

# Softexpert Moldova – A Blog for IT Professionals

## How to connect to a serial port in Linux using c++?

October 18, 2007 — Vladimir Iachimovici

In Linux all devices have a file in */dev* directory, so the communication with these devices is very simple, just need to open necessary file, and make read and write operations upon them.

In this article is shown how to connect to serial port in Linux, using c++.

First of all we include all needed libraries, and declare all necessary variables:

```
#include <stdio.h>

#include <string.h>

#include <fcntl.h>

#include <errno.h>

#include <termios.h>

#include <unistd.h>

int fd1;

int fd2;

char *buff,*buffer,*bufptr;

int wr,rd,nbytes,tries;

int main()
{
    return 0;
}
```

Next step, we connect to device through associated file and check the connection:

```
fd1=open("/dev/ttyS0", O_RDWR | O_NOCTTY | O_NDELAY);

if (fd1 == -1 )
{
    perror("open_port: Unable to open /dev/ttyS0 – ");
}
```

```
else
```

```
{
```

```
fcntl(fd1, F_SETFL, 0);
```

```
printf("Port 1 has been successfully opened and %d is the file description\n", fd1);
```

```
}
```

Where, `"/dev/ttyS0"` is associated with *COM1* port.

With following code we send to device some bits:

```
wr=write(fd1,"ATZ\r",4);
```

And for reading response from device:

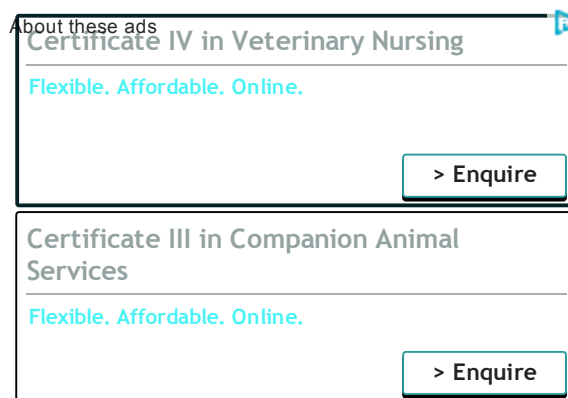
```
rd=read(fd1,buff,10);
```

```
printf("Bytes sent are %d \n",rd);
```

At the end, close the connection:

```
close(fd1);
```

**Enjoy!**



Posted in Linux, Programming. Tags: c++, Linux, serial port. 8 Comments »

## 8 Responses to “How to connect to a serial port in Linux using c++?”

**Gordon** Says:

October 25, 2007 at 12:09 am

Hi,

Thanks for the example, it was really helpful. I found that you can achieve pretty much the same result using file IO streams. I find them a bit easier to use...

Cheers,  
Gordon

Reply

**Hughes** Says:

April 7, 2008 at 12:44 pm

Very good!

Reply

**Dev.greensky.nl » Blog Archive » Connecting to serial device in Linux with C** Says:

April 7, 2008 at 8:30 pm

[...] <http://softexpert.wordpress.com/2007/10/18/how-to-connect-to-a-serial-port-in-linux-using-c/> [...]

Reply

**Dam** Says:

November 24, 2008 at 3:47 am

Are you talking about how to write to port with C++ <— not C

Reply

**mohammad** Says:

December 28, 2008 at 9:41 am

Thanks A LOT !!!

Reply

**Mark** Says:

November 29, 2009 at 3:39 pm

Thanks for posting this, but how is this C++? It's pure C.

Reply

**jlmuniz** Says:

May 13, 2010 at 5:30 pm

Why are you saying is C++ when you are using stdio.h wich is a "C" library, instead of , i dont see inheritance, polymorphism, etc...

Reply

**Messer** Says:

February 16, 2011 at 5:16 pm

Great tut! Thanks a lot.

Solved my issue definitely!

Regards;

Reply

« How to connect to a MySQL DB using c++ Linux?

14 golden rules for site optimization »

Blog at WordPress.com. | The Garland Theme.

Follow

Follow "Softexpert Moldova - A Blog for IT Professionals"

Powered by WordPress.com