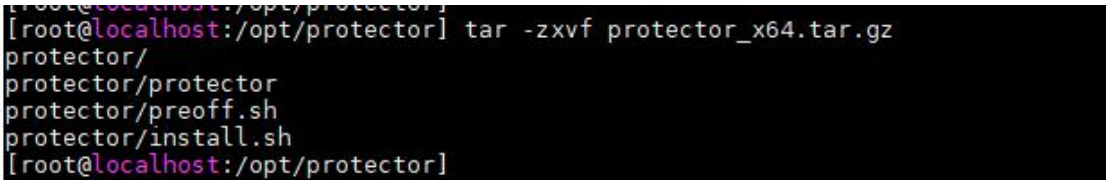
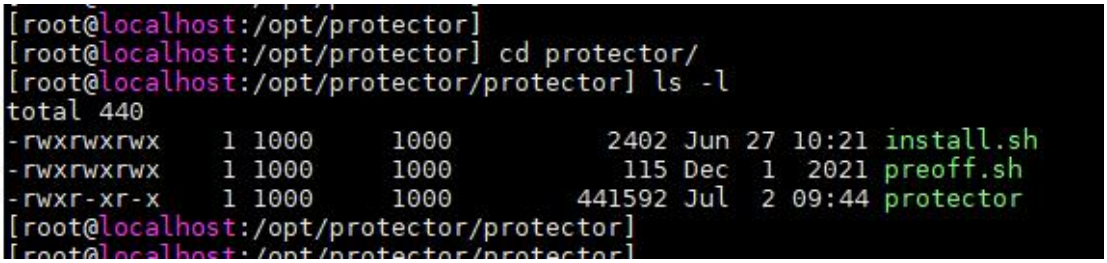
1. Place the software(Note whether you have a 64-bit or 32-bit linux system) in a custom folder. The following example is uploading to the /opt/protector folder,Protector is a new custom folder. (**Special reminder**:VM esxi systems use the /vmfs/volumes/ subdirectory, such as ESXI01-Datastore, as the installation directory;otherwise, automatic startup and shutdown protection software cannot be implemented.).

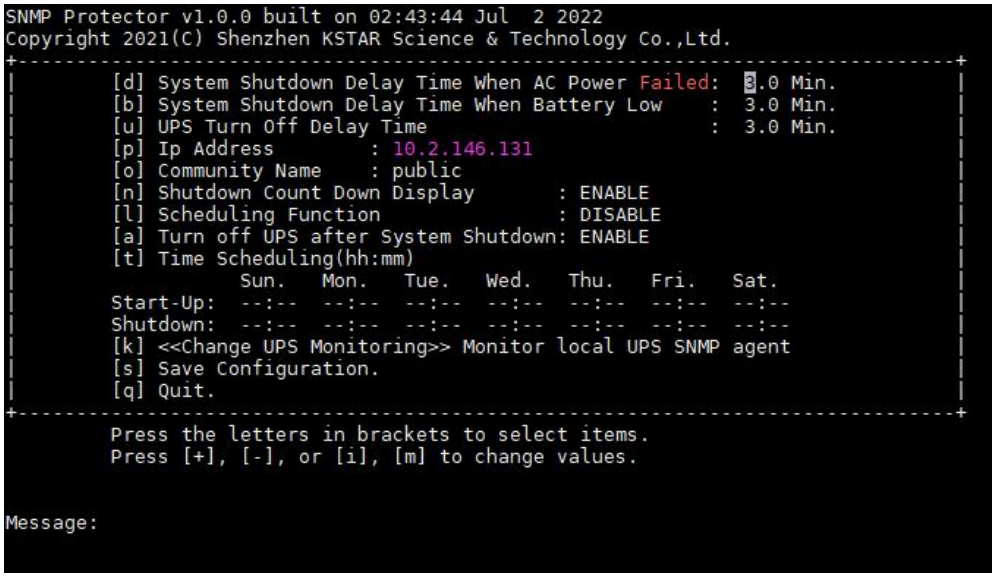
2. Decompress the file and run the **tar -zxvf protector_64.tar.gz** command.



3. Open the decompressed folder and run the **cd protector** command.



4. Run the **./install.sh** command to grant root permission.
   (1) Press the keyboard letter K key to select the communication mode, SNMP communication or serial communication.
   (2) Press the d key to set the number of minutes to shut down the server after the "mains outage" alarm occurs.
   (3) Press the letter B key to set the number of minutes to shut down the server after the battery low alarm occurs.
   (4) Press the keyboard letter U key to set the delay of the UPS command (send shutdown command before the server shutdown).



When you select the SNMP communication mode, you need to set the IP address and community string.

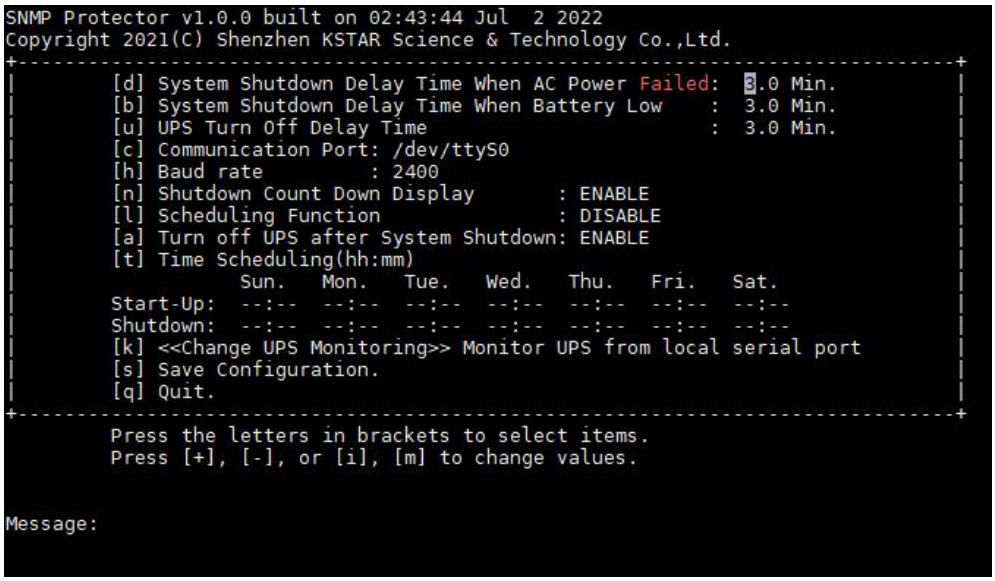
(5) Press p to set the SNMP card IP address.

(6) Press the keyboard letter O to set the community string, which must be consistent with that set on the SNMP card.

When selecting the serial port communication mode, set the serial port position and baud rate.

(7) Press the keyboard letter C to set the serial port position.

(8) Press keyboard letter H to set the serial port baud rate.



(9) Press n to enable Shutdown Count Down Display.

(10) Press l to enable the Scheduling Function,That is, the computer can be turned on or off at a specified time.

(11) Press a to enable the UPS Turn off THE UPS after System Shutdown.

Press s to save the configuration and q to exit.

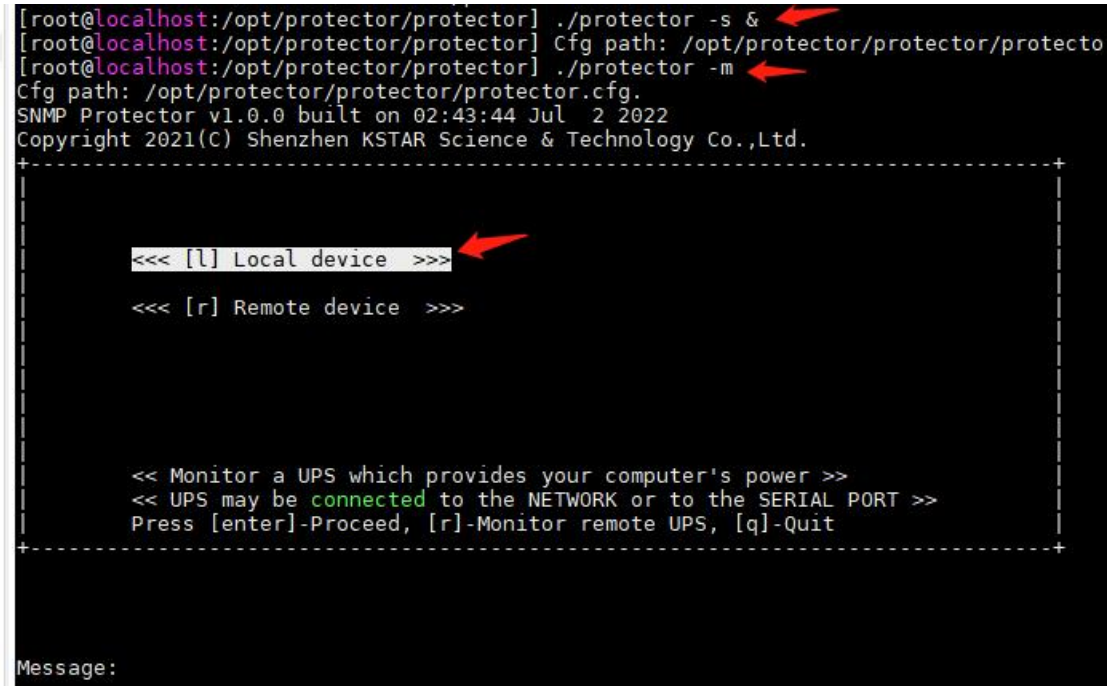
The default installation path is /VMFS volumes/datastore1/protector ,if manual stop after, need

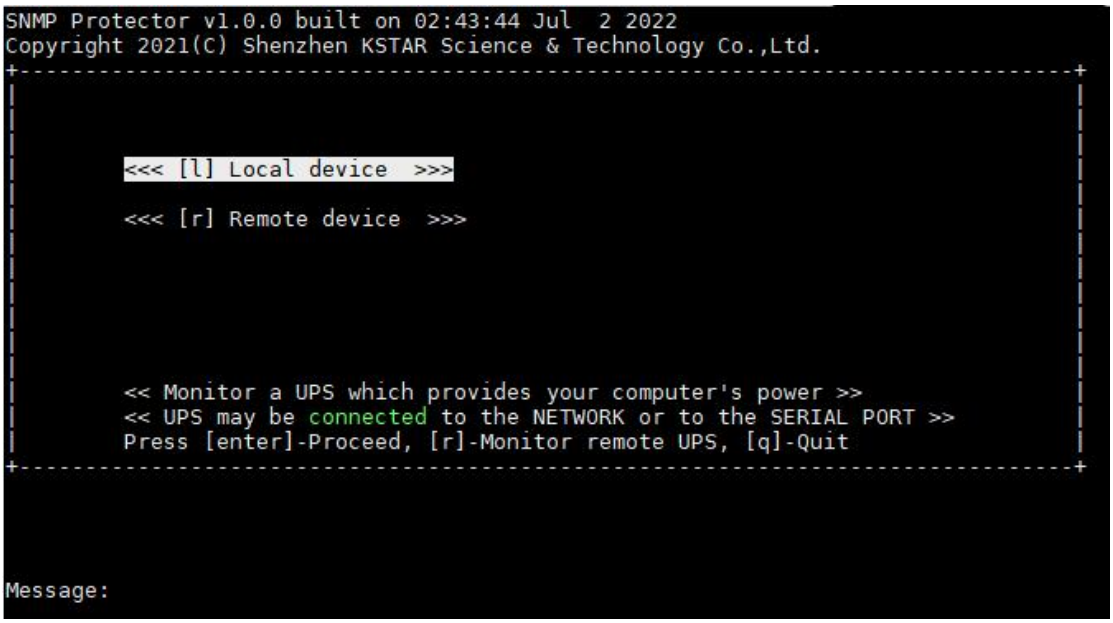
to start under the default installation path.

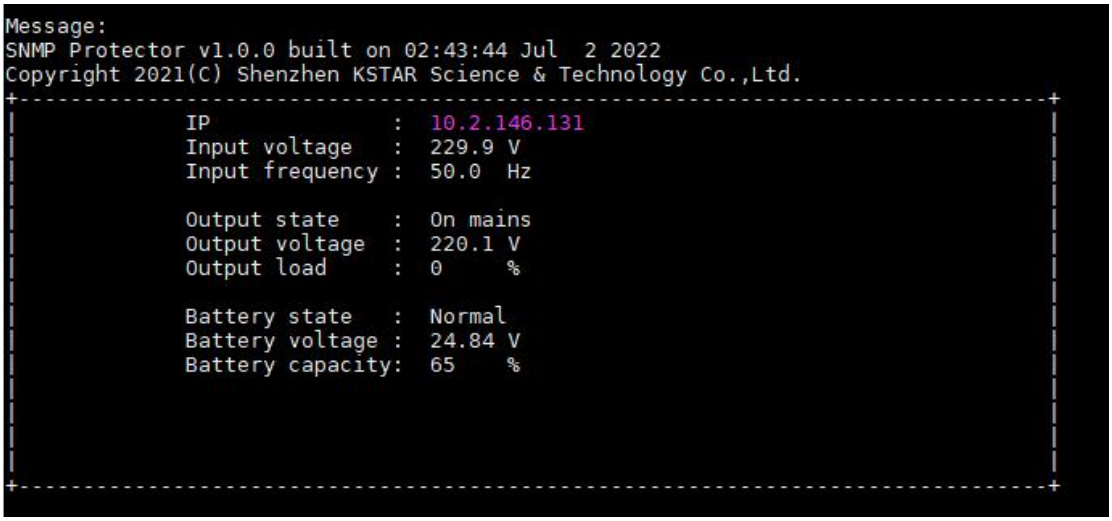
5. Shutdown protection program

Command: **./protector -s &**

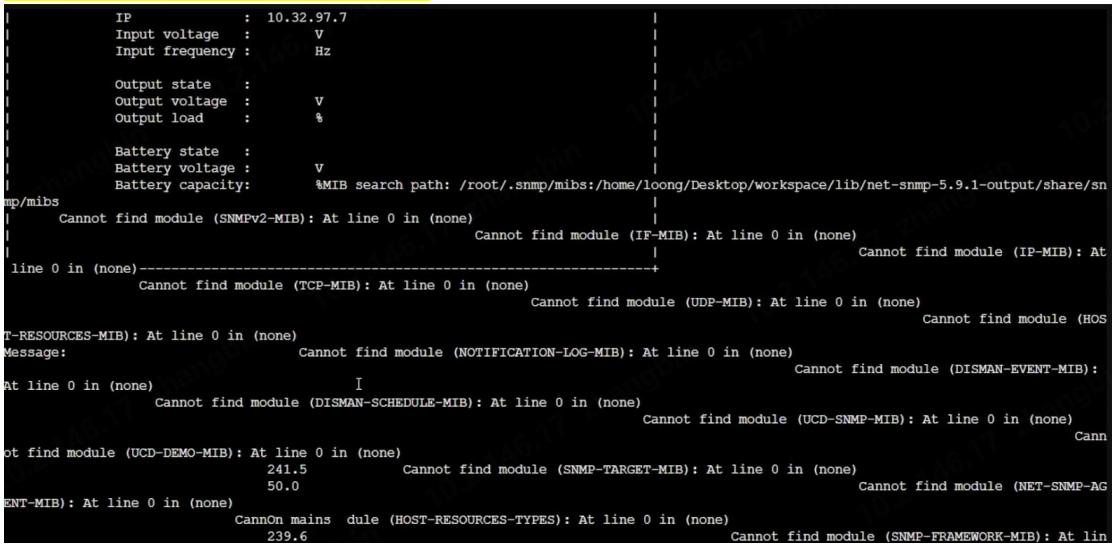
Command: **./protector -m** Check whether the status of the server and SNMP card is normal. If relevant data can be displayed as shown in the following figure, it indicates that the system is in the normal monitoring state. Press Q to exit the monitoring state after starting and confirming the error, otherwise the shutdown protection program will not take effect. Notice This function needs to transmit data through UDP161 port, that is, open UDP161 port .



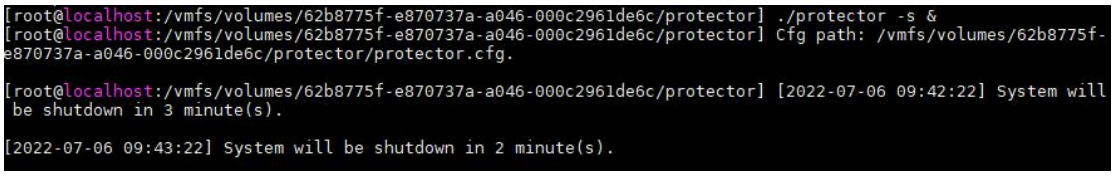




If the situation shown in the following picture appears, press the "Enter" key on the keyboard continuously until the normal display.



6. Cut off the mains input for simulation test.



7. Frequently Asked Question

(1) Relevant commands

① The command to start the shutdown protection program is: ./protector -s &

② To turn off the shutdown protector, run the following command: ./protector -t

③ Command for modifying configuration parameters: ./protector -c

Note: The above three commands need to be performed in the installation directory.

④ To view the process of running a program: ps -aux | grep protector

(2) How do I create a port development policy for Linux EXSI? Because the shutdown protection software function requires data transmission through udp161 port, udp161

port must be enabled.

① Create a new Protector. XML file (or just use the one already edited in the package) with the following contents:

```
<ConfigRoot>
    <service id='0300'>
        <id>protector</id>

        <rule id='0000'>
            <direction>inbound</direction>
            <protocol>udp</protocol>
            <porttype>src</porttype>
            <port>161</port>
        </rule>

        <rule id='0001'>
            <direction>outbound</direction>
            <protocol>udp</protocol>
            <porttype>dst</porttype>
            <port>161</port>
        </rule>

        <enabled>true</enabled>
        <required>true</required>
    </service>
</ConfigRoot>
```

② Place the Protector. XML file in the /etc/vmware/firewall directory. In addition, save the protector. XML file in a directory similar to/VMFS /volumes/ XXX /. Otherwise, data in /etc/vmware/firewalll will be lost after a power failure. Therefore, if a power failure occurs, after the system is shut down and restarted, you need to re-place the protector. XML file in the /etc/vmware/firewall directory, otherwise the shutdown protection software cannot work properly.

③ Restarting the Firewall: esxcli network firewall refresh.

④ Verify in the Linux Exsi system web console that you can see the Protector service is complete.

⑤ If the shutdown command cannot be executed, check the protector.cfg file in the installation directory. In general, check the path configured for shutdown_exe of the shutdown command (halt, poweroff, shutdown). The default is "shutdown_exe": "/sbin/halt". For example, if the path corresponding to VMware ESXI 6.7.0 is /bin/halt, you can query it by which halt.

(3) The shutdown protection software fails to start after the Ubuntu Linux system is shut down and restarted.

The following configurations are required:

① sudo gedit /lib/systemd/system/rc-local.service；

② Add at the end:

[Install]
WantedBy=multi-user.target
Alias=rc-local.servic

③ Save the Settings and exit

④ Check whether the Settings in the previous step are successful:
cat /lib/systemd/system/rc-local.service

⑤ sudo gedit /etc/rc.local, Add content to the first line of the file (#! /bin/sh) and save the Settings and exit.

⑥ sudo systemctl enable rc-local

⑦ sudo systemctl start rc-local.service

⑧ Restart the server and check whether the shutdown protection program starts automatically.