

## How to say “Hello World” in XML with a CGI Shell Script File

The DIL/NetPC DNP/1110 default Linux configuration comes with a pre-installed embedded Web server. The object storage space for HTML pages, pictures, CGI programs and other objects of this Web server is located within the DNP/1110 flash memory. CGI programs for the DNP/1110 can be written in C/C++ or as Linux shell script file. This documents shows how to write a Linux shell script-based CGI program with XML output.

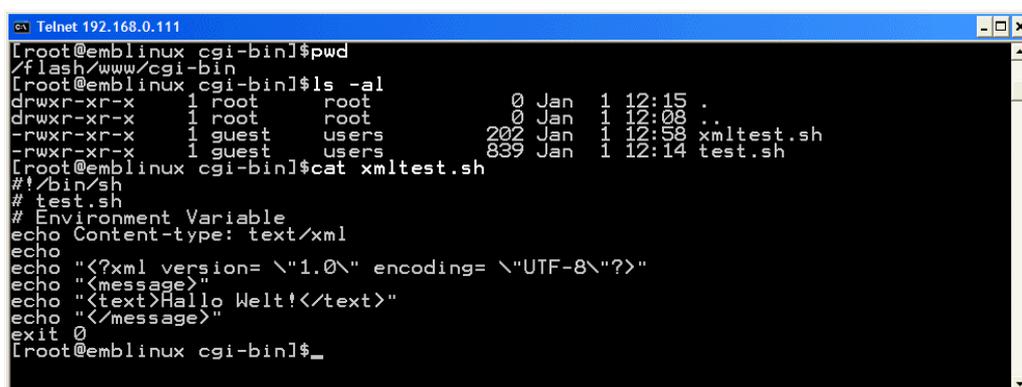
- **1. Step:** Create a Linux shell script file with the name `xmltest.sh` on your development system. Use a simple text editor program for this job. The following code is a sample for CGI shell script.

```
#!/bin/sh
# xmltest.sh
# XML-based "Hallo Welt"
echo Content-type: text/xml
echo
echo "<?xml version= \"1.0\" encoding= \"UTF-8\"?>"
echo "<message>"
echo "<text>Hallo Welt!</text>"
echo "</message>"
exit 0
```

- **2. Step:** Use a FTP session for the file transfer of the Linux shell script file to the DNP/1110. Make sure, that the Linux shell script file with the CGI shell script owns the necessary attributes. The necessary commands the attribute setup are:

```
chmod +x xmltest.sh
chmod +r xmltest.sh
```

The right location for a Linux shell script file with the CGI shell script is the `.../cgi-bin` directory of DNP/1110 embedded Web server. Create this directory first, if necessary.

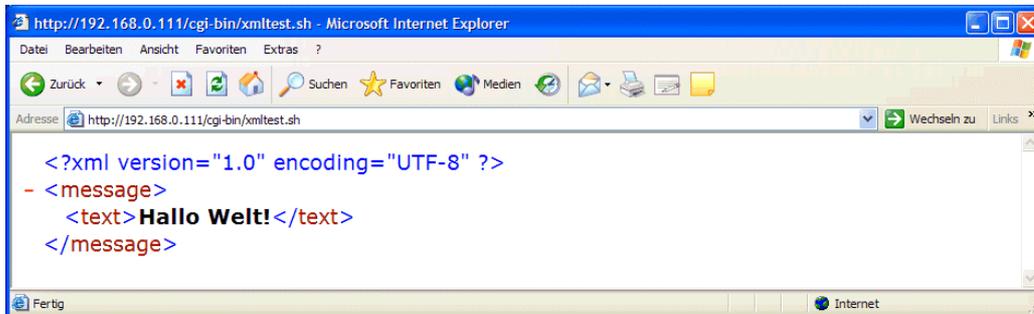


```
Telnet 192.168.0.111
[root@emblinux cgi-bin]#pwd
/flash/www/cgi-bin
[root@emblinux cgi-bin]#ls -al
drwxr-xr-x  1 root  root      0 Jan  1 12:15 .
drwxr-xr-x  1 root  root      0 Jan  1 12:08 ..
-rwxr-xr-x  1 guest  users    202 Jan  1 12:58 xmltest.sh
-rwxr-xr-x  1 guest  users    839 Jan  1 12:14 test.sh
[root@emblinux cgi-bin]#cat xmltest.sh
#!/bin/sh
# test.sh
# Environment Variable
echo Content-type: text/xml
echo
echo "<?xml version= \"1.0\" encoding= \"UTF-8\"?>"
echo "<message>"
echo "<text>Hallo Welt!</text>"
echo "</message>"
exit 0
[root@emblinux cgi-bin]#_
```

- **3. Step:** Start your Web browser and use the URL <http://192.168.0.126/cgi-bin/xmltest.sh> to

run the DIL/NetPC DNP/1110 CGI program. “192.168.0.126” is the IP address. “xmltest.sh” is the name of the CGI shell script file. Please modify these parameters if necessary.

It is necessary to use a Web browser, which knows XML. The newer versions of the Microsoft Internet Explorer supports XML.



**Please note:** 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 DIL/NetPC DNP/1110. 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.