

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 <u>http://www.acme.com/software/thttpd/</u> 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/>br/>"
echo "REMOTE IDENT=$REMOTE IDENT<br/>>"
```

```
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```

```
echo "SCRIPT_NAME=$SCRIPT_NAME<br/>br/>"
echo "QUERY_STRING=$QUERY_STRING<br/>br/>"
echo "CONTENT_TYPE=$CONTENT_TYPE<br/>br/>"
echo "CONTENT_LENGTH=$CONTENT_LENGTH<br/>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*.



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File Edit View Tools Window Help									
▲ 20 11 10 9 日 All Folders	↓ ↑ × B E Contents of '/home/guest' A B E								
⊡- ` ⊟ /	Name	Description	Size	Туре	Date	Permissions	Owner	Group	
⊟- <mark>(</mark> home ! (guest	i∎]test.sh		1KB	SH File	01.01.2007 12:53:00	-rw-r	guest	users	
testsh transfer complete. Received 839 bytes in 0.00 seconds (1 bytes/sec). 💆									
200 Type set to A. PORT 192,168,0,2,12,226 200 PORT command successful. LIST									
150 Opening ASCII mode data connection for '/bin/ls'. 226 Transfer complete.									
For Help, press F1					Awaiting	Command			

• 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.

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🗋 Kostenlose Hotmail 🗋 Links anpassen 🗋 Windows Media 🗋 Windows						
SERVER_SOFTWARE==thttp:d/2.1508feb00						
SERVER_NAME=emblinux						
SERVER_PROTOCOL=HTTP/1.1						
SERVER_PORT=80						
REQUEST_METHOD=GET						
GATEWAY_INTERFACE=CGI/1.1						
PATH_INFO=						
PATH_TRANSLATED=						
REMOTE_HOST=						
REMOTE_ADDR=192.168.0.2						
REMOTE_IDENT=						
SCRIPT_NAME=/cgi-bin/test.sh						
QUERY_STRING=						
CONTENT_TYPE=						
CONTENT_LENGTH=						
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That is all.