Subject: Re: SSL server crash
Posted by Zbych on Fri, 09 Sep 2011 09:36:09 GMT
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mirek wrote on Fri, 09 September 2011 10:00
Of course, what you cannot is to take a reference (pointer) to element and then unlock the mutex and use this reference.

But I can do this with Array, can't I?

Can you take a look at this version:

```
#include <Core/Core.h>
#include <Web/SSL/WebSSL.h>

using namespace Upp;

struct client_data: Moveable<client_data> {
 Socket sock;
 dword ip;
 int par1;
 int par2;
};


template <class T>
class MTArray: private Array<T>{
private:
 Mutex mtx;
public:
 T&       Add(const T& x)     {Mutex::Lock __(mtx); Array<T>::Add(x);}
 void     Remove(int i, int count = 1)  {Mutex::Lock __(mtx); Array<T>::Remove(i, count);}
 const T& operator[](int i) const      {Mutex::Lock __(mtx); return Array<T>::Get(i); }
 T&       operator[](int i)            {Mutex::Lock __(mtx); return Array<T>::Get(i); }
 int      GetCount()       {Mutex::Lock __(mtx); return Array<T>::GetCount(); }
};


class TestServer{
 volatile Atomic stop;
 MTArray<client_data> clients;

 int WaitForInput(int _timeout_ms);
 void Worker();
public:
 typedef TestServer CLASSNAME;
 void Start();
 void Stop()  {AtomicWrite(stop, true);}
```

```
 TestServer()  {AtomicWrite(stop, false);}
};


int TestServer::WaitForInput(int timeout_ms)
{
 fd_set set;
 struct timeval tval;
 int max = 0;

 if (clients.GetCount() <= 0) return -1;

 tval.tv_sec = timeout_ms / 1000;
 tval.tv_usec = 1000 * (timeout_ms % 1000);

 FD_ZERO(&set);
 for (int i = 0; i < clients.GetCount(); i++){
  int tmp = clients[i].sock.GetSocket();
  if (tmp > max) max = tmp;
  FD_SET(tmp, &set);
 }

 if (select(max+1, &set, NULL, NULL, &tval) > 0){
  for (int i = 0; i < clients.GetCount(); i++){
   if (FD_ISSET(clients[i].sock.GetSocket(), &set)) return i;
  }
 }

 return -1;
}


void TestServer::Worker()
{
 while(!Thread::IsShutdownThreads() && !AtomicRead(stop))
 {
  int ci = WaitForInput(1000);
  if (ci >= 0){
   if (!clients[ci].sock.IsOpen() || clients[ci].sock.IsError() || clients[ci].sock.IsEof()){
    Cout() << "Client no " << ci << " (" << FormatIP(clients[ci].ip) << ") closed connection\n";
    clients[ci].sock.Close();
    clients.Remove(ci);
   }else{
    Cout() << "[" << FormatIP(clients[ci].ip) << "] " << clients[ci].sock.Read() << "\n" ;
   }
  }else{
   for (int i = 0; i < clients.GetCount(); i++){
    clients[i].sock.Write(Format("%`: message to client no %d", GetSysTime(), i));
```

```
   }
  }
 }
}


void TestServer::Start()
{
 Socket server;
#if 1
 SSLContext context;

 if (!context.Create(SSLv3_server_method())){
  Cout() << "Can not create context\n";
  return;
 }

 if (!context.UseCertificate(LoadFile(ConfigFile("servercert.pem")),
LoadFile(ConfigFile("serverkey.pem")), false)){
  Cout() << "Certificate and key are diffrent!\n";
  return;
 }

 if(!SSLServerSocket(server, context, 11111, true, 5, true)){
#else
 if(!ServerSocket(server, 11111)){
#endif
  Cout() << "Can not start server\n";
  return;
 }

 Thread().Run(THISBACK(Worker));

 Cout() << "Waiting for connections\n";

 while(!Thread::IsShutdownThreads() && !AtomicRead(stop)){
  client_data new_client;
  if (server.Accept(new_client.sock, &new_client.ip)){
   Cout() << "Client no " << clients.GetCount() << " from " << FormatIP(new_client.ip) << "\n";
   clients.Add(new_client);
  }else{
   Cout() << "+\n";
  }
 }
}


TestServer server;
```

```
void Stop(int sig)
{
 Cout() << "\nstopping, please wait...\n";
 server.Stop();
}


CONSOLE_APP_MAIN
{
 signal(SIGINT, Stop);
 server.Start();
}
```