Chameleon Sampler Version 3.11 (Dial-up serial line only)
7/12/94

The Chameleon software you have installed includes several powerful applications most commonly used in dial-up TCP/IP environments including the Internet. This serial-only version of Chameleon provides fully functional copies of FTP, Telnet, Mail, Ping and Custom applications that have been selected from a prior version of NetManage's popular Chameleon TCP/IP for Windows commercial application suite.

With these applications you can send and receive mail with anyone on the Internet, download files from FTP servers or login to remote computers. Also included in this Sampler is a native windows implementation of the TCP/IP Protocol that is 100% DLL and fully WinSock standard compliant. The WinSock industry standard is based on the NetManage TCP/IP specification which was contributed to the standards body.

Chameleon is the leading TCP/IP connectivity product for Microsoft Windows. It was the first product designed specifically for the Windows environment, not ported from DOS. In addition to providing dial-up serial line access, regular Chameleon features connectivity to local area networks running Ethernet, Token Ring, or FDDI. NetManage's TCP/IP can run concurrently with NetWare, Banyan Vines, LAN Manager, and PathWorks.   There are over two dozen applications in the full Chameleon product, including: LAN support, MIME support for multimedia attachments to email messages, a Gopher Client, Internet News Reader, TN3270 and TN5250 emulation, Scripting, TFTP, Bind, Finger, WhoIs, an SNMP Agent, and optional support for both NFS client and server. New applications and features are being added in each new release.

NetManage products turn your PC into an integral part of an inter-networked computing environment. You can share resources and information across your network, and across the world. We at NetManage are dedicated to providing all the benefits of inter-networking and distributed computing to the PC user without sacrificing performance or native Windows ease of use.

Other products from NetManage include Chameleon, ChameleonNFS, Internet Chameleon, Chameleon32NFS for Windows NT, ChameleonX with an X Window server for Windows PCs, NEWT-SDK Software Developers Kit for developing WinSock and ONC RPC client/server applications, and NewtWatch, a new Desktop Management and Packet Trace application suite for system administrators.

To purchase a full copy of the most recent version of Chameleon or to obtain information about other NetManage products, please contact us at the following address or send email to sales@netmanage.com.

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We hope you will enjoy this application sampler.

Application Notes (Please Read Before Starting)

This sampler includes several popular Chameleon applications: FTP, Mail, Telnet and Ping. It also includes the Custom utility which you use to customize your environment before attempting to connect to a TCP/IP network. You can use this software to connect to the Internet, or to your own TCP/IP network via a dial-up phone link.

In addition to this software, you will also need a modem that you can connect to a COM port of your computer. This sampler comes with configuration files pre-loaded with most of the parameters needed to connect to many popular Internet access providers. For more information on obtaining a dial-up Internet access account, please contact the respective provider. **A complete list of the providers supported with pre-configurations can be found in the file PROVIDER.TXT which is copied into the directory where you installed the Sampler.**

Note that Chameleon allows you to connect to the Internet as a full TCP/IP host, rather than login through a shell account running on the computer of a remote service provider. For the latter you can only use a character mode emulator such as Kermit, or Microsoft Terminal. When contacting the Internet provider of your choice, you need to indicate that you would like a dial-up TCP/IP connection and that you want to connect via SLIP or PPP directly from your Windows PC.

Getting Started

You will need the following information before you start Custom to access a TCP/IP network. You can get most of this information from your Internet Access provider, or your system administrator.

Startup Information	Example
Your own IP Address	147.161.2.15
Your Host Name	myname
Your Domain Name	ansremote.com
Port	COM2, 9600
Modem	Hayes
Dial up (& optional access code)	1-800-926-7111,,,0000001
Login: Name	myname
Password	********
Startup Command	SLIP
Domain Name Server Address	192.103.63.100
MailBox Name *	myname
MailBox Password *	********
Mail Gateway Name *	p-o.ans.net
Mail Server Name *	p-o.ans.net

(*) Mail service is optional. This information is necessary if you wish to use electronic mail.

NOTE: Many providers also supply information about DEFAULT GATEWAY and SUBNET mask. You can ignore this information. For a dial-up only connection all information goes out the COM port and these parameters are unnecessary and not used by the Chameleon Sampler.

Using Pre-Configured Access files
Start Custom by double clicking on the Custom icon in the Chameleon Sampler program group.

To use a pre-configured Custom file, select File, then Open, and choose the .cfg file with the name corresponding to your Internet access provider. They will be of the form <providername.cfg> such as: alternet.cfg, ansremote.cfg, cerfnet.cfg, psinet.cfg, etc.

NetManage has tested the Chameleon Sampler with each of these providers to facilitate ease of getting connected and to offer a wide range of choice in Internet access providers.

There is also a corresponding help guide for each of these providers that you will find on the Sampler disk itself. The format of the file name is <providername>.txt. These help files are not installed on your hard disk when you install the Sampler programs.

Defining your Own Interface
Use the default configuration (TCPIP.CFG) if you are going to define your own interface to a computer network or use an access provider other than one of those noted above. The default generic interface defined in TCPIP.CFG is a PPP interface. If your provider has given you a SLIP account, you will need to add a SLIP interface rather than modify this default.

To define your own interface, select Interface, then Add, and select the type. Custom will create an interface entry in Custom and a corresponding entry for the type of interface you have chosen in the SLIP.INI and name it (e.g. SLIP0). Some modification to you slip script may be necessary. For more information on slip scripting see the appropriate section below.

Certain other configuration files you will see under File, Open cannot be opened by Custom, as they relate to other Chameleon applications. A warning message will appear if you try to open them through Custom.

Multiple interfaces to the same network (e.g. SLIP and PPP, or high speed and low speed dialup interface definitions) can be created in Custom.   However, you should use a separate CFG file for each unique network connection that you define if any variables under Services (e.g. Domain name server) are different since they are global across all defined interfaces in a single configuration.

Entering Your Startup Information in Custom
In Custom, under Setup, enter the information gathered above into: IP address, Host Name, Domain Name, COM Port and Modem speed (leave all other values as given), Modem type, Dial up number (you can insert a "9," before the access number if on a PBX), and Login.

In Custom under Services, enter the Domain Name server IP number(s). Then select File, Save and then Exit from Custom. **Important note: Changes to certain values in your configuration file (such as Domain Server address) made through Custom do not take effect until the next time you run the application. You should always save any changes and exit *all* Chameleon applications, then relaunch Custom before reconnecting.**

Depending on the provider selected, a number of values are already correctly entered and do not need to be changed. Some providers, such as PSINet will supply the IP address dynamically.

No other values need to be set for this serial only version of Chameleon. Many providers also supply information about DEFAULT GATEWAY and SUBNET mask. You can ignore this information. For a dial-up only connection all data goes through the COM port and these parameters are unnecessary and not used by the Chameleon Sampler.

If you are adding your own custom SLIP interface, you may need to make changes to the default SLIP script in order to successfully connect. See below for more information on scripting. The default slip script that is automatically created for new interfaces works for many popular access providers, and for dialing in to routers such as the Telebit NetBlazer.

Connecting to the Network
Make sure that your modem is connected to the correct COM port and power is on. Restart Custom, and under Setup select Log to open a window which will allow you to view and log your connection sequence. Move the log window down, and then again in Custom select Connect. In

the log window you will see the modem commands transmitted over the COM port. When you are successfully connected, the system will signal you. Minimize Custom and you are now ready to use your Chameleon applications.

Testing your Network Connection
Ping is the grandfather of all network testing tools, and allows you to validate that you are successfully able to communicate with other machines. Ping sends a brief message to another host, and a reply will echo back if you are able to reach that machine. A good test would be to ping the domain server IP address given you by your administrator, e.g. 192.103.63.100, or try pinging your mail server name, e.g. p-o.ans.net. You can also ping other hosts by either their IP addresses or by name. Note that in order to ping machines by name, you must have input a correct value for at least one Domain Name Server in Custom. The Domain Name Server translates domain names to actual IP addresses.

Troubleshooting
If you experience the problem that you can Ping, but cannot resolve domain names and none of the other applications appear to work, this is typically symptomatic of improperly setting compression with a SLIP account. (e.g. You have selected SLIP and your account is setup by the provider for CSLIP or vice versa). PPP will automatically negotiates compression, so the problem does not occur in the case of PPP.

If you experience the problem that the Custom LOG window shows the SLIP script sequence completing, and you recieve the 'Connect' signal but cannot successfully Ping anything at all -- this most likely indicates a problem with your password being rejected or expired. If the script has successfully completed, any error messages that may occur after supplying the password are not echoed back in the LOG, resulting in this problem scenario. Verify that you have the correct login and password by testing them by connecting with the Microsoft Terminal application. If these are correct, please re-check your SLIP script sequence.

SLIP Scripting (You can skip this section if using a default Internet provider configuration)

The scripting language is used to negotiate the initial login to the remote host. The remote host could be a UNIX box, a special SLIP/CSLIP/PPP router like a NetBlazer, a Chameleon PC or a terminal server that supports the SLIP, CSLIP or PPP protocols.

The script is kept in a file called SLIP.INI in the netmanage directory. For each SLIP, CSLIP or PPP interface you create in Custom, an entry will be added to the SLIP.INI with the name of the interface as a header.

The default used for new interfaces defined in Custom should satisfy your needs in most of the cases. You may need to use SLIP's scripting language if you require automatic connection dialogs different than the ones provided.

You can edit the default script for each SLIP interface. Before attempting any changes to your SLIP.INI it is suggested that you make a backup copy named SLIP.OLD. You may then use the notepad utility in windows to edit your SLIP.INI.

The scripting language is simply a series of alternating "Expect" and "Send" statements. The "Expect" statements tell the script to wait for a series of character(s) before it "Sends" a reply. The "Send" statements send the information in response to a prompt (the preceding "expect") from the remote host.

There is a special character set used for writing a connection script. Please refer to the scripting language syntax and examples below for the script character information.

EXAMPLE

The SLIP.INI file that comes with the Sampler will look something like this:

```
[DEFAULT]
SCRIPT=login: $u$r word: $p$r
TYPE=SLIP

[AlterNet]
SCRIPT=login: $u$r word: $p$r enabled $2$r
TYPE=PPP

[ANSRemote]
SCRIPT=-n $9$r$r name: $u$r word: $p$r -n $9$c$r Switching
TYPE=PPP

[CERFnet]
SCRIPT=name: $u$r word: $p$r -n $6$c$r -i
TYPE=SLIP
```

etc...

Each new serial interface defined in CUSTOM will use the information under [Default] as its initial default script. This script may need to be edited to properly negotiate the login on a particular remote dial up host.

In order to successfully execute a dial-up script the user must know the login sequence. This means that the user must know the exact prompts, the order and what needs to be sent at those prompts.

EXAMPLE

If you need to send a user name at the Login prompt, the script would look like this:

SCRIPT=Login: ur

Login: - is the exact prompt to be expected (expects are case sensitive)

$u - will send the login name from the UserName field in CUSTOM

$r - will send a CR (Carriage Return)

If you are not familiar with the exact login procedure of your Internet service do the following:

* Connect to your Service Provider using the windows terminal application
* Write down every Prompt, CR (Carriage Return), and send parameter used.

EXAMPLE

Lets say that after you have connected using Windows terminal, before you can send the UserName you need to send a Carriage Return (CR) (hit ENTER) to "wake-up" the server. The script will look like this:

SCRIPT=-n $r Login: ur

-n means skip an expect. Anything following this character will be a send. In the above example we are sending a CR represented by the $r character.

Lets take a look at the script for PSINET as another example:

[PSINet]
SCRIPT=name: ur word: pr -n 6c$r -i
TYPE=SLIP

After the dial up is complete and the baud rate is negotiated the script tells Chameleon to expect the characters "name:" contained in the initial prompt from the remote host. After the prompt is received the program will send the UserID (the $u parameter) and a Carriage Return ($r).

Next is an expect of the password prompt "word:". Even though the actual prompt says "password:", you only need to put in the last 4 characters of any prompt to create an "expect" string. After the prompt is understood by the script, the script will send the value contained in the login PASSWORD field in Custom and a CR (pr).

Then the script sends a 6 second delay ($6), the command to start SLIP,CSLIP or PPP (represented by $c which sends the value specified in the Startup Command field of CUSTOM application LOGIN menu), after skipping an expect with the (-n) parameter. So the script reads -n 6c$r immediately after the password is sent.

The (-i) option at the end of the script, tells the system to expect an IP address (an IP address displayed in text by the remote SLIP host). The (-i) is not used for PPP. PPP negotiates the addresses automatically.

If you choose to modify the automatic dialogs provided, update the SLIP file using the scripting language syntax below:

        <expect1><send1><expect2>...

Words are separated by white space, that is, spaces or tabs. Within a <send> string you can include the following escapes:

SLIP SCRIPT LANGUAGE SYNTAX

$n   - send a new line
$r   - send a carriage-return
$s   - send a space
$b   - cause a short "break" on the line
$t   - send a tab
$1 - $9 - pause the indicated number of seconds
$xXX   - send the character with HEX code XX
$u   - send the user id
$p   - send the password
$c   - send the SLIP COMMAND
$d   - send the phone number
$$ - send a "$" character
$f   - define a prompt

Within an <expect> string you can include the following escapes:

--   - expect "-"
-n   - skip an expect
-i   - expect IP address (to replace your own)
$-   - find the string following this symbol

Using The Chameleon Sampler Applications
(See also the online help files in each application for more information)

The Telnet application allows you to logon to remote hosts and emulate a VT or ANSI character terminal. You simply need to provide a host name or IP address under Connect. Typically a logon screen will then prompt you for the appropriate access information. Full keyboard remapping is provided with both of these applications.

FTP (File Transfer Program) allows you to connect to remote hosts and download files. There are many public FTP servers on the Internet. Anonymous FTP means you need only provide the Host name, a user name of "anonymous", and any password (typically your own host name) to connect. Then select the appropriate directories and files, and choose the action you wish to perform. Connection profiles can be saved for later reuse. This FTP application can also be set up as an FTP server, allowing you to define users and permit access to files on your own PC, as long as both machines are connected to the network at the same time.

The Mail application allows multiple users to have their own mailboxes on the same PC, and they can retrieve their mail at different times without any interference. Each user can define their own foldering system, address book, and filtering rules. This is useful in a small office or a home setting where different people use the same PC. Even if you are just a single user, you need to define your own mailbox before using Mail.

Setting up Mail

Open the Mail application and login as Postmaster (the default is no password). As Postmaster, under Services, select Mailboxes, enter your name (from our example above, "myname") and select Add. Note that you should define your local mailbox name to be the same as the one defined for you on the mail server to which you will be connecting. You can then enter in an optional password, and an optional "in real life" name. Then save this information and quit the Postmaster. Note that this information simply defines your local mailbox on the PC. You still need to enter your network mailbox parameters.

Now open Mail again, this time going into your new mailbox (myname). Under Settings and Network enter your mail Gateway name (e.g. p-o.ans.net), then under Settings, Network and Server enter your server name (again p-o.ans.net), your mailbox name (myname) and password. You do not need to enter a mail directory. If you select the box "delete mail from server", mail will be deleted from the server once it is retrieved and stored on your Windows PC. After entering this information select OK, then go to File and select Save to save your configuration.

When you are connected to the network, you should now be able to send and receive mail. In the example given here, your mail address would be myname@ansremote.com. Refer to your access provider's documentation for more information about your own mail usage. Chameleon Mail allows you to edit and send mail messages while still offline, and they will be held in the outbox until the next time you connect to the mail server. Similarly, the POP mail server on the network holds all email messages for you to download when you connect to the network.

Licensing and Ownership
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Support
The company provides free courtesy support to users of the Chameleon Sampler, however we hope that people intending to use our software for production use will take advantage of the special upgrade offer to purchase the full and most recent version of Chameleon or Internet Chameleon with maintenance and support. The company reserves the right to limit the amount of

free support provided for the Sampler.

For technical questions concerning use of the Sampler please identify yourself as a Chameleon Sampler user when calling for support in order to provide faster response.

Email: support@netmanage.com
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For problems with diskettes or physical media, please contact the publisher or vendor bundling this software for a free disk replacement.

We hope you will enjoy using your Chameleon Sampler.

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