

Contents for the GCP++ Sample Client Application

This help file applies to GCP_CLNT.EXE that dynamically links to GCP_API.DLL.

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Introduction

GCP++ is a system comprised of a single GCP Server (GCP.EXE) and GCP clients. GCP_CLNT is a client example that use the server via library function calls. The four GCP function calls, GCPopen(), GCPagent(), GCPserver(), and GCPquery() have provided the model for the GCP_CLNT menu bar, and each menu item is used to fill in various parameters and make the function call. Thus, GCP_CLNT is intended to test and exercise the GCP++ system, and to provide an interactive learning tool for the application programmer who is using it.

GCP_CLNT may be used to test GCP++ functionality on one or multiple workstations. Due to the "loop-back" support provided by most TCP/IP vendors, connections may also be made back to the host workstation that test all the functionality of the agents. To do this, start two copies of GCP_CLNT on your workstation, and use your host address for all connections.

It is also possible to start multiple servers from a single GCP_CLNT task, but when this is done the extra handles are discarded...the only ramification is that created agents will not be closed until GCP.EXE is manually closed.

GCP++ has been written to make your TCP/IP programming tasks easier. Good luck!

Signed,

Mike Baldwin, GCP++ Developer

GCPopen ()

This menu is used to select the type of communications agent the user wishes to use. Please refer to the GCP++ Developer's Guide for a description of the 5 server types (PEER, TELNET, TCP, UDP, TFTP), and the parameters required for each. The selection of a GCPopen() menu item instantiates a dialog box that supports the specification of address, port, etc., and builds a GCPopen() function call that is executed when the appropriate button is selected.

Generally, the "AGENT" button refers to the creation of a server that implements the "client" side of the client-server model. The "DAEMON" button refers to the creation of a daemon that waits for an incoming service request before spawning the appropriate matching AGENT.

GCPagent ()

This menu is used to command an agent that was instantiated in response to the GCPopen() function call. Every selection on the GCPagent menu builds a GCPagent() function call and executes it when selected.

The GCPagent menu offers the following commands:

Message	Instantiates the Message Transport dialog box that allows the user to build a string and send it out over the established connection. When a message arrives (asynchronously), it is displayed in the main client window. The Size field allows the user to send very large buffers. The Repeat field allows the user to specify numerous copies to be sent serially. The Remote Host group box supports UDP datagrams only that are addressed individually. When messages are received, they are displayed in the listbox at the bottom.
File	Instantiates the File Transport dialog box. This supports the transfer of files (PEER and TFTP server types only).
TELNET Command	When a TELNET command sequenced is received, this modal dialog box is instantiated with the parameters of the sequence. The user may then specify his own TELNET Command sequence and send it back. The sub-option string performs a coding of unprintable characters in the form: ^xxx, where the caret symbol means that the following 3 digits contains the decimal value of the unprintable character. The coding is valid for both incoming and outgoing sub-commands.
Close	Completes any pending actions (buffer and file transfers), release communication resources and deletes the server from memory.
Abort	Abruptly closes the server connection and deletes the server from memory.

GCPserver ()

This menu is used to command the behavior of the GCP Server. Every selection on the GCPserver menu builds a GCPserver() function call and executes it when selected.

The GCPserver menu offers the following commands:

Show GCP Server	Shows the GCP Server as an icon (this is default operation when GCP++ is started via mouse click).
Hide GCP Server	Hides the display of the GCP Server (this is default operation when GCP++ is started via an API function call).
Release GCP Server	Closes the GCP Server if no agents are active.
Automatic Close	Instructs the GCP Server to remove itself after the last agent is closed. This is default operation.
Manual Close	Instructs the GCP Server to remain open indefinitely.

GCPquery ()

This menu is used to query a GCP Agent or the GCP Server. Each menu item builds a GCPquery function call that is executed upon command.

Selection of the Host Table item instantiates a dialog box that displays the local host name and address (line 1 of the list box), and all other names present in the host name table.

