

## AN-023 Configuring multiple Ethernet adapters in CHARON-VAX

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CHARON-VAX/Industrial is a MicroVAX 3600 emulator with a configurable Qbus. The Qbus is loaded with devices according to the specification in the emulator configuration file. To facilitate configuration, the emulator observes the Qbus default settings for the various device classes. For example, the entry in the configuration file:

```
Load DESQA XQA
```

```
Set XQA interface="\Device\Packet_{<specific device id in your system>}"
```

generates a DESQA adapter with default address 17774440 (octal) and vector 120 (Octal).

The Qbus has a second Ethernet adapter address defined. Since this is not the default address it must be specified in the configuration file:

```
Load DESQA XQB
```

```
Set XQB interface="..."
```

```
Set XQB address=017774460
```

```
Set XQB vector =0300
```

When configured, XQA and XQB will be visible from the MV 3600 boot prompt (>>>) with the 'SHOW DEV' command. They will also be visible in VMS on CHARON-VAX after a VMS installation or an autogen.

Additional Ethernet adapters are not defined for the Qbus, but it is possible to add additional devices at a free address and vector in the Qbus floating address space, which starts at 760010 (octal). For example:

```
Load DESQA XQC
```

```
Set XQC interface="..."
```

```
Set XQC address=017761010
```

```
Set XQC vector =0760
```

This third adapter will be visible under 'show devices' in the CHARON-VAX command interface (as the 'hardware' is present), but not from the >>> boot prompt since the MV 3600 boot Rom does not check for it.

It is possible to use this third adapter in VMS by pointing its XQDRIVER specifically to it with the SYSGEN CONNECT command:

```
$ MCR SYSGEN CONNECT XQC0/ADAPTER=0/CSR=%0761010 -
```

```
$ /DRIVERNAME=XQDRIVER/VECTOR=%0760
```

XQC0: will now be visible in VMS. If this command is executed before the network software is started, DECnet or TCP/IP can use the adapter.

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