Description for the hipecs client demo

This is the description for the hipecs client demo project. There is another demo project for using the hipecs as server, too.

Introduction

For using this demo application, you'll need at least a hipecs Controller with network interface (CORE10, PLC1020,1030,1220,1230). A properly configured network is necessary of course.

Preparation

For the **hardware**, there is no special preparation necessary.

For the **software** it is important to use the actual IP addresses of the client and the server in this demo application. The default settings in this project are the same as in the system.ini file. This file should be copied to the hipecs boot drive! Attention!! Make sure, these parameters and IP addresses are within the possible address range of your network. The system.ini file hold all network parameters for the controller.

hipecs setup

When using a frenzel + berg Visu-P Panel, you have to use the COM3 (RS422) interface for the SGI connection to the panel. Baudrate is 460.000 Baud. Check Visu-Panel DIP switches, too.

The "app_hipecssocketclient_v1r1_en.prj" file is the CoDeSys PLC program for this example. The communication parameters are COM15 and 57600 Baud. **This must be changed to your demands!**

Starting and handling the project

It is recommended to use the target visualisation to operate the demo application. In the "Filesystem_VISU" visualization, there are several grey buttons. These buttons trigger the corresponding function once. The blue fields are meant to enter strings for changing the port number or to enter the hostname you want to search for. Searching for localhost returns the IP of the hipecs itself.

Attention!! Unlike in this demo, it is strongly recommended to run socket related functions in a separated task. This library contains functions blocking the current task, such as the accept function waiting for the client. If executed in the same task as the PLC_PRG, this could trigger the output watchdog, resetting the hipecs hardware I/Os. Depending on your application you may not want this to happen.

POUs and functions

PLC_PRG

This project only uses the PLC_PRG POU. All functions are called here. Only functions of the "SysLibSocket" library are used in this project. All grey buttons of the visualization will trigger a function by changing the "step" variable in the "PLC_PRG" POU. The function is executed and the variable is set to 0 again. The green or red circles indicate whether the function was successful or not.

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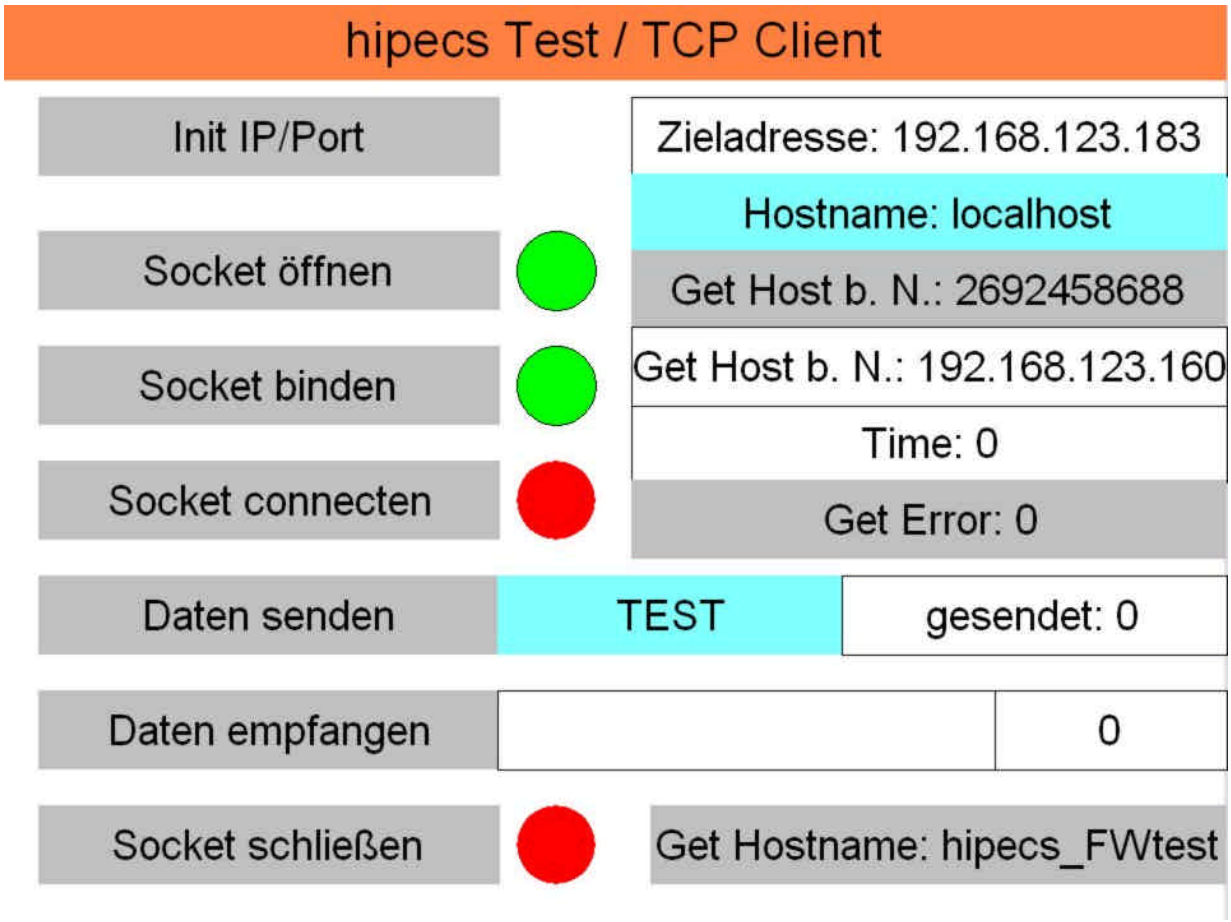
Visu



Button	Function
Init IP/Port	initialize the network variables
Socket öffnen	calls the function for opening a socket
Socket binden	binds the socket
Socket connecten	establishes the connection
Daten senden	sends the data from the blue field to the server
Daten empfangen	receives data from the input buffer
Socket schließen	closes the socket
Get Host b.N.:	returns the IP address of the corresponding hostname
Get Error	returns the last error code
Get Hostname	returns the own hostname