SSV

How to write a CGI shell script for the DNP/9200 Web server

The DIL/NetPC DNP/9200 default embedded Linux configuration comes with a preinstalled embedded Web server (the *thttpd* – see also: http://www.acme.com/software/thttpd/ for more information). This feature allows you to access Web pages and CGI programs (CGI = Common Gateway Interface) with a Web browser.

- **1. Step**: Run a Telnet client on your desktop PC (please see also: *mHT9200-08.pdf: How to use the DNP/9200 Linux Telnet Server*. Then enter the following command lines within this Telnet session and create the CGI directory for the DNP/9200 Web server:

```
cd /flash
mkdir www
cd www
mkdir cgi-bin
```

- **2. Step**: Reboot your DNP/9200. The Linux O/S restarts then the *thttpd* Web server with the new directory **/flash/www**.

- **3. Step**: Create a Linux shell script file with the name *test.sh* on your development system. Use a simple text editor program for this job. The following code is a sample for a CGI shell script.

```
#!/bin/sh
# test.sh
# Environment Variable
echo Content-type: text/html
echo
echo "<html>"
echo "<head>"
echo "<title>"
echo "CGI Environment Variable"
echo "</title>"
echo "</head>"
echo "<body>"
echo "SERVER_SOFTWARE=$SERVER_SOFTWARE<br/>"
echo "SERVER_NAME=$SERVER_NAME<br/>"
echo "SERVER_PROTOCOL=$SERVER_PROTOCOL<br/>"
echo "SERVER_PORT=$SERVER_PORT<br/>"
echo "REQUEST_METHOD=$REQUEST_METHOD<br/>"
echo "GATEWAY_INTERFACE=$GATEWAY_INTERFACE<br/>"
echo "PATH_INFO=$PATH_INFO<br/>"
echo "PATH_TRANSLATED=$PATH_TRANSLATED<br/>"
echo "REMOTE_HOST=$REMOTE_HOST<br/>"
echo "REMOTE_ADDR=$REMOTE_ADDR<br/>"
echo "REMOTE_IDENT=$REMOTE_IDENT<br/>"
```
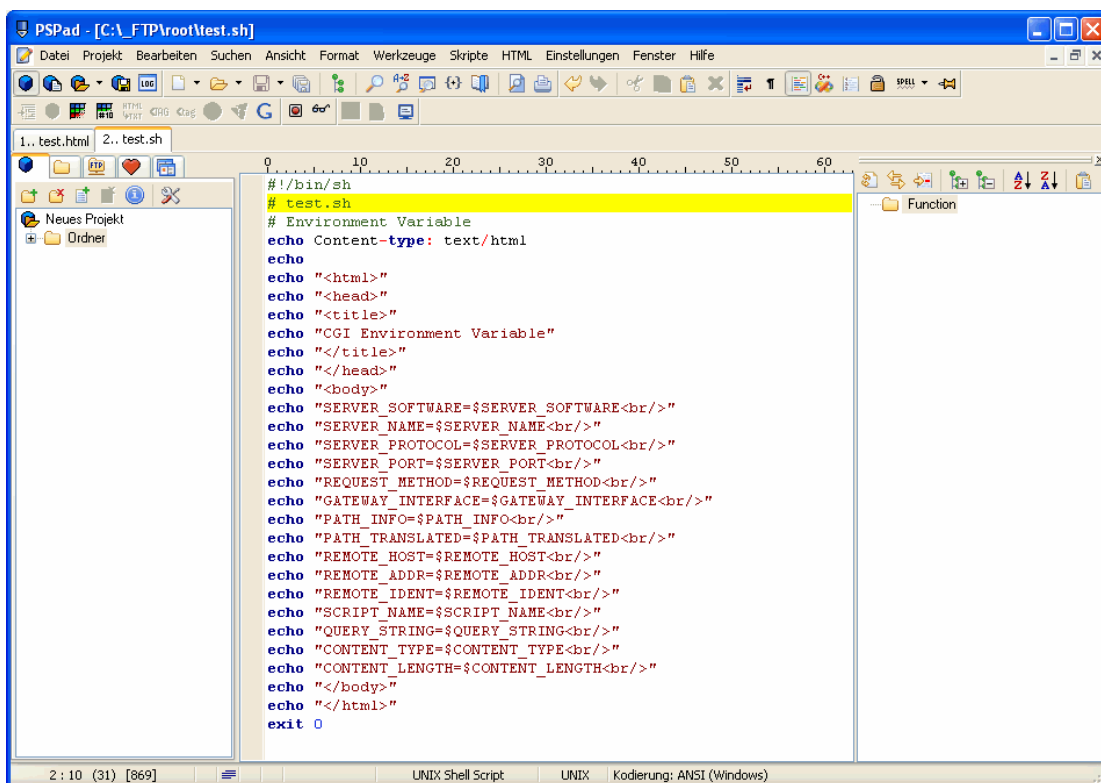
```
echo "SCRIPT_NAME=$SCRIPT_NAME<br/>"
echo "QUERY_STRING=$QUERY_STRING<br/>"
echo "CONTENT_TYPE=$CONTENT_TYPE<br/>"
echo "CONTENT_LENGTH=$CONTENT_LENGTH<br/>"
echo "</body>"
echo "</html>"
exit 0
```

- **4. Step**: If you edit shell script files for Linux systems on a Windows-based PC, it is necessary to convert the file with a DOS2UNIX tool before the download to the DNP/9200.

  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.

  Some editors for Windows-based PCs (e.g. *PSPad*) allow you to edit text files directly within the UNIX file format. In this case, no conversion step is necessary.
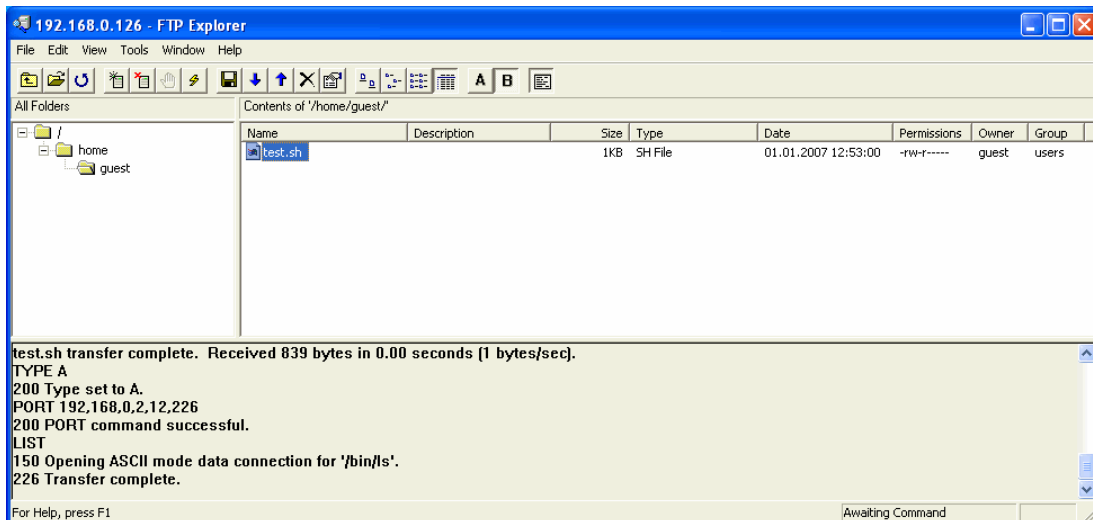

- **5. Step**: Now run a FTP session and upload *test.sh* to **/home/guest** within the DNP/9200 flash memory.

  Please note: The standard configuration for the FTP server of the DNP/9200 allows only the R/W access to **/home/guest** or **/home/gast**. The default directory for CGI files is **/flash/www/cgi-bin**.
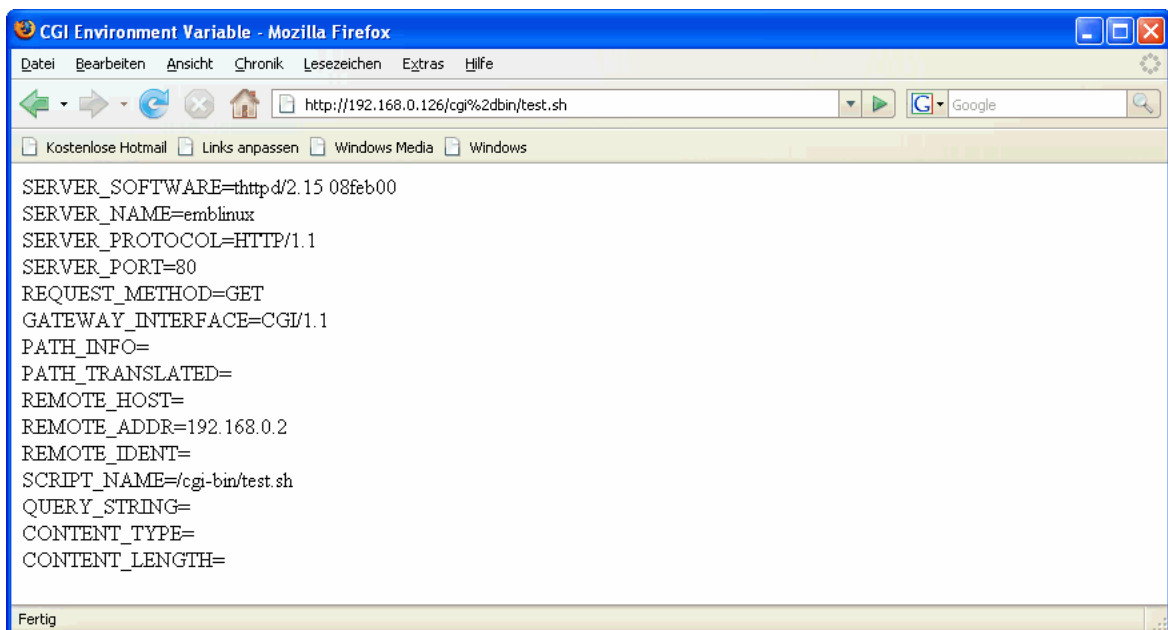
- **6. Step**: Run a Telnet session and copy *test.sh* to **/flash/www/cgi-bin**. Make sure, that *test.sh* on the DNP/9200 is equipped with readable and executable attributes. The following steps show the details for your Telnet session.

```
cd /flash/www/cgi-bin
mv /home/guest/test.sh test.sh
chmod +x test.sh
chmod +r test.sh
```

- **7. Step**: Run your PC Web browser and access *test.sh* with your browser. Use the URL `http://192.168.0.126/cgi-bin/test.sh`. This URL assumes that your DNP/9200 is using the IP address ***192.168.0.126***. Change this address if necessary.

That is all.