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How do I download, compile and install the latest version of SAMBA for OpenServe #114822)

Description:

I wish to download, compile and install the latest version of SAMBA, version 2.2.1a

Solution:

Use the following steps:

1. Run "netstat -an | grep 139" at the root prompt to see if you already have a file and printer server product running on your server. For example:

- A previous version of SAMBA
- Advanced File & Print Services (AFPS)
- VisionFS
- Tarantella 3.1x running Client Drive Mapping (CDM)

2. Visit <http://www.samba.org/> and select a download site nearest to your location.

The FTP Site should identify an image file to download, for example:

samba-2.2.1a.tar.gz

Download this file to your server into a directory:

/local/samba

3. To unpack the file, you will need a copy of "gzip". To obtain a copy, visit:

<http://www.caldera.com/skunkware/shutils/index.html#gzip>

and download the latest GZIP volume for the OpenServer Distribution Web Site, for example:

gzip-1.2.4-VOLS.tar

and download it into a directory:

/local/utills

Alternatively, visit the SkunkWare CD provided with your Media

Kit to obtain the software.

To install GZIP, untar the file with the command:

```
tar xvf gzip-1.2.4-VOLS.tar
```

Then, run "custom" and select Software -> Install New -> From
<your_server> -> Media Images -> /local/utis

Once completed, ensure that /use/local/bin is in your PATH.

4. To unpack the SAMBA file:

```
cd /local/samba  
gunzip samba-2.2.1a.tar.gz  
tar xvf samba-2.2.1a
```

This will generate a /local/samba/samba-2.2.1a directory.

5. Check the contents of:

```
samba-2.2.1a/packaging/Caldera/OpenServer/README
```

6. If you have the GNU compiler installed, then you will be able to follow the instructions detailed in the README file.

Alternatively, you can:

```
cd ../../../../source  
./configure
```

to compile using the built in OpenServer compiler. This assumes your server has the OpenServer Development Kit installed.

7. Now, run the command:

```
make
```

This will create the binaries. Once it's successfully compiled you can use:

```
make install
```

to install the binaries and manual pages. You can install the binaries and/or man pages separately using:

```
make installbin
```

and

```
make installman
```

Note: if you are upgrading from a previous version of SAMBA, the old versions of the binaries will be renamed with a ".old" extension. You can go back to the previous version with:

```
make revert
```

8. Once completed, you should find your new binaries in:

/usr/local/samba

9. To access the Web version of SAMBA Administration (SWAT), you will need to:

Using your favorite editor, modify /etc/inetd.conf with the following line:

```
swat stream tcp nowait root /usr/local/samba/bin/swat swat
```

and add the following line to /etc/services:

```
swat 901/tcp
```

To start the services, you will need to restart the "inetd" process. To find the process number of this process, run:

```
ps -ef | grep inetd
```

```
root 349 1 0 Jul-09 ? 00:00:02 /etc/inetd
```

In this example, the process id is "349". You need to run:

```
kill -1 349
```

You should now be able to access SWAT with your favorite browser by going to the URL:

[:901>http://:901](http://:901)

Note: A Web server does not need to be running on your server.

Note: When prompted you can log in as the "root" user.

10. You should then have access to the following URL:

[:901/swat/help/UNIX_INSTALL.html>http://:901/swat/help/UNIX_INSTALL.html](http://:901/swat/help/UNIX_INSTALL.html)

This document will explain how to initially configure your SAMBA and start the appropriate daemons to start testing access to your server.

You will find example "smb.conf" files to copy to:

/usr/local/samba/lib

in:

/local/samba/samba-2.2.1a/examples/simple

or:

/local/samba/samba-2.2.1a/packaging/Caldera/OpenServer

or:

Simply create one with just the entries:

```
[global]
workgroup = <YOUR_WORKGROUP>
```

```
[homes]
guest ok = no
read only = no
```

11.If you have problems with connection from a PC client, there is a document called "DIAGNOSIS.txt", which is located in the /local/samba directory structure to help you identify problems.

```
/local/samba/samba-2.2.1a/docs/textdocs/DIAGNOSIS.txt
```

In addition, when connecting with the command:

```
net use d: \\servername\service
```

and you are getting errors such as:

```
System error 5 has occurred
Access is denied
```

or:

```
System error 1240 has occurred
The account is not authorized to login from this station
```

or:

```
System error 86 has occurred
The specified network password is not correct
```

It is likely your username is not being properly authenticated. If you already have a Windows NT domain in your organization, you may wish to add:

```
security = server
password server = <nearest_NT_BDC/PDC>
```

to the "global" section of "smb.conf" or use a simpler "smb.conf" to start with. See the above examples.

If you do not have a Windows NT domain in your organisation then you may wish to add:

```
encrypt passwords = Yes
```

to the "global" section of "smb.conf" then run:

```
/usr/local/samba/bin/smbpasswd -a <user>
```

then enter a password.

You should then be able to connect to the SAMBA server from your Windows client.

12.Your SAMBA server should appear in the Network Neighborhood or "My Network Places" under the WorkGroup or Domain detailed in the "smb.conf" file. You should then be able to click on the server and, assuming you have an account there, have access to your \$HOME directory.

NOTE: Downloaded SAMBA and SkunkWare products are unsupported by Caldera.

NOTE: Here is the DIAGNOSIS.txt file:

```

=====
!==
!== DIAGNOSIS.txt for Samba release 2.2.0-alpha3 24 Mar 2001
!==
Contributor:Andrew Tridgell
Updated:November 1, 1999

Subject:DIAGNOSING YOUR SAMBA SERVER
=====

```

This file contains a list of tests you can perform to validate your Samba server. It also tells you what the likely cause of the problem is if it fails any one of these steps. If it passes all these tests then it is probably working fine.

You should do ALL the tests, in the order shown. I have tried to carefully choose them so later tests only use capabilities verified in the earlier tests.

If you send me an email saying "it doesn't work" and you have not followed this test procedure then you should not be surprised if I ignore your email.

ASSUMPTIONS

In all of the tests I assume you have a Samba server called BIGSERVER and a PC called ACLIENT both in workgroup TESTGROUP. I also assume the PC is running windows for workgroups with a recent copy of the microsoft tcp/ip stack. Alternatively, your PC may be running Windows 95 or Windows NT (Workstation or Server).

The procedure is similar for other types of clients.

I also assume you know the name of an available share in your smb.conf. I will assume this share is called "tmp". You can add a "tmp" share like by adding the following to smb.conf:

```

[tmp]
comment = temporary files
path = /tmp
read only = yes

```

THESE TESTS ASSUME VERSION 2.0.6 OR LATER OF THE SAMBA SUITE. SOME COMMANDS SHOWN DID NOT EXIST IN EARLIER VERSIONS

Please pay attention to the error messages you receive. If any error message reports that your server is being unfriendly you should first check that you IP name resolution is correctly set up. eg: Make sure your /etc/resolv.conf file points to name servers that really do exist.

Also, if you do not have DNS server access for name resolution please check that the settings for your smb.conf file results in "dns proxy = no". The best way to check this is with "testparm smb.conf"

TEST 1:

In the directory in which you store your smb.conf file, run the command "testparm smb.conf". If it reports any errors then your smb.conf configuration file is faulty.

Note: Your smb.conf file may be located in: /etc
Or in: /usr/local/samba/lib

TEST 2:

run the command "ping BIGSERVER" from the PC and "ping ACLIENT" from the unix box. If you don't get a valid response then your TCP/IP software is not correctly installed.

Note that you will need to start a "dos prompt" window on the PC to run ping.

If you get a message saying "host not found" or similar then your DNS software or /etc/hosts file is not correctly setup. It is possible to run samba without DNS entries for the server and client, but I assume you do have correct entries for the remainder of these tests.

Another reason why ping might fail is if your host is running firewall software. You will need to relax the rules to let in the workstation in question, perhaps by allowing access from another subnet (on Linux this is done via the ipfwadm program.)

TEST 3:

Run the command "smbclient -L BIGSERVER" on the unix box. You should get a list of available shares back.

If you get an error message containing the string "Bad password" then you probably have either an incorrect "hosts allow", "hosts deny" or "valid users" line in your smb.conf, or your guest account is not valid. Check what your guest account is using "testparm" and temporarily remove any "hosts allow", "hosts deny", "valid users" or "invalid users" lines.

If you get a "connection refused" response then the smbd server may not be running. If you installed it in inetd.conf then you probably edited that file incorrectly. If you installed it as a daemon then check that it is running, and check that the netbios-ssn port is in a LISTEN state using "netstat -a".

If you get a "session request failed" then the server refused the connection. If it says "Your server software is being unfriendly" then it's probably because you have invalid command line parameters to smbd, or a similar fatal problem with the initial startup of smbd. Also check your config file (smb.conf) for syntax errors with "testparm" and that the various directories where samba keeps its log and lock files exist.

There are a number of reasons for which `smbd` may refuse or decline a session request. The most common of these involve one or more of the following `smb.conf` file entries:

```
hosts deny = ALL
hosts allow = xxx.xxx.xxx.xxx/yy
bind interfaces only = Yes
```

In the above, no allowance has been made for any session requests that will automatically translate to the loopback adaptor address 127.0.0.1.

To solve this problem change these lines to:

```
hosts deny = ALL
hosts allow = xxx.xxx.xxx.xxx/yy 127.
```

Do NOT use the "bind interfaces only" parameter where you may wish to use the samba password change facility, or where `smbclient` may need to access local service for name resolution or for local resource connections. (Note: the "bind interfaces only" parameter deficiency where it will not allow connections to the loopback address will be fixed soon).

Another common cause of these two errors is having something already running on port 139, such as Samba (ie: `smbd` is running from `inetd` already) or something like Digital's Pathworks. Check your `inetd.conf` file before trying to start `smbd` as a daemon, it can avoid a lot of frustration!

And yet another possible cause for failure of TEST 3 is when the subnet mask and / or broadcast address settings are incorrect. Please check that the network interface IP Address / Broadcast Address / Subnet Mask settings are correct and that Samba has correctly noted these in the `log.nmb` file.

TEST 4:

Run the command "`nmblookup -B BIGSERVER __SAMBA__`". You should get the IP address of your Samba server back.

If you don't then `nmbd` is incorrectly installed. Check your `inetd.conf` if you run it from there, or that the daemon is running and listening to udp port 137.

One common problem is that many `inetd` implementations can't take many parameters on the command line. If this is the case then create a one-line script that contains the right parameters and run that from `inetd`.

TEST 5:

run the command "`nmblookup -B ACLIENT '*'`"

You should get the PC's IP address back. If you don't then the client software on the PC isn't installed correctly, or isn't started, or you got the name of the PC wrong.

If `ACLIENT` doesn't resolve via DNS then use the IP address of the client in the above test.

TEST 6:

Run the command "nmblookup -d 2 '*'"

This time we are trying the same as the previous test but are trying it via a broadcast to the default broadcast address. A number of Netbios/TCPIP hosts on the network should respond, although Samba may not catch all of the responses in the short time it listens. You should see "got a positive name query response" messages from several hosts.

If this doesn't give a similar result to the previous test then nmblookup isn't correctly getting your broadcast address through its automatic mechanism. In this case you should experiment use the "interfaces" option in smb.conf to manually configure your IP address, broadcast and netmask.

If your PC and server aren't on the same subnet then you will need to use the -B option to set the broadcast address to the that of the PCs subnet.

This test will probably fail if your subnet mask and broadcast address are not correct. (Refer to TEST 3 notes above).

TEST 7:

Run the command "smbclient //BIGSERVER/TMP". You should then be prompted for a password. You should use the password of the account you are logged into the unix box with. If you want to test with another account then add the -U option to the end of the command line. eg: smbclient //bigserver/tmp -Ujohndoe

Note: It is possible to specify the password along with the username as follows:
smbclient //bigserver/tmp -Ujohndoe%secret

Once you enter the password you should get the "smb>" prompt. If you don't then look at the error message. If it says "invalid network name" then the service "tmp" is not correctly setup in your smb.conf.

If it says "bad password" then the likely causes are:

- you have shadow passwords (or some other password system) but didn't compile in support for them in smbd
- your "valid users" configuration is incorrect
- you have a mixed case password and you haven't enabled the "password level" option at a high enough level
- the "path =" line in smb.conf is incorrect. Check it with testparm
- you enabled password encryption but didn't create the SMB encrypted password file

Once connected you should be able to use the commands "dir" "get" "put" etc. Type "help <command>" for instructions. You should especially check that the amount of free disk space shown is correct when you type "dir".

TEST 8:

On the PC type the command "net view \\BIGSERVER". You will need to do this from within a "dos prompt" window. You should get back a list of available shares on the server.

If you get a "network name not found" or similar error then netbios name resolution is not working. This is usually caused by a problem in nmbd. To overcome it you could do one of the following (you only need to choose one of them):

- fixup the nmbd installation
- add the IP address of BIGSERVER to the "wins server" box in the advanced tcp/ip setup on the PC.
- enable windows name resolution via DNS in the advanced section of the tcp/ip setup
- add BIGSERVER to your lmhosts file on the PC.

If you get a "invalid network name" or "bad password error" then the same fixes apply as they did for the "smbclient -L" test above. In particular, make sure your "hosts allow" line is correct (see the man pages)

Also, do not overlook that fact that when the workstation requests the connection to the samba server it will attempt to connect using the name with which you logged onto your Windows machine. You need to make sure that an account exists on your Samba server with that exact same name and password.

If you get "specified computer is not receiving requests" or similar it probably means that the host is not contactable via tcp services. Check to see if the host is running tcp wrappers, and if so add an entry in the hosts.allow file for your client (or subnet, etc.)

TEST 9:

Run the command "net use x: \\BIGSERVER\TMP". You should be prompted for a password then you should get a "command completed successfully" message. If not then your PC software is incorrectly installed or your smb.conf is incorrect. make sure your "hosts allow" and other config lines in smb.conf are correct.

It's also possible that the server can't work out what user name to connect you as. To see if this is the problem add the line "user = USERNAME" to the [tmp] section of smb.conf where "USERNAME" is the username corresponding to the password you typed. If you find this fixes things you may need the username mapping option.

TEST 10:

Run the command "nmblookup -M TESTGROUP" where TESTGROUP is the name of the workgroup that your Samba server and Windows PCs belong to. You should get back the IP address of the master browser for that workgroup.

If you don't then the election process has failed. Wait a minute to see if it is just being slow then try again. If it still fails after that then look at the browsing options you have set in smb.conf. Make

sure you have "preferred master = yes" to ensure that an election is held at startup.

TEST 11:

From file manager try to browse the server. Your samba server should appear in the browse list of your local workgroup (or the one you specified in smb.conf). You should be able to double click on the name of the server and get a list of shares. If you get a "invalid password" error when you do then you are probably running WinNT and it is refusing to browse a server that has no encrypted password capability and is in user level security mode. In this case either set "security = server" AND "password server = Windows_NT_Machine" in your smb.conf file, or enable encrypted passwords AFTER compiling in support for encrypted passwords (refer to the Makefile).

Still having troubles?

Try the mailing list or newsgroup, or use the tcpdump-smb utility to sniff the problem. The official samba mailing list can be reached at samba@samba.org. To find out more about samba and how to subscribe to the mailing list check out the samba web page at <http://samba.org/samba>


Also look at the other docs in the Samba package!

SEE ALSO: <http://www.samba.org>

<http://www.caldera.com/skunkware/samba/>

Product: OpenServer Release 5	Sub-Product: Release 5.05/5.06	Date Created: 07/27/2001 03:03 PM	Ref. #
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