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//-----
#include <Vcl.Dialogs.hpp>
#pragma hdrstop

#include "UnitDMSockets.h"
#include "UnitFormMain.h"
#include "UnitUtils.h"
#include "UnitThreadWorking.h"
//-----
#pragma package(smart_init)
#pragma classgroup "Vcl.Controls.TControl"
#pragma resource "*.dfm"
TdmSockets *dmSockets;
//-----
__fastcall TdmSockets::TdmSockets(TComponent* Owner)
: TDataModule(Owner)
{
    __read_ini_file(); // четене на параметрите от конфигурационния файл

    csOut1->Port = 37;
    csOut1->Address = stringIPAddress;

    csOut2->Port = 37;
    csOut2->Address = stringIPAddress;

    csOut3->Port = 37;
    csOut3->Address = stringIPAddress;

    csOut4->Port = 37;
    csOut4->Address = stringIPAddress;
}
//-----
__fastcall TdmSockets::~TdmSockets(void)
{
    __write_ini_file();
}
//-----
void __fastcall TdmSockets::__read_ini_file(void)
{
    stringIniFileName = Application->ExeName;
    stringIniFileName = stringIniFileName.SubString(1, stringIniFileName.Length() - 3) + ".ini";

    iniFile = new TIniFile(stringIniFileName);
    if(!FileExists(stringIniFileName))
        ShowMessage("Missing configuration file!");

    formMain->Top = iniFile->ReadInteger(L"FormPos", L"Top", 0);
    formMain->Left = iniFile->ReadInteger(L"FormPos", L"Left", 0);

    formMain->memoLog->Visible = !iniFile->ReadInteger(L"Log", L"Visible", 0);

    stringIPAddress = iniFile->ReadString(L"TimeServer", L"IPAddress", L"127.0.0.1");

    intVolume = iniFile->ReadInteger(L"Package", L"Volume", 1);
    intDelayToFree = iniFile->ReadInteger(L"Package", L"DelayToFree", 0);
}
//-----
void __fastcall TdmSockets::__write_ini_file(void)
{
    try
    {
        iniFile->WriteInteger("FormPos", "Top", formMain->Top);
        iniFile->WriteInteger("FormPos", "Left", formMain->Left);

        iniFile->WriteInteger(L"Log", L"Visible", formMain->memoLog->Visible);
    }
    catch(Exception& e)
    {
        ShowMessage(e.Message);
    }

    delete iniFile;
}

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//-----
void __fastcall TdmSockets::csOut1Connect(TObject *Sender, TCustomWinSocket *Socket)
{
    int intReqId = 0;
    if(Sender == csOut1)
    {
        intReqId = 1;
    }
    else if(Sender == csOut2)
    {
        intReqId = 2;
    }
    else if(Sender == csOut3)
    {
        intReqId = 3;
    }
    else if(Sender == csOut4)
    {
        intReqId = 4;
    }

    AddToLog(Socket, "CNC[" + IntToStr(intReqId) + "]");
    if(csOut1->Active && csOut2->Active && csOut3->Active && csOut4->Active)
    {
        formMain->buttonSync->Enabled = false;
    }
}

//-----
void __fastcall TdmSockets::csOut1Disconnect(TObject *Sender, TCustomWinSocket *Socket)
{
    int intReqId = 0;
    if(Sender == csOut1)
    {
        intReqId = 1;
    }
    else if(Sender == csOut2)
    {
        intReqId = 2;
    }
    else if(Sender == csOut3)
    {
        intReqId = 3;
    }
    else if(Sender == csOut4)
    {
        intReqId = 4;
    }

    AddToLog(Socket, "DSC[" + IntToStr(intReqId) + "]");
    if(!csOut1->Active && !csOut2->Active && !csOut3->Active && !csOut4->Active)
    {
        formMain->buttonSync->Enabled = true;
        Screen->Cursor = crDefault;
    }
}

//-----
void __fastcall TdmSockets::csOut1Error(TObject *Sender, TCustomWinSocket *Socket,
    TErrorEvent ErrorEvent, int &ErrorCode)
{
    int intReqId = 0;
    if(Sender == csOut1)
    {
        intReqId = 1;
    }
    else if(Sender == csOut2)
    {
        intReqId = 2;
    }
    else if(Sender == csOut3)
    {
        intReqId = 3;
    }
    else if(Sender == csOut4)
    {

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        intReqId = 4;
    }

    AddToLog(Socket, "ERR[" + IntToStr(intReqId) + "]");
    if(!csOut1->Active && !csOut2->Active && !csOut3->Active && !csOut4->Active)
    {
        formMain->buttonSync->Enabled = true;
        Screen->Cursor = crDefault;
    }

    ErrorCode = 0;
}

//-----
void __fastcall TdmSockets::csOut1Read(TObject *Sender, TCustomWinSocket *Socket)
{
    int intReqId = 0;
    if(Sender == csOut1)
    {
        intReqId = 1;
    }
    else if(Sender == csOut2)
    {
        intReqId = 2;
    }
    else if(Sender == csOut3)
    {
        intReqId = 3;
    }
    else if(Sender == csOut4)
    {
        intReqId = 4;
    }

    unsigned long ulTime;

    int intBytesReceived = Socket->ReceiveBuf(&ulTime, 4);
    // if(intBytesReceived != 4)
    // { // Грешен отговор
    //     String str = "Error: " + IntToStr(intBytesReceived) + " bytes received";
    //     AddToLog(str);
    //     return;
    // }

    ulTime = ntohl(ulTime);

    String strTime;
    strTime.printf(L"%0X", ulTime);
    AddToLog(Socket, "RPL[" + IntToStr(intReqId) + "]::[" + strTime + "]");

    intPendingReq--;

    // СИМУЛАЦИЯ НА ОБРАБОТКА
    // многозадачно обслужване за избягване на сериализацията
    // на паралелните клонове
    //
    std::thread threadWorking(DoWork, Socket, intReqId, intDelayToFree);
    threadWorking.detach(); // развързване на дъщерната нишка от основната
    ////////////////////////////////////////
}

//-----
void __fastcall TdmSockets::SendBatchOfReq(void)
{
    /* TODO : Формиране на пакет заявки */
    if(csOut1->Active || csOut2->Active || csOut3->Active || csOut4->Active)
    {
        String str = "There are pending requests. Cannot send batch.";
        AddToLog(str);
        return;
    }

    csOut1->Open(); intPendingReq++;
    csOut2->Open(); intPendingReq++;
    csOut3->Open(); intPendingReq++;
    csOut4->Open(); intPendingReq++;
}

```

