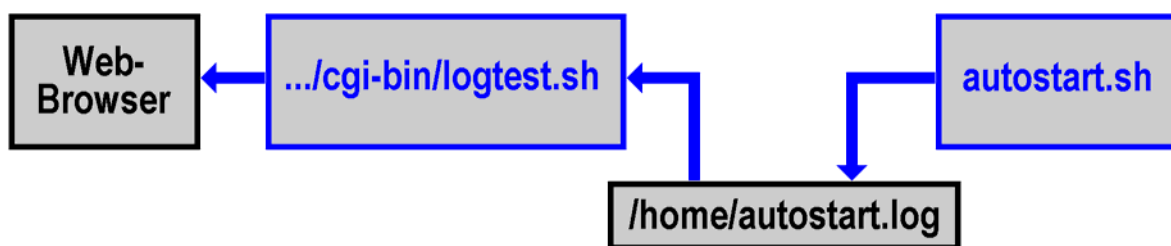


How to transfer live data from a Linux process to a CGI Program

For some applications of your IGW/100 Linux Security Gateway it can be necessary to access live data – generated by a Linux user process – with a CGI program and deliver these data to a Web browser.

- **1. Step:** We need two Linux shell script files to demonstrate a solution. One shell script writes every second some new data to a RAM disk file with the name `/home/autostart.log`. The other shell script is the CGI program. The following picture shows the details.



- **2. Step:** Create a Linux shell script file with the name `autostart.sh` on your development system and transfer this file to the DIL/NetPC ADNP/1520 directory `/flash`. Use a simple text editor program for this job. It is also possible to create the file direct with the help of a Telnet session:

```

cd /flash
cat > autostart.sh
#!/bin/sh
while true ; do
    date > /home/autostart.log
    sleep 1
done
CTRL-D (CTRL-D stops the Linux cat command)
chmod +x autostart.sh
  
```

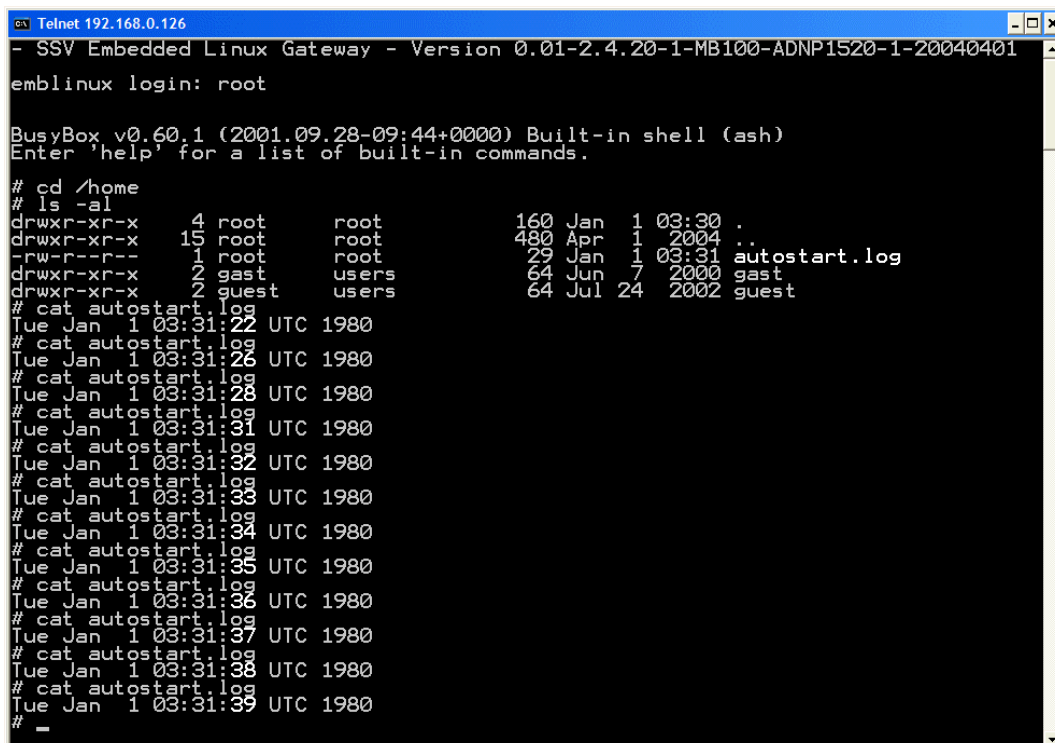
The screenshot shows a Telnet session window titled 'Telnet 192.168.0.126'. The user enters the following commands and receives the following output:

```

# cd /flash
# pwd
/flash
# cat > autostart.sh
#!/bin/sh
while true ; do
    date > /home/autostart.log
    sleep 1
done
# ls -al
drwxr-xr-x  1 root    root          0 Jan  1  03:24 .
drwxr-xr-x 15 root    root        480 Apr  1  2004 ..
-rw-r--r--  1 root    root          72 Jan  1  03:25 autostart.sh
drwxr-xr-x  1 root    root          0 Jan  1  02:48 www
# chmod +x autostart.sh
# ls -al
drwxr-xr-x  1 root    root          0 Jan  1  03:24 .
drwxr-xr-x 15 root    root        480 Apr  1  2004 ..
-rwxr-xr-x  1 root    root          72 Jan  1  03:25 autostart.sh
drwxr-xr-x  1 root    root          0 Jan  1  02:48 www
# cat autostart.sh
#!/bin/sh
while true ; do
    date > /home/autostart.log
    sleep 1
done
#
  
```

- **3. Step:** Create the CGI program as Linux shell script file. Use the name **logtest.sh** for this file. Create this file on your development system with the help of a simple text editor program and transfer it into the DIL/NetPC ADNP/1520 directory **/flash/httpd/cgi-bin**. It is also possible to create this file direct within the directory **/flash/httpd/cgi-bin** with the help of a Telnet session:

```
cd /flash/httpd/cgi-bin
cat > logtest.sh
#!/bin/sh
# logtest.sh
# Show content of /home/autostart.log
echo "Content-type: text/html"
echo
echo "<html>"
echo "<head>"
echo "<title>"
echo "Show content of /home/autostart.log"
echo "</title>"
echo "</head>"
echo "<body>"
echo "<h1>"
cat /home/autostart.log
echo "</h1>"
echo "</body>"
echo "</html>"
exit 0
CTRL-D (CTRL-D stops the Linux cat command)
chmod +x logtest.sh
```

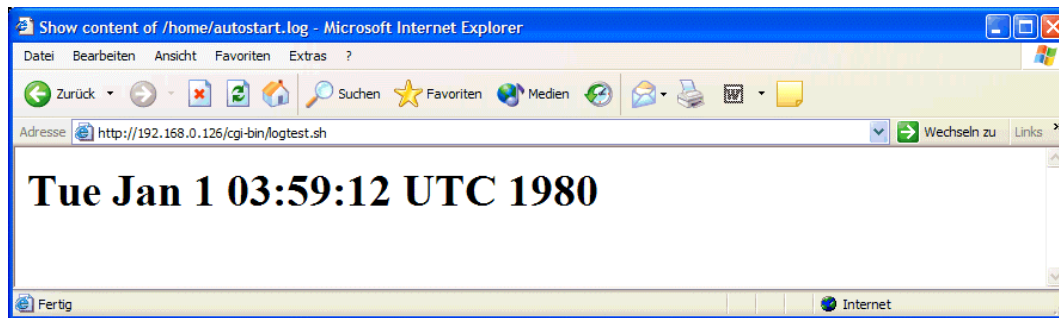


```
Telnet 192.168.0.126
- SSV Embedded Linux Gateway - Version 0.01-2.4.20-1-MB100-ADNP1520-1-20040401
emblinux login: root

BusyBox v0.60.1 (2001.09.28-09:44+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

# cd /home
# ls -al
drwxr-xr-x  4 root    root    160 Jan  1  03:30 .
drwxr-xr-x 15 root    root    480 Apr  1  2004 ..
-rw-r--r--  1 root    root     29 Jan  1  03:31 autostart.log
drwxr-xr-x  2 gast    users   64 Jun  7  2000 gast
drwxr-xr-x  2 guest   users   64 Jul 24  2002 guest
# cat autostart.log
Tue Jan  1 03:31:22 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:26 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:28 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:31 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:32 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:33 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:34 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:35 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:36 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:37 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:38 UTC 1980
# cat autostart.log
Tue Jan  1 03:31:39 UTC 1980
#
```

- **4. Step:** Now reboot the IGW/100 Linux Security Gateway. The Linux shell script sample file **autostart.sh** from the 2. step of this paper writes every second a new date string into the file **/home/autostart.log**.
- **5. Step:** Run the CGI shell script file. Start the Web browser of your development system and enter the URL *http://192.168.0.126/cgi-bin/logtest.sh*. This URL runs the CGI shell script and generates a Browser window with the current content of the file **/home/autostart.log**.



Please note: If you edit shell script files for Linux systems on a Windows-based PC, it is necessary to convert these files with a DOS2UNIX tool before you transfer them to the DIL/NetPC ADNP/1520 inside your IGW/100 Linux Security Gateway. Linux shell script files are simple text files. Windows is using the good old MS-DOS format for text files. MS-DOS and Unix systems use different methods to identify end-of-line information in text files. MS-DOS, including Windows 9x/ME/NT/2000/XP, use a carriage return/linefeed pair (CR/LF), whilst Unix only uses the LF character.

That's all.