

AN-44 Migrating systems with local DECWINDOWS display to CHARON-VAX

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To meet the OpenVMS workstation licensing requirements a number of CHARON products (CHARON-VAXstation, CHARON-VAX/XM, XL (Plus) and XK, etc) include a configuration option “dummy” VCB02 graphical adapter emulation. This emulation looks like an emulation of the hardware VCB02 to the operating systems in terms of the registers layout, interrupts, and working conventions but it does not emulate the VCB02 physical display. Despite the lack of the graphics display emulation this device enables users to run with their existing licenses specified for the VAX Workstation line of the products delivered by DEC.

See the Application Note #25 for more information on using CHARON-VAX and the OpenVMS licensing structure. See the “DUMMY_VCB02” chapter of your CHARON-VAX manual for more details on how to load and configure the “dummy_vcb02”. Note that in the CHARON-VAXstation products no additional configuration action is required since the “dummy_vcb02” is pre-loaded by default.

The following example demonstrates how to load the “dummy_vcb02” using CHARON-XM/XL/XK configuration file:

```
load dummy_vcb02/null_vcb02 dummy_vcb
```

Once the device is loaded it is possible to boot the system originally taken from a physical VAX Workstation on CHARON-VAX – no modifications to the system COM files are required – as well as any other re-tuning of the system. There is also no need to define any additional logicals, etc.

However there is an exception. If the system is clustered, apply the following modifications to the OpenVMS startup scripts in order to avoid a system failure (with bug-check) in case of a “reboot” operation:

Edit the DECW\$DEVICE.COM file to place an exit statement right after the DECW\$DEVICE == “NONE” line.

Note: Running AUTOGEN or installing any OpenVMS updates does not remove the above DECwindows modification (exit statement). But the installation of the DECMotif usually re-writes the DECW\$DEVICE.COM file, so in this case re-apply the modifications before a system restart.

Since the dummy VCB02 emulation does not provide graphical output it is recommended to use an XWindows emulator like eXcursion providing identical graphical output. In this case the prerequisite is that TCP/IP is installed and configured on OpenVMS. Make sure that TCP/IP has started correctly and it is able to communicate to the local network TCP/IP hosts. To automatically start the TCP/IP uncomment the following line in the SYSTARTUP_VMS.COM file:

CHARON-VAX application note

\$ @SYSS\$MANAGER:UCX\$STARTUP

or

\$ @SYSS\$MANAGER:TCPIP\$STARTUP

Once the OpenVMS TCP/IP networking is up and running install the selected XWindows emulator on the a PC connected to the local network and configure it to the “single windows” mode – after that start the corresponding XWindows server providing the emulation. Please refer to your XWindows emulator documentation for details on how to do that. Instead of the XWindows emulation it is possible to use a hardware XWindows servers, like, for example, the VXT family XWindows servers produced by DEC. No additional specific configuration is required in this case – the VXT will work the same way with CHARON-VAX as it works with a physical VAX.

To open up a remote session, or start any application remotely, use the following setting to provide TCP/IP address of the XWindows server to the OpenVMS running on CHARON-VAX:

\$ SET DISPLAY/CREATE/NODE=<IP address of XWindows server>/TRANSPORT=TCPIP

for example:

\$ SET DISPLAY/CREATE/NODE=192.168.1.15/TRANSPORT=TCPIP

Once it is done it is possible to start any desired application using the remote XWindows server, for example:

\$ MC SYSS\$MANAGER:DECW\$LOGIN

or

\$ MC SYSS\$MANAGER:DECW\$MWM

It is also possible to run the XWindows emulation on the CHARON-VAX host system. See the Application Note 43 for some ideas on how to configure virtual network using Microsoft Loopback adapters for communication between Windows and CHARON family of products.

It is recommended to put SET DISPLAY and all the lines starting DECWindows applications remotely in a command file, which should be executed at the end of SYSTARTUP_VMS.COM. Note that TCP/IP must have started before these commands execute.

For further information:

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