Enabling Persistent Debug Logging

Overview

Occasions arise where the output of debug may need to be captured over a short-term or long-term period. One problem with this process is that Telnet/SSH sessions for these connections can time out due to firewall protocol limits, etc and disconnect. One way to work around this limitation is to use a Telnet/SSH program that allows for the periodic transmission of a command to the AOS Command Line Interface (CLI). This document outlines an example process using TeraTerm, a freeware terminal client available on the web. Also included is a brief example of how to accomplish this in SecureCRT.

Creating Keep-alive Script for TeraTerm

TeraTerm uses scripts as a macro that will continuously run along side of the terminal program. These scripts can be created using a simple text editor such as Notepad in Windows. However, Notepad saves files with the ".txt" file extension and TeraTerm requires the file extension to be ".ttl" in order to recognize it as a macro. This is easily solved by renaming the file from "file.txt" to "file.ttl" in Windows.

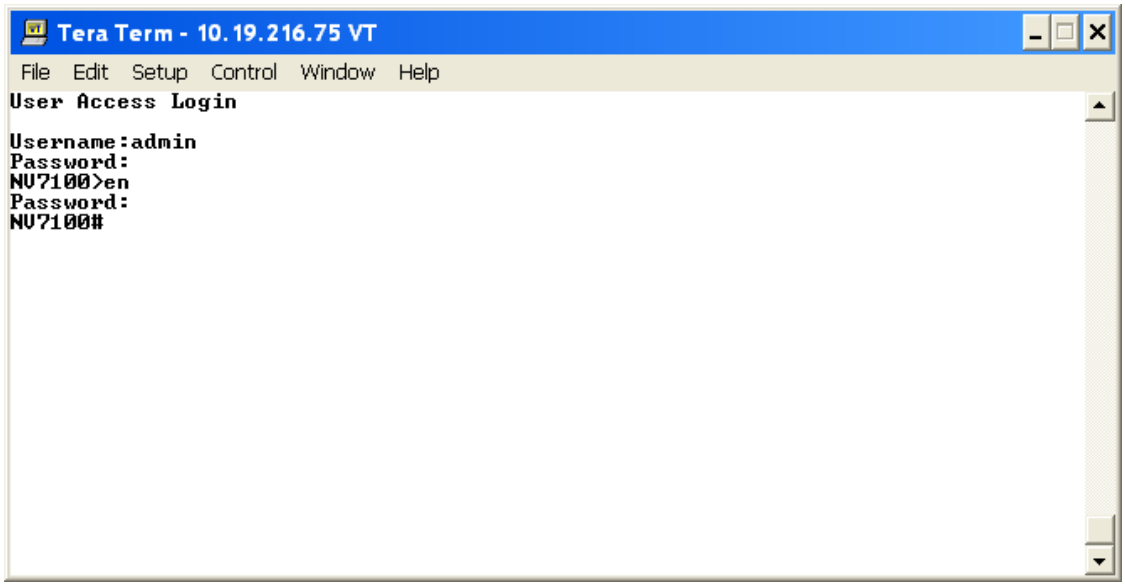
Below is an example script to get you started. In this example, "debug voice verbose" and "debug sip stack message summary" are enabled and every 300 seconds (5 minutes) the "show clock" command is entered at the CLI to keep the Telnet session active.

This script is merely an example and your results may vary depending on the version of TeraTerm being used.

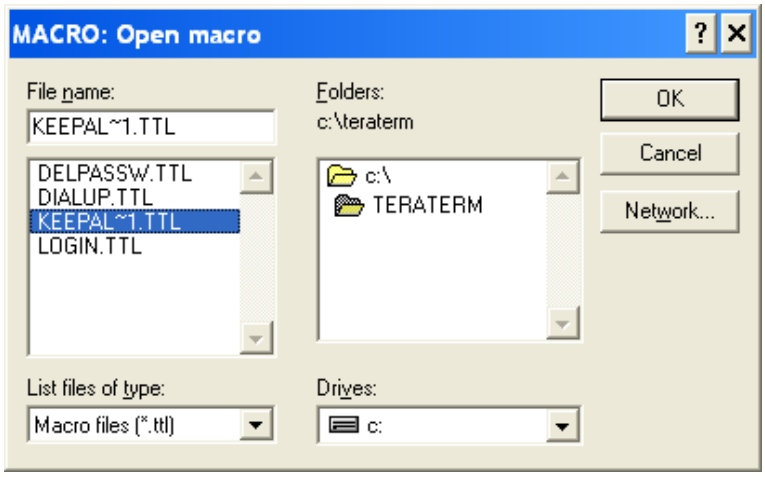
```
; Initialize sleep counter to 0
sleep_count = 0

; Change to log directory
; See http://ttssh2.sourceforge.jp/manual/en/macro/command/changedir.html
; See http://ttssh2.sourceforge.jp/manual/en/macro/command/setdir.html
changedir 'C:\Logs\'
setdir 'C:\Logs\'

; Set the filename of the log YYYY-MM-DD_hh-mm-ss.txt
; See http://ttssh2.sourceforge.jp/manual/en/macro/command/getdate.html
getdate logfile "%Y-%m-%d_%H-%M-%S.txt"

; Start the log file
; See http://ttssh2.sourceforge.jp/manual/en/macro/command/logopen.html
logopen logfile 0 1 1

; Enable debugs
sendln 'term len 0'
sendln 'debug voice verbose'
sendln 'debug sip stack messages'

; Start the subroutine that sends the keepalive string
goto keepalive

:keepalive
; After 12 hours have passed, switch to a new log file
    if sleep_count = 144 then
        logclose

        getdate logfile "%Y-%m-%d_%H-%M-%S.txt"
        logopen logfile 0 1 1

        sleep_count = 0
    endif

    timeout = 300

    ; Send keepalive string
    sendln 'show clock'

    ; Sleep until the timeout expires
    ; See http://ttssh2.sourceforge.jp/manual/en/macro/command/waitevent.html
    waitevent 1

    ; Increment the sleep counter
    sleep_count = sleep_count + 1

    ; Restart the keepalive subroutine
    goto keepalive
end
```

Activating script in TeraTerm

1. Open TeraTerm and activate a new connection.



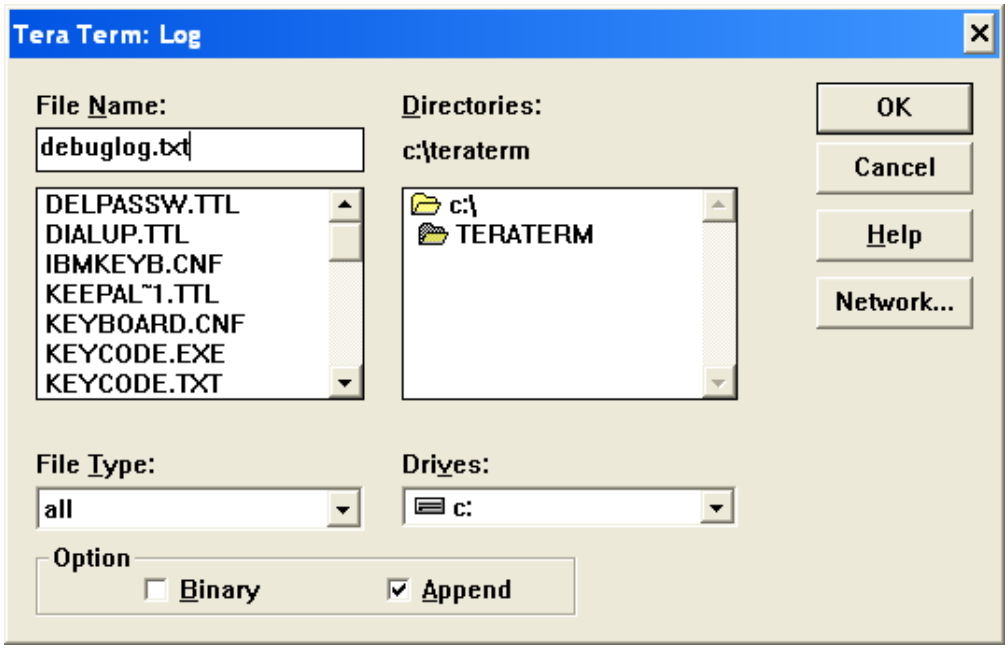
2. Once connected, click Control and then Macro. You should see a dialog box similar to the one below. Browse to the location of the script file you created, highlight it, and click OK.



The script should now be enabled and a separate TeraTerm window will activate to show the status of the macro.

Enabling Logging

3. Click File and then Log and you should be prompted with a dialog box similar to the one below.



4. Choose a location, enter a File Name, and click OK.

The logging should now be enabled and a separate TeraTerm window will activate to show the status of the log.

Enabling the Anti-Idle String in SecureCRT

Another program that can be used for managing Telnet/SSH sessions is SecureCRT. It is not freeware, but does offer a great interface for this purpose. Below is a screenshot from the SecureCRT Session setup screen.

See below that the Anti-idle section has the following items configured:

- Send string – **"show clock\n"**

Note that the "\n" is very important for the command to be interpreted correctly. It adds a carriage return after the "show clock" command.

- Timeout – **300 seconds** (this can be adjusted to work correctly with your firewall protocol timeout settings).