

??:

Windows ????? SMB (Session Message Block protocol, ??? NetBIOS ? LanManager protocol.) ,?????????????,?
samba ?? Linux ????? SMB (NetBIOS) ??????????????????.????? samba ?? Windows ? Linux ??????????????????.
Windows ? Linux ?? SMB /NMB ??????????:

???? SMB(NetBIOS)?!????????????????????.

NetBIOS

??? IBM ????? NetBIOS API(Network Basic Input/Output System Application Program Interface),?? NetBIOS
? 18 ? API ??,?????????????????????. ?? NetBIOS ????(broadcasts)?????.?????????(routed).?????????????.NetBIOS
?? session layer protocol(?5?,???)

NetBEUI

?????NetBIOS?????,NetBEUI(NetBIOS Extened User Interface),?????????????????????.NetBEUI ?? data-link layer
protocol (?2?,?????).

SMB(NetBIOS)

Windows NT4.0 ????????(?????????),?????(wins)...???? NetBIOS over NetBEUI?????.??? NetBIOS ??? over TCP/IP
? Windows 2000 ????????(?????????), Linux ? samba server or NETBIOS over IPX(Internetnetwork Packet
Exchange) ? NT ?? NWLINK

note:

- 1.?????????????,??? Roter ?, Router ??????????.???????????????? InterNet ?,????????.
- 2.NetBEUI ?? data-link layer protocol (?2?,?????)

Samba ?????? <http://www.samba.org>

RHEL5 - Samba (?) ?? samba ???

???? samba ?????,????? /Server ???????? samba ? rpm ?????????? yum ???.

```
[root@benjr ~]# rpm -aq | grep samba
samba
samba-common
samba-client
system-config-samba
```

?? samba ? RedHat ???????? /Server ??????????

```
[root@benjr ~]# rpm -ivh samba-common.rpm
[root@benjr ~]# rpm -ivh samba-client.rpm
[root@benjr ~]# rpm -ivh samba.rpm
[root@benjr ~]# rpm -ivh system-config-samba
```

?? samba ??????????????

```
[root@benjr ~]# chkconfig smb on
[root@benjr ~]# chkconfig --list smb
smb    0:off 1:on 2:on 3:on 4:on 5:on 6:off
```

???? samba ??

```
[root@benjr ~]# service smb start
Starting SMB services:      [ OK ]
Starting NMB services:     [ OK ]
```

RHEL 5 ??? #system-config-samba ?????????????? samba ???,????????????????????? samba ????? /etc/samba/smb.conf ,????????? samba ?????.

```
[root@benjr ~]# cat /etc/samba/smb.conf
#===== Global Settings =====
[global]
  workgroup = mygroup
  server string = Samba Server Version %v
  netbios name = benjr
  security = user
  passdb backend = tdbsam
#===== Share Definitions=====
[homes]
  comment = Home Directories
  browseable = no
  writeable = yes
```

```

; valid users = %S
; valid users = MYDOMAIN\%S

[printers]
comment = All Printers
path = /var/spool/samba
browseable = no
; guest ok = no
; writeable = no
printable = yes

```

??????????????

1.[global] ?????? samba ?????

??? [global] ? security ??????????,samba 3.X ?????????????

2.[share] ?????????????????

/etc/samba/ ?? ?????

```

[root@benjr ~]# ll /etc/samba/
total 52
-rw-r--r-- 1 root root  20 Apr  3  2008 lmhosts
-rw----- 1 root root 4096 Apr 12 06:59 passdb.tdb
-rw----- 1 root root 8192 Apr 12 06:59 secrets.tdb
-rw-r--r-- 1 root root 10043 Apr 14 03:37 smb.conf
-rw-r--r-- 1 root root  97 Apr  3  2008 smbusers

```

- 1."/etc/samba/lmhosts" ?? NetBIOS name ? IP ?????
- 2."/etc/samba/passdb.tdb" ?????? samba server ??????????????
- 3."/etc/samba/secrets.tdb" ?? samba ????
- 4."/etc/samba/smb.conf" samba ????
- 5."/etc/samba/smbusers" UNIX name ? samb name ?????

??? samba ????????????????? /etc/samba/smbpassword ,????????? samba server ??????????,????????????????????

- 1.????????,????????.
- 2.??? samba server ?????? smbpasswd ?,???? samba server ??????????.
- 3.smbpasswd ?????????????????????.
- 4.????????????????????? samba server ?????,

???? RHEL5 ?????????????????,???????????????????? tdbsam(.tdb) ?????? Samba ?????????,???? LDAP ???????.

- 1.Plain Text: :
- 2.smbpasswd : Encrypted Password Database
- 3.tdbsam:
- 4.ldapsam:
- 5.MySQL:

6.XML:

RHEL5 - Samba (?) samba ?????

RHEL 5 ????? #system-config-samba ??? samba ???????????????????????:

nmblookup : ?? NetBIOS ??? IP addresses

```
[root@benjr ~]# nmblookup benjr
querying benjr on 192.8.1.255
192.8.1.85 benjr<00>
```

smbstatus : ?? samba server ??????????

```
[root@benjr ~]# smbstatus
Samba version 3.0.28-0.el5.8
PID Username Group Machine
-----
Service pid machine Connected at
-----
share 4600 192.8.1.242 Tue Apr 14 03:47:18 2009

Locked files:
Pid Uid DenyMode Access R/W Oplock SharePath Name Time
-----
4600 99 DENY_NONE 0x100001 RDONLY NONE /share . Tue Apr 14 03:47:18
2009
```

testparm : ?????????????????? /etc/samba/smb.conf ???,Samba ??????? testparm ?????? /etc/samba/smb.conf ???????,????????.

```
[root@benjr ~]# testparm /etc/samba/smb.conf
Load smb config files from /etc/samba/smb.conf
Processing section "[homes]"
Processing section "[printers]"
Loaded services file OK.
Press enter to see a dump of your service definitions
.....?.....
```

????????????? samba server ????

```
[root@benjr ~]# testparm /etc/samba/smb.conf 192.13.9.9
```

smbclient : ?? samba server ??????????

```
[root@benjr ~]# smbclient -L benjr
Password:
```

```

Domain=[MYGROUP] OS=[Unix] Server=[Samba 3.0.28-0.el5.8]
  Sharename  Type      Comment
  -----  ---  -----
  share      Disk
  IPC$       IPC      IPC Service (Samba Server Version 3.0.28-0.el5.8)
Domain=[MYGROUP] OS=[Unix] Server=[Samba 3.0.28-0.el5.8]

  Server      Comment
  -----  -----
  BENJR       Samba Server Version 3.0.28-0.el5.8

  Workgroup   Master
  -----  -----
  MYGROUP
    
```

"mount or smbmount" :mount smaba ??? share ??

```

[root@unsvr root]# mount -t smbfs //benjr/share /mnt
Password:
[root@unsvr root]# smbmount //benjr/share /mntpoint
Password:
    
```

RHEL5 - Samba (?) ???(iptables)

?? samba Server ???24?????,????????????????????,????????,????? port ??,??????????
 iptables(firewall) ? SELinux ???? Samba ??????.???????????????? iptables(firewall) ? SELinux.?Linux?????
 iptables.?? RHEL5 ?? iptables ?????.????:

```

[root@benjr ~]#system-config-securitylevel
    
```

????: ?????????????(iptables)??????????.

???????????? port ??,?????? port ??? SMB /NMB ??????????????.?????????????????????????????????????.?????????NetBIOS
(UDP ports 137 and 138, TCP ports 139) ? TCP port 445 for SMB file sharing without NetBIOS.

?????????? SSH ?????????? Text mode ????

```
[root@benjr ~]#system-config-securitylevel-tui
```

????????,???????????????????? /etc/sysconfig/iptables

```
[root@benjr ~]# cat /etc/sysconfig/iptables
# Firewall configuration written by system-config-securitylevel
# Manual customization of this file is not recommended.
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
:RH-Firewall-1-INPUT - [0:0]
-A INPUT -j RH-Firewall-1-INPUT
-A FORWARD -j RH-Firewall-1-INPUT
-A RH-Firewall-1-INPUT -i lo -j ACCEPT
-A RH-Firewall-1-INPUT -i ppp0 -j ACCEPT
-A RH-Firewall-1-INPUT -i eth0 -j ACCEPT
-A RH-Firewall-1-INPUT -p icmp --icmp-type any -j ACCEPT
-A RH-Firewall-1-INPUT -p 50 -j ACCEPT
-A RH-Firewall-1-INPUT -p 51 -j ACCEPT
-A RH-Firewall-1-INPUT -p udp --dport 5353 -d 224.0.0.251 -j ACCEPT
-A RH-Firewall-1-INPUT -p udp -m udp --dport 631 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m udp -p udp --dport 137 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m udp -p udp --dport 138 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 139 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 445 -j ACCEPT
-A RH-Firewall-1-INPUT -j REJECT --reject-with icmp-host-prohibited
COMMIT
```

??:

?????? samba ?????? port.

```
-A RH-Firewall-1-INPUT -m state --state NEW -m udp -p udp --dport 137 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m udp -p udp --dport 138 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 139 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 445 -j ACCEPT
????????? iptables ,?????????,????????????? iptables .
```

```
[root@benjr ~]#chkconfig iptables on
```

????????????????????????????????????? iptables ??.

```
[root@benjr ~]#service iptables start
Starting httpd [OK]
```

???? iptables ??????

```
[root@benjr ~]#/sbin/service iptables save
#????????? /etc/sysconfig/iptables
```

RHEL5 - Samba (?) ????????

?? RHEL5 ??? samba ??? 3.X,? samba 3.X ??????????????????

????????????????? samba server ?????????? Windows ????

1.Share Level Security : ??????????

security = share

2.User Level Security : ???? samba server ??????,?????????????

security = user

3.Server Security : ?????? Windows NT/2000/2003 ? samba server ??????

encrypt passwords = Yes

security = server

password server = "NetBIOS_name_of_a_DC"

4.Domain Security Mode : ?????? Windows AD (Domain ? mixed mode)??? Windows NT 4 ??

workgroup = "name_of_NT_domain"

security = domain

5.ADS Security Mode : ?????? Windows AD ??(Domain ? native mode)

realm = your.kerberos.REALM

security = ADS

ads server = your.kerberos.server

RHEL5 - Samba (?) Share ??????

???? Share Level Security : ??????????,????????????????????????????? X-windows ??? #system-config-samba ??

"Authentication Mode" ? Share.

?? #system-config-samba ???????,????????? samba ??? /etc/samba/smb.conf ,????????? share ?????? samba ??
?????????.

```
[root@benjr ~]# vi /etc/samba/smb.conf
[global]
  workgroup = MYGROUP
  netbios name = benjr
  security = share
```

- 1.???????????? security = share
 - 2.netbios name ??????,??? Windows ?????,????? netbios name ? samba ????? hostname ?????.
- ??????? samb ?????????????????,???????? Linux ??????.??? Windows ??????.

```
???????????????? /share ????,?????(#mkdir /share).??????????????.??????????????.?????????
????,???????????????? Linux ??????.??? #system-config-samba
```

?? Add Share ????????,?? samba ?????????????????? Access ?????? "Allow access to everyone".? Basic ?????? Share name ????????????,??????????.?????????????,???????????????????????????????? "writable" ????????(Guest User) ????????.????????????? ??? samba ??? /etc/samba/smb.conf ????????

```
[root@benjr ~]# vi /etc/samba/smb.conf
===== Share Definitions =====
[tmp]
comment = Temporary file space
path = /tmp
read only = no
public = yes
[share]
path = share
public = yes
writable = yes
```

[share] ????????, path = /share ?????? Linux ???,writable ??????????????????.

Linux client ??????????

I.smbclient ?? samba server ??????????

```
[root@benjr ~]# smbclient -L benjr
Password:
Domain=[MYGROUP] OS=[Unix] Server=[Samba 3.0.28-0.el5.8]
```

```

Sharename  Type  Comment
-----  -
share      Disk
IPC$       IPC   IPC Service (Samba Server Version 3.0.28-0.el5.8)
Domain=[MYGROUP] OS=[Unix] Server=[Samba 3.0.28-0.el5.8]

Server      Comment
-----  -
BENJR      Samba Server Version 3.0.28-0.el5.8

Workgroup   Master
-----  -
MYGROUP

```

??? passwd ??????,??? enter ?????

II."mount or smbmount" mount smaba ??? share ??

```

[root@unsvr root]# mount -t smbfs //benjr/share /mnt
Password:
[root@unsvr root]# smbmount //benjr/share /mntpoint
Password:

```

??? passwd ??????,??? enter ?????,?????????smaba ??????.

Windows client ????????

???????????,??? ??/? ? IP ??????(netbios name),????? samba server ??????,????????? samba server ??????
?.

RHEL5 - Samba (?) ?? samba User

? samba server security ? user ?????????? samba server ??????.?? /etc/
samba/smbpasswd,RHEL5 ?????????????? passdb.tdb .

```

[root@benjr ~]# cat /etc/samba/smb.conf
# ----- Standalone Server Options -----
#
# Security can be set to user, share(deprecated) or server(deprecated)
#
# Backend to store user information in. New installations should
# use either tdbsam or ldapsam. smbpasswd is available for backwards
# compatibility. tdbsam requires no further configuration.
security = user
passdb backend = tdbsam

```

?? Linux ???,?????????????.???????? "Bob" ? "John"

```

[root@benjr ~]# adduser bob

```

```

[root@benjr ~]# adduser john
[root@benjr ~]# passwd bob
Changing password for user bob.
New UNIX password:
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@benjr ~]# passwd john
Changing password for user john.
New UNIX password:
Retype new UNIX password:
passwd: all authentication tokens updated successfully.

```

??????? system-config-samba ?????,??? #system-config-samba ?,?? Preferences / Samba Users ????? "Add User"

???????????????? Linux User ??? Unix Username:???????? bob ? john.Windows Username ????? Unix Username ?
???

??? #pdbedit -au ??????.

```
[root@benjr ~]# pdbedit -au bob
new password:
retype new password:
Unix username:  bob
NT username:
Account Flags:  [U      ]
User SID:      S-1-5-21-1634407166-380897321-584037179-1001
Primary Group SID:  S-1-5-21-1634407166-380897321-584037179-513
Full Name:
Home Directory:  \\benjr\bob
HomeDir Drive:
Logon Script:
Profile Path:   \\benjr\bob\profile
Domain:        BENJR
Account desc:
Workstations:
Munged dial:
Logon time:    0
Logoff time:   never
Kickoff time:  never
Password last set:  Fri, 17 Apr 2009 03:38:39 CST
Password can change:  Fri, 17 Apr 2009 03:38:39 CST
Password must change: never
```

```

Last bad password : 0
Bad password count : 0
Logon hours      : FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
[root@benjr ~]# pdbedit -au john
new password:
retype new password:
Unix username:   john
NT username:
Account Flags:   [U      ]
User SID:        S-1-5-21-1634407166-380897321-584037179-1002
Primary Group SID: S-1-5-21-1634407166-380897321-584037179-513
Full Name:
Home Directory:  \\benjr\john
HomeDir Drive:
Logon Script:
Profile Path:    \\benjr\john\profile
Domain:          BENJR
Account desc:
Workstations:
Munged dial:
Logon time:      0
Logoff time:     never
Kickoff time:    never
Password last set: Fri, 17 Apr 2009 03:38:51 CST
Password can change: Fri, 17 Apr 2009 03:38:51 CST
Password must change: never
Last bad password : 0
Bad password count : 0
Logon hours      : FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF

```

```
#pdbedit ??? -L ????????? samba ???.
```

```

[root@benjr ~]# pdbedit -L
john:501:
bob:500:

```

note:

????? RedHat ??????????????,????? system-config-samba ?????????,?!?????????.?????????????????(An account for this user already exists. Please try again).

?!!!!?????!!??????? #pdbedit -L ?????????,?????,??? system-config-samba ??? /etc/samba/smbpasswd ?
????????,???? RHEL5 ????????????????? passdb.tdb ,???? RHEL5.2 ?????,??? RHEL5.3 ???.???? RHEL5.2 ??
???????????? system-config-samba-1.2.40 ??????,????????.

https://bugzilla.redhat.com/show_bug.cgi?id=236557

RHEL5 - Samba (?) ???

????????????????????????????????,???????? Linux ?????.

1.? Bob ?? Samba Server ?????????,?????????????????.? Share Level Security ?????????????????????,?? Bob ???
Samba Server ??????(????????????? Windows ? LDAP ???,??????).

2.? Bob ?????????????,??? Samba Server ?????????????????????.

3.?? Samba ? Bob ??????????,?? Linux ????????????????? Linux ????????.
 Linux ??????????????,???????????????????????????????????? .
 #ls -l (ls "list directory contents",-l "use a long listing format")????????????????????.

????????????[????][????][????]
 ?? -rw-r--r-- [????]????????????????????,??????,????? rwx ,????????????????????.

??? User ??????????????????,????????[???].
 ??? Group?????????????????,????????[????].
 ??? Other ??[?????]??????.

????????? rwx ,?????? rwx ?????????????????
 I. ??????:
 ??(r):??cat????
 ??(w):??cp,move????
 ??(x):?????
 II. ??????:
 ??(r):?????????????????,?????x???.??? ls ????????.
 ??(w): ??????????????????,?????x???.???cp,move,touch???????.
 note: ????? w ????????????????? w ??,?????????????????.
 ??(x): ?? cd (change directory)?????????

note:?????User,group?????,???? User ?.

?????????:

```
[root@benjr ~]# mkdir /share
[root@benjr ~]# ll -d /share
drwxr-xr-x 2 root root 4096 Apr 20 08:31 /share
```

???????????????? rx ??????.???? Bob ??? /share ??????

1.other ??? w (?) ???.

2.? /share ? user ?? Bob.

3.??? (Group), ??????????.??? w (?) ???.

???????????????????? 777.