Topic :	**Mounting Windows Shares on Cache-A Archive Appliances**		
Reference Release:	v1.2.3	**Date :**	**August 4, 2011**

Summary:

Cache-A Archive Appliances provide a GUI based method for mounting windows shares as long as they are configured to be "publicly browseable." This configuration may not be possible in some windows installations due to IT policies or the use of active directory configurations.

This paper outlines both temporary and permenant methods to mount windows shares via command-line accessed either from a client terminal application or direct attached mouse/monitor/keyboard. Please consult the Cache-A Tech Brief on Command Line operations for info on how to get started.

Mounting Overview:

Mount issues can occur if your share settings on the host systems are preventing the Cache-A from acquiring a listing anonymously. If you run the command:

```
smbtree -N
```

You often will see some type of error displayed for the host you are attempting to connect to. Currently the work around for this is to use the command line interface to manually mount your shares to the Cache-A. The instructions below will assist in guiding you on how to do this if your host is preventing mounting through the normal method.

Unix / Linux systems mount external devices and network shares directly to folders within their file system. If you want to mount a network share you must create an empty folder first.

The location that you want to do this is in the /mnt/network/ directory.

Once at a command line via SSH or Mouse/Monitor/Keyboard, type the following to change directories:

```
cd /mnt/network/
```

At any point, to check what directory you are currently in, type:

```
pwd
```

That should have returned that you are in fact in the `/mnt/network` directory

Now to create a directory, we need to run the `mkdir` command:

```
mkdir mymountpoint
```

Substitute the name you want to represent the share for mymountpoint. Then run the following command (substituting mymountpoint) to open up the new folder's permissions:

```
chmod 777 mymountpoint
```

Note that this folder will always exist unless you remove it, so the UI will always display this folder under it's shares even if there is no share currently mounted to it. Unfortunately there is no way to really tell the difference, so once you mount this folder to a share, we recommend always keeping at least 1 item in the network share, so that when you check the UI, you will see this item, confirming that it is in fact mounted to the share. If it is not mounted, and you move data into this folder, you have the potential of overfilling the internal root partition of the Cache-A, which could cause unusual behavioral problems.

If you ever want to remove the folder you just created, you can do so by unmounting it and running the rm command (substituting mymountpoint):

```
umount /mnt/network/mymountpoint
```

(yes the command is umount, not unmount)

```
rm -rf /mnt/network/mymountpoint
```

This will not prompt you, and MAKE SURE the share had been unmounted prior to prevent any data loss on your share.

Now that we have the mount point, there are two methods to mounting. One is temporary, and the mount will be disconnected after reboot, the other is permanent and will survive a reboot. If you have no more than a few shares that never change, the permanent option would be suitable, but if you have numerous shares that could potentially change often, then you would likely want to learn how to use the temporary option on an as needed basis.

Temporary Mount Option:
From the command line we will want to mount our network share directly to the folder we just created. This is fairly simple and should require just one command (typed all on one line ignoring line wraps):

```
mount -t cifs //ShareServerHostNameOrIP/ShareFolderName
/mnt/network/mymountpoint -o
username=Uname,password=Pword,noserverino,uid=500,gid=100
```

Note the Variables:
`ShareServerHostNameOrIP` is the hostname or IP address of the machine with the share
`ShareFolderName` is the name of the user's shared folder
`mymountpoint` is the custom name you had earlier
`Uname` is the username you want to use from `ShareServerHostNameOrIP` with permissions to mount the share
`Pword` is of course the password for this username

As soon as you run this command, the share should now be mounted to the folder you created earlier. You should now be able to go to the Cache-A WebUI and select this folder under the Source Directory drop-down, and see the share's contents displayed.

Once you are done with the share, rebooting will disconnect it, or running:

```
umount /mnt/network/mymountpoint
```

will also disconnect it. Once disconnected, the folder you created can then be deleted or reused to mount another share to it.

Permanent Mount Option:
This option is a little more complicated as we will need to modify /etc/fstab permanently so that it mounts the share after rebooting.

To do so we will use the vi editor. Make the command line window as large as possible, then run:

```
vi /etc/fstab
```

You will now be in a text based text editor with a cursor. You can move this cursor around by pressing the arrow keys.

Press the down arrow key until you get to the line that starts with:

```
# Cache-A Mounts
```

Make sure your cursor is on the # at the very beginning of the line, then press the 'i' button, then Enter, followed by the UP arrow.

PLEASE NOTE: If at **any** point, you make a mistake, and need to start over, hit [ESC] followed by these three characters :q! to quit without saving changes. Try this multiple times if you don't get it right the first time.

You should now have a blinking cursor at the front of a new line just above the "# Cache-A Mounts" line.

You now want to type in the following after modifying it to your match your settings:

```
//ShareServerHostNameOrIP/ShareFolderName
/mnt/network/mymountpoint cifs
username=Uname,password=Pword,noserverino,uid=500,gid=100,b
g,async,auto 1 1
```

Make sure your forward slashes are going in the right direction, and also note, that it is all on **one** line (this is why we suggest making the window large). You will need to modify ShareServerHostNameOrIP, ShareFolderName, mymountpoint, Uname, and Pword to whatever your needs require.

Note that those are [TAB]'s between each field, except for 1 1 at the end. So there is a tab after ShareFolderName, mymountpoint, cifs, and auto. The **only** space is in between 1 1.

Also note, host names and share folder names on you server should be as simple as possible, preferably only letters with no spaces. If your share folder name has a [SPACE] in it, you will need to substitute an octal representation of a space (\040), so if the share folder on your share server is named "Share Folder" it will have to be called "Share\040Folder" in the fstab string.

Once you are done writing the string and everything is correct, hit [ESC] followed by these three characters :wq to save (write) the file, then quit.

After vi exits, run:

```
cat /etc/fstab
```

and verify that everything looks ok. If all looks good, you can either run:

```
mount -a
```

or reboot the system.

At this point everything should be set up and you should be good to go, check file manager for the share folder and make sure you see its contents.

Note: Both methods will only show up in file manager under the source directory, they will not show up in mount manager, as that uses additional code that we are working around.

Removing Added Shares:
As both methods do not use Mount Manager, you will need to manually remove the changes if you want to remove the share from the machine.

As we said before, to get rid of the folder we created we must first `unmount`:

```
umount /mnt/network/mymountpoint
```

Then `rm` to remove the folder:

```
rm -rf /mnt/network/mymountpoint
```

With the permanent option, we also must edit /etc/fstab to remove the entry you previously added.

run:

```
vi /etc/fstab
```

Use the arrow keys to highlight the first character of the line you wish to remove.

Now press the letter `d` twice in a row, this will delete that one line.

To save, hit [ESC] followed by the three characters `:wq`

The entry should now be gone, and the share will no longer mount after reboot.