
Subject: my TCP client/server don't work correctly
Posted by [Xemuth](#) on Mon, 17 May 2021 18:52:49 GMT
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Following SocketServer / SocketClient example :

Server :

```
#include <Core/Core.h>
```

```
using namespace Upp;
```

```
CONSOLE_APP_MAIN
```

```
{  
    TcpSocket server;  
    if(!server.Listen(3214, 5)) {  
        Cout() << "Unable to initialize server socket!\n";  
        SetExitCode(1);  
        return;  
    }  
    Cout() << "Waiting for requests..\n";  
    TcpSocket s;  
    if(s.Accept(server)) {  
        while(!s.IsError()){  
            String w = s.GetLine();  
            Cout() << "Request: " << w << " from: " << s.GetPeerAddr() << '\n';  
            if(w == "time")  
                s.Put(AsString(GetSysTime()));  
            else  
                s.Put(AsString(3 * atoi(~w)));  
            s.Put("\n");  
        }  
    }  
    Cout() << "Stopping server..\n";  
}
```

Client :

```
#include <Core/Core.h>
```

```
using namespace Upp;
```

```
CONSOLE_APP_MAIN
```

```
{  
    TcpSocket s;  
    if(!s.Connect(CommandLine().GetCount() ? CommandLine()[0] : "127.0.0.1", 3214)) {  
        Cout() << "Unable to connect to server!\n";  
        SetExitCode(1);  
    }  
    s.GlobalTimeout(1000);  
}
```

```
s.Put("time" + '\n');
Cout() << s.GetLine() <<EOL;
s.Put("hello" + '\n');
Cout() << s.GetLine() <<EOL;
}
```

Here is what I get in my console :

What I'm doing wrong ? the SocketServer / SocketClient work fine but it only use the socket once to send and receive data once before closing it

Subject: Re: my TCP client/server don't work correctly
Posted by [Xemuth](#) on Mon, 17 May 2021 19:03:25 GMT
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Subject: Re: my TCP client/server don't work correctly
Posted by [Oblivion](#) on Mon, 17 May 2021 19:10:56 GMT
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Hello Xemuth,

Your server code accepts only a single connection and then exits. You need to loop. :)

SocketServer example:

```
for(;;) { <<-----
  TcpSocket s;
  if(s.Accept(server)) {
    String w = s.GetLine();
    Cout() << "Request: " << w << " from: " << s.GetPeerAddr() << '\n';
    if(w == "time")
      s.Put(AsString(GetSysTime()));
    else
      s.Put(AsString(3 * atoi(~w)));
    s.Put("\n");
  }
}
```

If you need to handle multiple incoming connections at the same time, you either fork (expensive) or use an array of nonblocking sockets and/or MT, once accepting them, loop over them asynchronously until the connection is closed.

Best regards,
Oblivion

Subject: Re: my TCP client/server don't work correctly
Posted by [Xemuth](#) on Mon, 17 May 2021 21:29:31 GMT
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Hello again Oblivion !

Only having one socket and send multiple data across this one is what I aim for. That why I dont do a for in my example.

Probleme is, when I connect to the server. Neither my first nor my second data is received by server. Instead I receive a Null string from server (probably when I destroy the client socket) (this behavior can be seen in the console screen)

Subject: Re: my TCP client/server don't work correctly
Posted by [Oblivion](#) on Mon, 17 May 2021 21:53:43 GMT
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Probleme is, when I connect to the server. Neither my first nor my second data is received by server. Instead I receive a Null string from server (probably when I destroy the client socket) (this behavior can be seen in the console screen)

Then, the reason seems to be:

```
// s.Put("time" + '\n'); // << ----- This won't work... Clang: warning: adding 'char' to a string
does not append to the string [-Wstring-plus-int] (not the same thing what SocketClient does. It
appends it to a Upp::String, using the relevant operator.)
```

```
    s.Put("time\n");          // << ----- This works as expected.
s.Put(String("time") + '\n'); // also works
Cout() << s.GetLine() <<EOL;
s.Put("hello\n");
Cout() << s.GetLine() <<EOL;
```

Best regards,
Oblivion

Subject: Re: my TCP client/server don't work correctly
Posted by [Xemuth](#) on Tue, 18 May 2021 06:42:22 GMT
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Indeed it make sense...
will give a try after work.
Thanks again Oblivion

Edit : It worked fine, here is the code I come up with (not perfect and Many thing need to be added but it might help) :

```
if(!server.Listen(port, 1)) {
    LOG("Unable to initialize server socket on port " + AsString(port));
    return;
}
client.GlobalTimeout(1000);
LOG("Waiting for webServer...");
while(!Thread::IsShutdownThreads()){

if(client.Accept(server)){
    LOG("WebServer connected");
    int emptyData = 0;
    while(!client.IsError()){
        Upp::String data = client.GetLine();
        if(!client.IsTimeout()){
            Upp::String sendingCmd = "";
            LOG("Receiving : " + data + " from: " + client.GetPeerAddr());
            sendingCmd = ProcessCommandNetwork(data);
            LOG("Sending: " + sendingCmd + " To: " + client.GetPeerAddr());
            sendingCmd += '\n';
            sendingCmd.Shrink();
            client.Put(sendingCmd);
        }else{
            client.ClearError();
        }
    }
    LOG("WebServer error: " + client.GetErrorDesc());
    client.Close();
    client.Clear();
    LOG("WebServer disconnected");
}
```

```
}  
LOG("Connection with webServer ended");
```
