HDOS/NET Reference Manual

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Introduction

This document describes details of an implementation of Networking on HDOS.

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Device Driver

The device driver, “NW”, uses the HDOS “non-directory” device flag to achieve a partial file-oriented interface. HDOS does not fully support all features desired for networked files and devices, so the “Device Specific Functions” interface is also used for additional features. The basic driver will intercept .OPEN, .CLOSE, .READ, and .WRITE system calls on networked files. This does not include .POSIT, .DELET, .RENAM, .CHFLG, or .LINK. Additional festures are added by special programs.

The driver keeps a Network Configuration Table, similar to CP/NET except that it only maps 8 units (drives) and each unit’s entry is 4 bytes long. These mappings may be displayed using the NETSTAT.ABS utility and altered using NETWORK.ABS. The first byte of each entry is the remote server node ID, or 0ffh is it is not mapped. The next three bytes contain the device name and unit (in ASCII) on the remote server.

Device Specific Functions

The following functions are added by calling the device driver entry with A=DC.DSF and C having the function number. Generally, this function number is the same as the corresponding HDOS system call. There are also some new functions added to support getting a directory listing.

C=**.CHFLG** D=*bits* E=*mask* HL=*{def-blk, file-string}*

> Change the flags on the file. Not all flags are supported on the server. Write protect should always work. SYS may not if the server does not support additional permissions on files. *{def-blk, file-string}* is an area that contains two addresses, first is the default block and second is the file string.

C=**.POSIT** B=*channel* DE=*sector*

> Set the file pointer to *sector*. The channel must be for an open, networked file.

C=**.RENAM** DE=*def-blk* HL=*{old-file-string, new-file-string}*

Rename the file. .DECODE will be applied to both *old-file-string* and *new-file-string* and must describe a network device unit.

C=**.DELET** HL=*file-spec*

Delete file(s). *file-spec* is similar to the results of the .DECODE system call, without the reserved fields, except that it may contain wildcards (‘*’ must be expanded to ‘?’).

C=**.LINK** DE=*def-blk* HL=*file-string*

This function is not implemented. It remains to be seen if it can be.

C=**11H** DE=*buffer* HL=*file-spec*

Search First. CY is set for errors, with A containing the error code (including EC.EOF). On success, *buffer* will be filled with a 23-byte directory entry. This entry will differ from a local HDOS directory entry in that the DIR.FGN and DIR.LGN bytes will contain the size of the file in 256-byte sectors, little-endian (16-bit value). *file-spec* is as specified for .DELET.

C=**12H** DE=*buffer*

Search Next. Same results as for Search First.

C=45**H**

Get Network Configuration Table. Returns HL=address of table.

Network Messages

The network message format is similar to the CP/NET message format, except the format byte 10H is used for requests and 11H for responses.