TECHNICAL NOTE: INSTALLING AND CONFIGURING SAMBA ON *groov* EPIC

If your application requires accessing the *groov* EPIC® file storage area via a mapped network drive on a Microsoft® Windows® PC, you will need to install and configure Samba. This tech note shows you how.

Samba is free software licensed under the GNU General Public License. It provides the application necessary to use the SMB/CIFS protocol, which supports network mapping of hard drive areas.

Requirements

Installing and using Samba requires a Secure Shell license, part number GROOV-LIC-SHELL, available at https://www.opto22.com/products/product-container/groov-lic-shell.

CAUTION: *Setting up and administering Samba on your groov EPIC is only for advanced developers who are familiar with Linux® shell commands. Once you upload the license file that includes Secure Shell access, you are on your own and will have to solve any issues that arise through your own knowledge and online research. Opto 22 product support is limited to helping you reset the groov EPIC processor to factory defaults; our Product Support engineers cannot help you with programming, usage, or troubleshooting.*

CAUTION: *Before updating groov EPIC firmware, be sure you back up any files or applications you have created, as they will be deleted during the update. In addition, be aware that when you update EPIC firmware, your installation and configuration will not be restored. You will need to repeat the steps in this tech note after you have updated the firmware.*

Installing Samba

1. Log into SSH and use apt to update the package repositories.
2. Use apt to install samba.

Configuring Samba

A large part of configuring Samba is setting up a Linux user on the system that will share and access the file area. Best practice dictates that this is NOT the same as the shell user. It could be, but it is more secure if you create a new Linux user from the command line.

1. Add the user via SSH:
   ```
   sudo useradd [your-username]
   sudo passwd [your-username]
   ```
2. Give the new user permission to access the unsecured file area:
   ```
   sudo usermod -a -G sysdev [your-username]
   ```
   NOTE: If you are sharing a different directory, change sysdev to the user group that has access to that directory.

3. Configure Samba:
   ```
   sudo nano /etc/samba/smb.conf
   ```
   Move through this file carefully, making note of any changes you make. For example, you might like to comment out the section on Printers.
4. At the bottom of the file, add the following example:
   ```
   [EPIC]
       comment = EPIC file space
       path = /home/dev/unsecured
       read only = No
       guest ok = Yes
   ```

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5. Add the Linux user to the Samba password list:
```
sudo smbpasswd -a [your-username]
```
6. Start the Samba application by entering the following two lines.
```
sudo /usr/sbin/smbd -D -s /etc/samba/smb.conf
sudo /usr/sbin/nmbd -D -l /var/log/samba -s /etc/samba/smb.conf
```

Adding EPIC firewall rules and mapping to EPIC

1. Open *groov* Manage and choose Home > Security > Firewall.
2. Set up two rules as shown below, covering ports 137, 138, 139 and 445.

Samba
Ports: 137:139
Allow: eth0,tun0
Deny: eth1,wlan0

SambaFileShare
Ports: 445
Allow: eth0,tun0
Deny: eth1,wlan0

3. Go to a Windows PC and right-click MyPC in File Explorer. Select Map Network Drive and enter the *groov* EPIC details. Enter the username and password that you created for the user and added to Samba.

← Map Network Drive

What network folder would you like to map?

Specify the drive letter for the connection and the folder that you want to connect to:

Drive: Z:

Folder: \\hostnameOrIPaddress\EPIC   Browse...

Example: \\server\share

☐ Reconnect at sign-in

☐ Connect using different credentials

Connect to a Web site that you can use to store your documents and pictures.

Finish   Cancel

Troubleshooting hints

Use the command testparm to see the Samba configuration currently used.

View the logs at `/var/log/samba`.

If you make any changes to the smb.cnf file, you need to restart Samba using the following two commands (both and in order):
```
sudo /usr/sbin/smbd -D -s /etc/samba/smb.conf
sudo /usr/sbin/nmbd -D -l /var/log/samba -s /etc/samba/smb.conf
```