

同济大学计算机网络

实验报告



姓名： 涂远鹏-1652262

题目： 虚拟机及各类软件安装配置

1652262 计算机二班 涂远鹏

1.安装过程此处省略.....下面截图可以证明安装成功了.....

2.登录 CentOS 7 64 位系统，修改 ifcfg-ens32 配置文件使网卡正常工作：

```
RHEL74-SVR login: root
Password:
Login incorrect

RHEL74-SVR login: root
Password:
Last failed login: Sat Sep 15 13:58:38 CST 2018 on tty1
There were 4 failed login attempts since the last successful login.
Last login: Sat Sep 15 13:38:59 on tty1
[root@RHEL74-SVR ~]# ifconfig
ens32: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.80.230 netmask 255.255.255.0 broadcast 192.168.80.255
    inet6 fe80::7f81:ad74:ddee:633e prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:70:37:d4 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 13 bytes 954 (954.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 104 bytes 8336 (8.1 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 104 bytes 8336 (8.1 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@RHEL74-SVR ~]#
```

3.设置宿主机/虚拟机的 ip 地址在同一网段，使宿主机和虚拟机能 ping 通：

```
Microsoft Windows [版本 10.0.17134.228]
(c) 2018 Microsoft Corporation。保留所有权利。

C:\Users\admin>ping 192.168.80.230

正在 Ping 192.168.80.230 具有 32 字节的数据:
来自 192.168.80.230 的回复: 字节=32 时间<1ms TTL=64
来自 192.168.80.230 的回复: 字节=32 时间=1ms TTL=64
来自 192.168.80.230 的回复: 字节=32 时间=1ms TTL=64
来自 192.168.80.230 的回复: 字节=32 时间=2ms TTL=64

192.168.80.230 的 Ping 统计信息:
    数据包: 已发送 = 4, 已接收 = 4, 丢失 = 0 (0% 丢失),
往返行程的估计时间(以毫秒为单位):
    最短 = 0ms, 最长 = 2ms, 平均 = 1ms

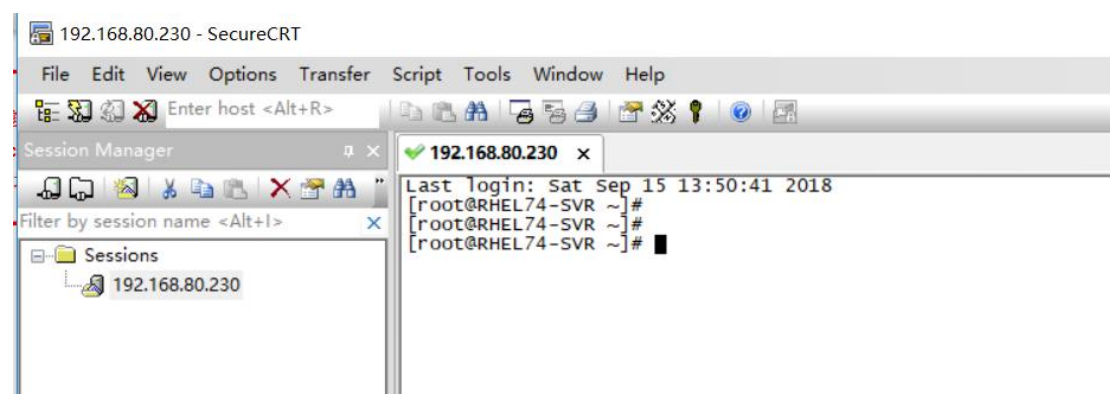
C:\Users\admin>
```

```

--- 192.168.80.1 ping statistics ---
52 packets transmitted, 52 received, 0% packet loss, time 51162ms
rtt min/avg/max/mdev = 0.207/0.801/3.466/0.557 ms
[root@RHEL74-SVR ~]# ping 192.168.80.1
PING 192.168.80.1 (192.168.80.1) 56(84) bytes of data:
64 bytes from 192.168.80.1: icmp_seq=1 ttl=128 time=0.213 ms
64 bytes from 192.168.80.1: icmp_seq=2 ttl=128 time=0.935 ms
64 bytes from 192.168.80.1: icmp_seq=3 ttl=128 time=0.702 ms
64 bytes from 192.168.80.1: icmp_seq=4 ttl=128 time=0.250 ms
64 bytes from 192.168.80.1: icmp_seq=5 ttl=128 time=0.711 ms
64 bytes from 192.168.80.1: icmp_seq=6 ttl=128 time=0.817 ms
64 bytes from 192.168.80.1: icmp_seq=7 ttl=128 time=0.246 ms
64 bytes from 192.168.80.1: icmp_seq=8 ttl=128 time=0.543 ms
64 bytes from 192.168.80.1: icmp_seq=9 ttl=128 time=0.220 ms
64 bytes from 192.168.80.1: icmp_seq=10 ttl=128 time=0.748 ms
64 bytes from 192.168.80.1: icmp_seq=11 ttl=128 time=1.04 ms
64 bytes from 192.168.80.1: icmp_seq=12 ttl=128 time=0.522 ms
^C
--- 192.168.80.1 ping statistics ---
12 packets transmitted, 12 received, 0% packet loss, time 11037ms
rtt min/avg/max/mdev = 0.213/0.579/1.049/0.283 ms
[root@RHEL74-SVR ~]# ^C

```

4.在 ping 通的基础上，使用 SecureCRT 能登陆 Linux:



5.修改 Linux 配置文件，使中文显示正常:

```

[root@RHEL74-SVR ~]# echo $LANG
zh_CN.gb18030
[root@RHEL74-SVR ~]# ls -l
anaconda-ks.cfg
test.txt
[root@RHEL74-SVR ~]# echo $LANG
zh_CN.gb18030
[root@RHEL74-SVR ~]#
"test.txt" 1L, 5C written
[root@RHEL74-SVR ~]# echo test.txt
test.txt
[root@RHEL74-SVR ~]# cat test
cat: test: 没有那个文件或目录
[root@RHEL74-SVR ~]# cat test.txt
你好
[root@RHEL74-SVR ~]#

```

```

Last login: Sat Sep 15 15:33:30 2018
[root@RHEL74-SVR ~]# ll
总用量 8
-rw-----. 1 root root 1412 9月 15 10:55 anaconda-ks.cfg
-rw-r--r--. 1 root root    5 9月 15 14:51 test.txt
-rw-r--r--. 1 root root    0 9月 15 15:13 测试.txt
[root@RHEL74-SVR ~]#

```

6.

首先启动 mariadb.service:

```
[root@RH74-SUR ~]# systemctl start mariadb.service
[root@RH74-SUR ~]# systemctl enable mariadb.service
Created symlink from /etc/systemd/system/multi-user.target.wants/mariadb.service to /usr/lib/systemd/system/mariadb.service.
```

查看 mysql 启动状态:

```
[root@RH74-SUR ~]# ps -ef | grep mysqld
mysql      2028      1  0 14:59 ?        00:00:00 /bin/sh /usr/bin/mysqld_safe --basedir=/usr
mysql      2190    2028  0 14:59 ?        00:00:00 /usr/libexec/mysqld --basedir=/usr --datadir=/var/
lib/mysql --plugin-dir=/usr/lib64/mysql/plugin --log-error=/var/log/mariadb/mariadb.log --pid-file=
var/run/mariadb/mariadb.pid --socket=/var/lib/mysql/mysql.sock
root       2259    1928  0 15:00 tty1    00:00:00 grep --color=auto mysqld
[root@RH74-SUR ~]#
```

登录 mysql 服务, 初始密码为空:

```
[root@RH74-SUR ~]# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 5.5.56-MariaDB MariaDB Server

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

修改 mysql 登录密码:

```
MariaDB [(none)]> USE mysql
ERROR 1049 (42000): Unknown database 'mysql'
MariaDB [(none)]> USE mysql
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [mysql]> UPDATE user SET password=PASSWORD('') WHERE User='root' AND Host='localhost';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0

MariaDB [mysql]> FLUSH PRIVILEGES
-> ;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> _
```

7.

修改 Mysql 文件配置, 增加

Init_connect='SET NAMES gbk'

Default_character_set=gbk

[client]

Default_character_set=gbk

[mysql]

Default_character_set=gbk

```
[mysqld]
init_connect='SET NAMES gbk'
character_set_server=gbk
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
# Disabling symbolic-links is recommended to prevent assorted security risks
symbolic-links=0
# Settings user and group are ignored when systemd is used.
# If you need to run mysqld under a different user or group,
# customize your systemd unit file for mariadb according to the
# instructions in http://fedoraproject.org/wiki/Systemd
```

Restart mysql.service 重启 mysql 服务，显示更改结果（show variables like 'character_set_%'）：

```
MariaDB [(none)]> show variables like 'character_set_%';
+-----+-----+
| Variable_name | Value |
+-----+-----+
| character_set_client | gbk |
| character_set_connection | gbk |
| character_set_database | gbk |
| character_set_filesystem | binary |
| character_set_results | gbk |
| character_set_server | gbk |
| character_set_system | utf8 |
| character_sets_dir | /usr/share/mysql/charsets/ |
+-----+-----+
8 rows in set (0.00 sec)
```

导入 sql 文件（demo.sql）：
采用逐条输入的方法输入 sql 信息：


```

MariaDB [demo]> create table student(sno varchar(20),sname varchar(20),ssex varchar
(20), sage varchar(20), sdept varchar(20));
Query OK, 0 rows affected (0.01 sec)

MariaDB [demo]> describe student
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sno   | varchar(20)   | YES  |     | NULL    |       |
| sname | varchar(20)   | YES  |     | NULL    |       |
| ssex  | varchar(20)   | YES  |     | NULL    |       |
| sage  | varchar(20)   | YES  |     | NULL    |       |
| sdept | varchar(20)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

MariaDB [demo]> insert into student
-> values('200215121','李晨','男','20','CS');
Query OK, 1 row affected (0.01 sec)

MariaDB [demo]> insert into student values('200215122','刘晨','女','20','CS');
Query OK, 1 row affected (0.00 sec)

MariaDB [demo]> insert into student values('200215123','王敏','女','18','MA');
Query OK, 1 row affected (0.00 sec)

MariaDB [demo]> insert into student values('2002151224','张立','男','19','IS');
Query OK, 1 row affected (0.00 sec)

MariaDB [demo]> select * from student
-> ;
+-----+-----+-----+-----+-----+
| sno   | sname | ssex | sage | sdept |
+-----+-----+-----+-----+-----+
| 200215121 | 李晨  | 男   | 20   | CS    |
| 200215122 | 刘晨  | 女   | 20   | CS    |
| 2002151223 | 王敏  | 女   | 18   | MA    |
| 2002151224 | 张立  | 男   | 19   | IS    |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

8.

首先挂载光盘，并新建并修改配置文件 CDROM.repo:

```

[root@RHEL74-SVR ~]# mount -t auto /dev/cdrom /mnt/cdrom
-bash: mount-t: 未找到命令
[root@RHEL74-SVR ~]# mount -t auto /dev/cdrom /mnt/cdrom
mount: /dev/sr0 写保护, 将以只读方式挂载
[root@RHEL74-SVR ~]# /etc/yum.repos.d/cdrom.repo
-bash: /etc/yum.repos.d/cdrom.repo: 没有那个文件或目录
[root@RHEL74-SVR ~]# vi /etc/yum.repos.d/cdrom.repo
[base]
name=RedHat
baseurl=file:///media/cdrom
enabled=1
gpgcheck=0
gpgkey=file:///media/cdrom/RPM-GPG-KEY-redhat-release
~
~

```

Yum install php 安装 php, Apache:

```

mount: /dev/loop0 写保护，将以只读方式挂载
[root@localhost ~]# df
文件系统              1K-块    已用    可用  已用% 挂载点
/dev/mapper/rhel-root 17811456 5852800 11958656 33% /
devtmpfs              1921572      0  1921572   0% /dev
tmpfs                 1932652    8916  1923736   1% /run
tmpfs                 1932652      0  1932652   0% /sys/fs/cgroup
/dev/sda1             1038336  148560   889776  15% /boot
/dev/loop0            3963760 3963760      0 100% /media/cdrom
[root@localhost ~]# yum clean all
已加载插件: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered with an entitlement server. You can use subscription-manager to register.
Repository 'repository_url': Error parsing config: Error parsing "baseurl = 'repository_url'"
ftp, file or https not ""
Cleaning up everything
Maybe you want: rm -rf /var/cache/yum, to also free up space taken by orphaned data from disk
[root@localhost ~]# yum install php
已加载插件: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered with an entitlement server. You can use subscription-manager to register.
Repository 'repository_url': Error parsing config: Error parsing "baseurl = 'repository_url'"
ftp, file or https not ""
base
(1/2): base/group_gz
(2/2): base/primary_db
正在解决依赖关系
--> 正在检查事务
--> 软件包 php.x86_64.0.5.4.16-42.el7 将被 安装
--> 正在处理依赖关系 httpd-mmn = 20120211x8664, 它被软件包 php-5.4.16-42.el7.x86_64 需要
--> 正在处理依赖关系 php-common(x86-64) = 5.4.16-42.el7, 它被软件包 php-5.4.16-42.el7.x86_64 需要
--> 正在处理依赖关系 php-cli(x86-64) = 5.4.16-42.el7, 它被软件包 php-5.4.16-42.el7.x86_64 需要
--> 正在处理依赖关系 httpd, 它被软件包 php-5.4.16-42.el7.x86_64 需要
--> 正在检查事务
--> 软件包 httpd.x86_64.0.2.4.6-67.el7 将被 安装
--> 正在处理依赖关系 httpd-tools = 2.4.6-67.el7, 它被软件包 httpd-2.4.6-67.el7.x86_64 需要
--> 正在处理依赖关系 /etc/httpd/conf/httpd.conf, 它被软件包 httpd-2.4.6-67.el7.x86_64 需要

```

```

正在安装      : php-cli-5.4.16-42.el7.x86_64
正在安装      : mailcap-2.1.41-2.el7.noarch
正在安装      : httpd-tools-2.4.6-67.el7.x86_64
正在安装      : httpd-2.4.6-67.el7.x86_64
正在安装      : php-5.4.16-42.el7.x86_64
base/productid
验证中       : httpd-2.4.6-67.el7.x86_64
验证中       : httpd-tools-2.4.6-67.el7.x86_64
验证中       : php-cli-5.4.16-42.el7.x86_64
验证中       : mailcap-2.1.41-2.el7.noarch
验证中       : php-5.4.16-42.el7.x86_64
验证中       : libzip-0.10.1-8.el7.x86_64
验证中       : php-common-5.4.16-42.el7.x86_64
已安装:
php.x86_64 0:5.4.16-42.el7
作为依赖被安装:
httpd.x86_64 0:2.4.6-67.el7      httpd-tools.x86_64 0:2.4.6-67.el7      libzip.x86_64 0:0.10.1-8.el7
mailcap.noarch 0:2.1.41-2.el7    php-cli.x86_64 0:5.4.16-42.el7      php-common.x86_64 0:5.4.16-42.el7

```

使用 SecureCRT 再次安装查看结果:

```

[root@RHEL74-SVR network-scripts]# cd ..
[root@RHEL74-SVR sysconfig]# cd ..
[root@RHEL74-SVR etc]# cd ..
[root@RHEL74-SVR /]# cd ..
[root@RHEL74-SVR /]# yum install php
已加载插件: fastestmirror, langpacks
Repository base is listed more than once in the configuration
Loading mirror speeds from cached hostfile
* base: mirrors.shu.edu.cn
* extras: mirrors.shu.edu.cn
* updates: mirrors.zju.edu.cn
软件包 php-5.4.16-45.el7.x86_64 已安装并且是最新版本
无须任何处理
[root@RHEL74-SVR /]# █

[root@RHEL74-SVR home]# cd ..
[root@RHEL74-SVR /]# mount /home/CentOS-7-x86_64-DVD-1804.iso /media/cdrom/
mount: 挂载点 /media/cdrom/ 不存在
[root@RHEL74-SVR /]# mount /home/CentOS-7-x86_64-DVD-1804.iso /media/cdrom/
mount: /dev/loop0 写保护, 将以只读方式挂载
[root@RHEL74-SVR /]# df
文件系统 1K-块 已用 可用 已用% 挂载点
/dev/mapper/centos-root 52403200 2095044 50308156 4% /
devtmpfs 2951692 0 2951692 0% /dev
tmpfs 2963964 0 2963964 0% /dev/shm
tmpfs 2963964 11936 2952028 1% /run
tmpfs 2963964 0 2963964 0% /sys/fs/cgroup
/dev/sda1 1038336 148456 889880 15% /boot
/dev/mapper/centos-home 208687556 4398456 204289100 3% /home
tmpfs 592796 0 592796 0% /run/user/0
/dev/loop0 4364408 4364408 0 100% /media/cdrom
[root@RHEL74-SVR /]# yum clean all
已加载插件: fastestmirror, langpacks
Repository base is listed more than once in the configuration
Cleaning up everything
Maybe you want: rm -rf /var/cache/yum, to also free up space taken by orphaned data f
rom disabled or removed repos
Cleaning up list of fastest mirrors
[root@RHEL74-SVR /]# yum install php
已加载插件: fastestmirror, langpacks
Repository base is listed more than once in the configuration
Determining fastest mirrors
* base: mirrors.shu.edu.cn
* extras: mirrors.shu.edu.cn
* updates: mirrors.zju.edu.cn
base | 3.6 kB 00:00:00
extras | 3.4 kB 00:00:00
updates | 3.4 kB 00:00:00
(1/4): extras/7/x86_64/primary_db | 187 kB 00:00:00
(2/4): base/7/x86_64/group_gz | 166 kB 00:00:02
(3/4): base/7/x86_64/primary_db | 5.9 MB 00:00:02
(4/4): updates/7/x86_64/primary_db | 5.2 MB 00:00:02
软件包 php-5.4.16-45.el7.x86_64 已安装并且是最新版本
无须任何处理
显示为最新所以安装成功

```

设置自启动:


```

[root@localhost ~]# systemctl start httpd.service
[root@localhost ~]# systemctl enable httpd.service
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/l
ervice.
[root@localhost ~]#

```

用 systemctl stop firewalld.service 关闭防火墙, 显示安装结果

测试写入的 info111.php 的结果:

<div> <div>PHP Version 5.4.16</div>  </div>	
System	Linux RHEL74-SVR 3.10.0-862.el7.x86_64 #1 SMP Fri Apr 20 16:44:24 UTC 2018 x86_64
Build Date	Apr 12 2018 19:02:50
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc
Loaded Configuration File	/etc/php.ini
Scan this dir for additional .ini files	/etc/php.d
Additional .ini files parsed	/etc/php.d/curl.ini, /etc/php.d/fileinfo.ini, /etc/php.d/json.ini, /etc/php.d/mysqli.ini, /etc/php.d/mysqli.ini, /etc/php.d/pdo.ini, /etc/php.d/pdo_mysql.ini, /etc/php.d/pdo_sqlite.ini, /etc/php.d/phar.ini, /etc/php.d/sqlite3.ini
PHP API	20100412
PHP Extension	20100525
Zend Extension	220100525
Zend Extension Build	API220100525.NTS
PHP Extension Build	API20100525.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	disabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled
IPv6 Support	enabled
DTrace Support	disabled
Registered PHP Streams	https, ftps, compress.zlib, compress.bzip2, php, file, glob, data, http, ftp, phar, zip
Registered Stream Socket	tcp, udp, unix, udg, ssl, sslv3, tls

Testing 123..

This page is used to test the proper operation of the [Apache HTTP server](#) after it has been installed. If you can read this page it means that this site is working properly. This server is powered by [CentOS](#).

Just visiting?

The website you just visited is either experiencing problems

Are you the Administrator?

You should add your website content to the directory `/var/www/html/`.

编辑 info.php 文件，输入(此处 mysql 我设置的是空密码，所以改了一下):

```

"/var/www/html/info.php" 26L, 874C written
[root@RHEL74-SVR ~]# systemctl restart httpd.service
[root@RHEL74-SVR ~]# vi /var/www/html/info.php
<?php
$startTime=microtime(true);
$mysqli=new mysqli('localhost','root','','demo');
if(mysqli_connect_errno()){
echo "连接失败, 原因为: ".mysqli_connect_error();
exit();
}
$result=$mysqli->query("set names GBK");
$query="select * from student";
$result=$mysqli->query($query);
if(!$result->num_rows){
echo "数据为空";
exit();
}
echo'<table align="center" width="50%" border="3" cellpadding="0" cellspacing="0">';
;
echo'<caption align="left">列表</caption>';
echo'<tr><th>学号</th><th>姓名</th><th>性别</th><th>年龄</th><th>系部</th><tr>';
while($row=$result->fetch_assoc()){
echo'<tr><td>'. $row["sno"]. '</td><td>'. $row["sname"]. '</td><td>'. $row["ssex"]. '</td><td>'. $row["sage"]. '</td><td>'. $row["sdept"]. '</td><tr>';
}
$result->close();
echo'</table>';
$mysqli->close();
$stopTime=microtime(true);
echo"打开网页耗时: ".($stopTime-$startTime)."秒.";
?>

```

修改/etc/php.ini 文件:

```

; PHP's default character set is set to empty.
; http://php.net/default-charset
default_charset = "GBK"

```

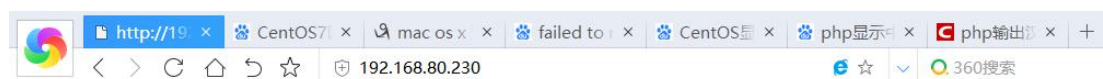
修改/etc/httpd/conf/httpd.conf 文件, 把显示的网页改成 info.php:

```

# To request.
#
<IfModule dir_module>
    DirectoryIndex info.php index.html
</IfModule>
#
# The following lines prevent htaccess and httpd

```

最后重启网络服务, 得到最后结果:



列表				
学号	姓名	性别	年龄	系部
200215121	李晨	男	20	CS
200215122	刘晨	女	20	CS
2002151223	王敏	女	18	MA
2002151224	张立	男	19	IS

打开网页耗时: 0.0053219795227051秒.

9

首先安装编译器:

依赖关系解决

Package	架构	版本	源	大小
正在安装:				
mariadb-devel	x86_64	1:5.5.60-1.el7_5	updates	754 k
为依赖而安装:				
keyutils-libs-devel	x86_64	1.5.8-3.el7	base	37 k
krb5-devel	x86_64	1.15.1-19.el7	updates	269 k
libcom_err-devel	x86_64	1.42.9-12.el7_5	updates	31 k
libkadm5	x86_64	1.15.1-19.el7	updates	175 k
libselinux-devel	x86_64	2.5-12.el7	base	186 k
libsepol-devel	x86_64	2.5-8.1.el7	base	77 k
libverto-devel	x86_64	0.2.5-4.el7	base	12 k
openssl-devel	x86_64	1:1.0.2k-12.el7	base	1.5 M
pcre-devel	x86_64	8.32-17.el7	base	480 k
zlib-devel	x86_64	1.2.7-17.el7	base	50 k
为依赖而更新:				
e2fsprogs	x86_64	1.42.9-12.el7_5	updates	699 k
e2fsprogs-libs	x86_64	1.42.9-12.el7_5	updates	167 k
krb5-libs	x86_64	1.15.1-19.el7	updates	747 k
libcom_err	x86_64	1.42.9-12.el7_5	updates	41 k
libss	x86_64	1.42.9-12.el7_5	updates	45 k

事务概要

安装 1 软件包 (+10 依赖软件包)
 升级 (5 依赖软件包)

总下载量: 5.2 M

Is this ok [y/d/N]: █

```

已安装:
mariadb-devel.x86_64 1:5.5.60-1.el7_5

作为依赖被安装:
keyutils-libs-devel.x86_64 0:1.5.8-3.el7          krb5-devel.x86_64 0:1.15.1-19.el7          libcom_err-devel.x86_64 0:1.42.9-12.el7_5
libkadm5.x86_64 0:1.15.1-19.el7                  libselinux-devel.x86_64 0:2.5-12.el7        libsepol-devel.x86_64 0:2.5-8.1.el7
libverto-devel.x86_64 0:0.2.5-4.el7               openssl-devel.x86_64 1:1.0.2k-12.el7        pcre-devel.x86_64 0:8.32-17.el7
zlib-devel.x86_64 0:1.2.7-17.el7

作为依赖被升级:
e2fsprogs.x86_64 0:1.42.9-12.el7_5      e2fsprogs-libs.x86_64 0:1.42.9-12.el7_5      krb5-libs.x86_64 0:1.15.1-19.el7      libcom_err.x86_64 0:1.42.9-12.el7_5
libss.x86_64 0:1.42.9-12.el7_5

完毕!
[root@RHEL74-SVR ~]# █

```

新建并输入 mysql_demo.cpp 内容, 此处也需要修改 root123 为空, 否则无法访问 mysql:

```

#include<iomanip>
#include<mysql.h>
using namespace std;
int main(int argc,char* argv[])
{
    MYSQL *mysql;
    MYSQL_RES *result;
    MYSQL_ROW row;
    if((mysql=mysql_init(NULL))==NULL){
        cout<<"mysql_init_failed"<<endl;
        return -1;
    }
    if(mysql_real_connect(mysql,"localhost","root","","demo",0,NULL,0)==NUL
        cout<<"mysql_real_connect failed("<<mysql_error(mysql)<<")"<<endl;
        return -1;
    }
    mysql_set_character_set(mysql,"GBK");
    if(mysql_query(mysql,"select * from student")){
        cout<<"mysql_query failed("<<mysql_error(mysql)<<")"<<endl;
        return -1;
    }
    if((result=mysql_store_result(mysql))==NULL){
        cout<<"mysql_store_result failed"<<endl;
        return -1;
    }
    cout<<"select return"<<(int)mysql_num_rows(result)<<" records"<<endl;
    while((row=mysql_fetch_row(result))!=NULL){
        cout<<setiosflags(ios::left);
        cout<<"学号: " <<setw(12)<<row[0];
        cout<<"姓名: " <<setw(8)<<row[1];
        cout<<"性别: " <<setw(4)<<row[2];
        cout<<"年龄: " <<setw(4)<<row[3];
        cout<<"系部: " <<setw(4)<<row[4];
        cout<<endl;
    }
    mysql_free_result(result);
    mysql_close(mysql);
}
mysql_demo.cpp 40L, 1069C written

```

编译输出正确结果:

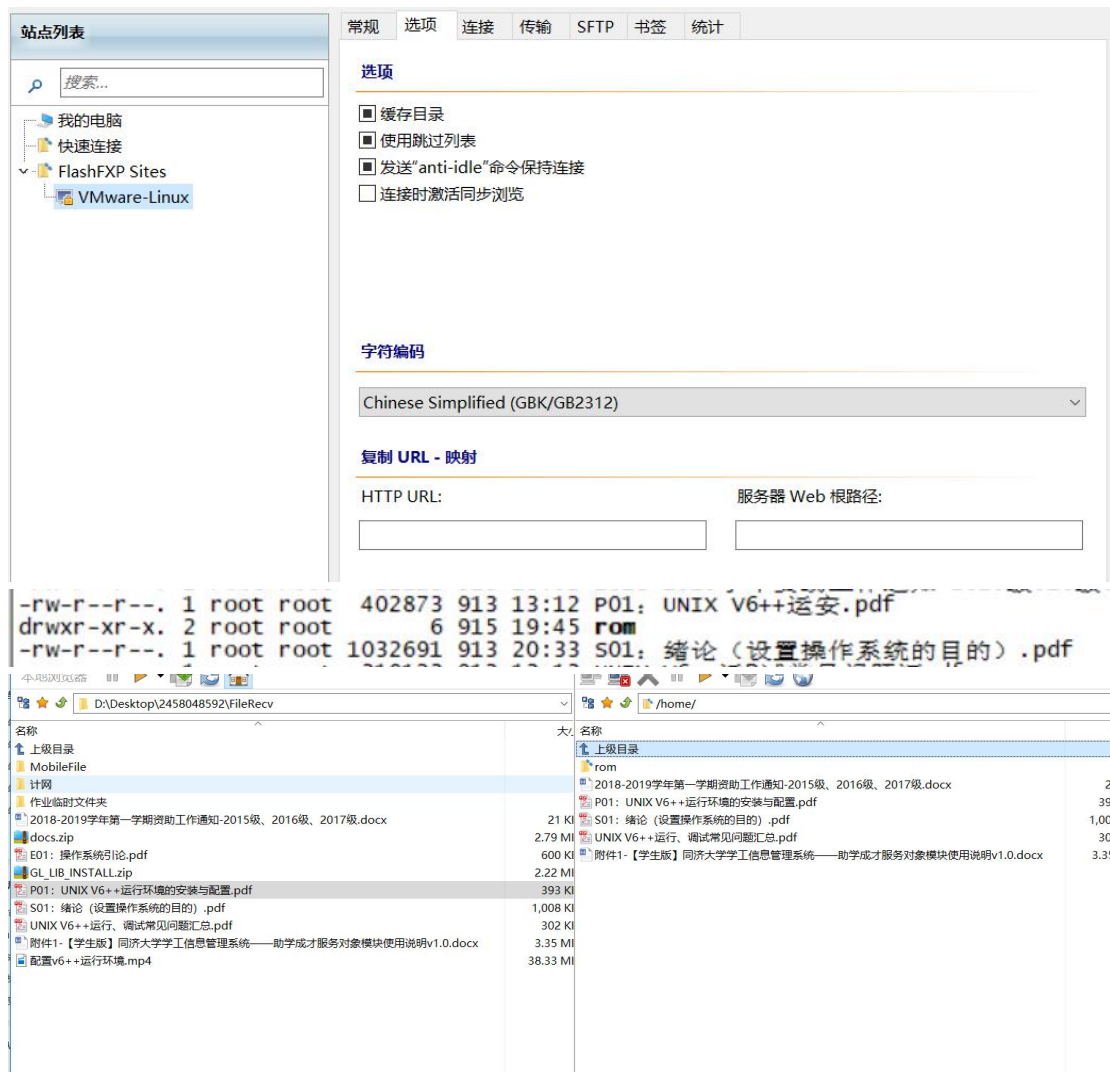
```

[root@RHEL74-SVR ~]# g++ mysql_demo.cpp -I/usr/include/mysql -L/usr/lib64/mysql -lmysqlclient
[root@RHEL74-SVR ~]# ./a.out
select return 4 records
学号: 200215121  姓名: 李晨  性别: 男  年龄: 20  系部: CS
学号: 200215122  姓名: 刘晨  性别: 女  年龄: 20  系部: CS
学号: 200215123  姓名: 王敏  性别: 女  年龄: 18  系部: MA
学号: 200215124  姓名: 张立  性别: 男  年龄: 19  系部: IS

```

10.

设置完成显示正常, 修改 FXP 和 SecureCRT 的编码方式一样, 其实就是修改 FXP 的站点管理器中的编码方式为 GBK, 此处需要注意的是, 需要用管理员方式打开 FXP, 貌似不用的话会出现一设置完就 FXP 无响应的情况.....:



PS: 有的是从 SecureCRT 上截的图, 有的是从 VMware 上截的图所以有的是背景为黑有的是为白.....