24.4-4.1.i686.rpm  linux-live-6.2.3--for-redflag
kernel-live-devel-2.6.24.3-3.i686.rpm  linux-live-6.2.3--for-redflag.tar.bz2
[root@localhost linux-live-6.2.3--for-redflag]# ls
build  cd-root  doc  initrd  install  readme  todo  tools  uninstall
[root@localhost linux-live-6.2.3--for-redflag]# ./build
Changing current directory to /livecd/linux-live-6.2.3--for-redflag
Name of your live distro [hit enter for RedFlag-LiveCD]: test-livecd
Linux live scripts were installed successfully in /
Enter path for the kernel you'd like to use [hit enter for /boot/vmlinuz-2.6.24.4-4live]:
```

运行结束，生成 ISO 文件



```
81.10% done, estimate finish Thu Jul 3 11:25:21 2008
82.10% done, estimate finish Thu Jul 3 11:25:21 2008
83.11% done, estimate finish Thu Jul 3 11:25:19 2008
84.11% done, estimate finish Thu Jul 3 11:25:19 2008
85.11% done, estimate finish Thu Jul 3 11:25:18 2008
86.11% done, estimate finish Thu Jul 3 11:25:17 2008
87.11% done, estimate finish Thu Jul 3 11:25:15 2008
88.11% done, estimate finish Thu Jul 3 11:25:15 2008
89.11% done, estimate finish Thu Jul 3 11:25:15 2008
90.11% done, estimate finish Thu Jul 3 11:25:13 2008
91.12% done, estimate finish Thu Jul 3 11:25:13 2008
92.12% done, estimate finish Thu Jul 3 11:25:13 2008
93.12% done, estimate finish Thu Jul 3 11:25:13 2008
94.12% done, estimate finish Thu Jul 3 11:25:12 2008
95.12% done, estimate finish Thu Jul 3 11:25:13 2008
96.12% done, estimate finish Thu Jul 3 11:25:11 2008
97.12% done, estimate finish Thu Jul 3 11:25:14 2008
98.12% done, estimate finish Thu Jul 3 11:25:14 2008
99.13% done, estimate finish Thu Jul 3 11:25:14 2008
Total translation table size: 2048
Total rockridge attributes bytes: 4540
Total directory bytes: 16384
Path table size(bytes): 124
Done with: The File(s)                                Block(s) 499181
Writing: Ending Padblock                               Start Block 499229
Done with: Ending Padblock                             Block(s) 150
Max brk space used 0
499379 extents written (975 MB)
/tmp/live_data_2838/test-livecd
[root@localhost linux-live-6.2.3--for-redflag]#
```

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