Subject: [Solved]XML Rpc client will halt when server is not running
Posted by kasome on Wed, 20 Jun 2012 10:58:23 GMT
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The following code will halt when XML RPC Server is not running.

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

using namespace Upp;

namespace Upp {
 extern bool HttpRequest_Trace__;
}

int main() {
#ifdef flagDEBUG
// LogXmlRpcRequests();
// HttpRequest_Trace__ = true;
 StdLogSetup( LOG_COUT | LOG_FILE );
#endif

 Time serverTime;
 SetDateFormat( "%4d-%02d-%02d" );
 XmlRpcRequest call( "127.0.0.1:1234" );
 if( call("GetServerTime") >> serverTime ) {
  LOG( "Server Time =" + Upp::AsString(serverTime) );
 }
 else {
  LOG( Upp::Format("Error: %s", call.GetError()) );
 }

 return 0;
}
```

I try to trace the code, the problem seems to happen in the red block. (In upp\uppsrc\Core\Socket.cpp)

```
int TcpSocket::Put(const char *s, int length)
{
 LLOG("Put " << socket << ": " << length);
 ASSERT(IsOpen());
 if(length < 0 && s)
  length = (int)strlen(s);
 if(!s || length <= 0 || IsError() || IsAbort())
```

```
  return 0;
 done = 0;
 bool peek = false;
 int end_time = GetEndTime();


 while(done < length) {
  if(peek && !Wait(WAIT_WRITE, end_time))
   return done;
  peek = false;
  int count = Send(s + done, length - done);
  if(IsError() || timeout == 0 && count == 0 && peek)
   return done;
  if(count > 0)
   done += count;
  else
   peek = true;
 }

 LLOG("//Put() -> " << done);
 return done;
}
```

I modify the code from (In upp\uppsrc\Core\Socket.cpp)

```
bool TcpSocket::WouldBlock()
{
 int c = GetErrorCode();
#ifdef PLATFORM_POSIX
 return c == SOCKERR(EWOULDBLOCK) || c == SOCKERR(EAGAIN);
#endif
#ifdef PLATFORM_WIN32
 return c == SOCKERR(EWOULDBLOCK) || c == SOCKERR(ENOTCONN);
#endif
}
```

to

```
bool TcpSocket::WouldBlock()
{
 int c = GetErrorCode();
#ifdef PLATFORM_POSIX
 return c == SOCKERR(EWOULDBLOCK) || c == SOCKERR(EAGAIN);
#endif
```

```
#ifdef PLATFORM_WIN32
 return c == SOCKERR(EWOULDBLOCK) || c != SOCKERR(ENOTCONN);
#endif
}
```

I hope that will fix the problem.

Subject: Re: XML Rpc client will halt when server is not running
Posted by kasome on Thu, 21 Jun 2012 03:21:31 GMT
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Here is full XML RPC Server & Client Code

Server:

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

using namespace Upp;

XMLRPC_METHOD( Compute ) {
 double a, b;
 Upp::String arithmeticOperator;
 rpc >> a >> arithmeticOperator >> b;
 LOG( Upp::Format("Request: %nf %s %nf", a, arithmeticOperator, b) );

 if( arithmeticOperator.GetCount() == 1 ) {
  switch( *arithmeticOperator ) {
   case '+': {
    rpc << a + b;
    break;
   }
   case '-': {
    rpc << a - b;
    break;
   }
   case '/': {
    if( b == 0 ) {
     rpc << Upp::ErrorValue("division by zero");
    }
    else {
     rpc << a / b;
    }
    break;
   }
```

```
   case '*': {
    rpc << a * b;
    break;
   }
  }
 }
 else {
  rpc << Upp::ErrorValue("unknown operator");
 }
}

XMLRPC_METHOD( GetServerTime ) {
 LOG( "Request: GetServerTime" );
 rpc << Upp::GetSysTime();
}

int main() {
 TcpSocket rpc;
 int port = 1234;

 if( !rpc.Listen(port,5) ) {
  return false;
 }

 while( true ) {
  if( _kbhit() ) {
   if( _getch() == 27 ){
    break;
   }
  }

  TcpSocket http;
  http.Timeout(1000);
  if( http.Accept(rpc) ) {
   XmlRpcPerform(http,NULL);
  }
 }

 return 0;
}
```

Client:

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

```
using namespace Upp;

namespace Upp {
 extern bool HttpRequest_Trace__;
}

void Compute( double a, Upp::String arithmeticOperator, double b );

int main() {
 Time serverTime;
 SetDateFormat( "%4d-%02d-%02d" );
 XmlRpcRequest call( "127.0.0.1:1234" );
 if( call("GetServerTime") >> serverTime ) {
  LOG( "Server Time = " << serverTime );
 }
 else {
  LOG( Upp::Format("Error: %s", call.GetError()) );
 }

 Compute( 12, "+", 12 );
 Compute( 12, "*", 12 );
 Compute( 12, "+56", 12 );
 Compute( 12, "/", 0 );

 return 0;
}

void Compute( double a, Upp::String arithmeticOperator, double b ) {
 double result = 0;
 XmlRpcRequest call( "127.0.0.1:1234" );
 if( call("Compute", a, arithmeticOperator, b) >> result ) {
  LOG( Upp::Format("%f %s %f = %f", a, arithmeticOperator, b, result) );
 }
 else {
  LOG( Upp::Format("Error: %s", call.GetError()) );
 }
}
```

Subject: Re: XML Rpc client will halt when server is not running
Posted by mirek on Thu, 21 Jun 2012 07:09:48 GMT
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This is wrong solution. Win32 regulary returns WSAENOTCONN when connection is in progress.

I guess the real problem is that we are here simulating blocking sockets using non-blocking behaviour. Win32 seems to give up connect in blocking mode after 21 seconds. So the correct

solution is perhaps to simulate this special timeout as well - done, please check.

(You can also decrease the timeout using Timeout).

Mirek

Subject: Re: XML Rpc client will halt when server is not running
Posted by kasome on Thu, 21 Jun 2012 15:16:57 GMT
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i try the latest u++ r5074, and it works well now, not halt anymore.

but i still can't use Timeout nor RequestTimeout, i.e.

```
XmlRpcRequest call( "127.0.0.1:1234" );
call.Timeout(1000);        // VS2005 compile error
call.RequestTimeout(1000); // VS2005 compile error
```

because XmlRpcRequest is private inheritance from HttpRequest,

how about change

```
class XmlRpcReques : HttpRequest
```

to

```
class XmlRpcReques : public HttpRequest ?
```

and thanks.
