

INSTALL NOTES

Elements Environments Distributed Messaging Element

This document provides supplemental information for users who want to build applications with the Distributed Messaging Element. DME users will want to read the following information before using DME. For more information about building applications, refer to the DME Programmer's Guide on the Neuron Data documentation suite CD-ROM.

Environment Variables

DME introduces a single unique environment variable: DME_TEMP. This variable lets you specify a directory that DME will use to put temporary files. You must provide an absolute pathname. On Unix, DME defaults to /tmp, and on Windows it defaults to the Windows temporary directory.

In addition to DME_TEMP, DME relies on the environment variables defined for the full Elements Environment. For a description of the common environment variables, refer to your platform-specific document in the System_Customization directory on the Neuron Data documentation suite CD-ROM.

Installing the irspawnd

The remote spawn daemon provides the capability of automatically starting a router on a particular subnet whenever an application or another router tries to connect to it. The daemon can be started once by simply executing the command once and specifying the path to the router executable:

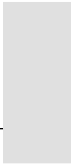
```
%irspawnd /usr/local/ee20/c/bin/irouter
```

The daemon should be installed so that it is automatically started whenever your machine is booted. Please refer to the instructions with your machine to install daemons. Note that each router will be started using the configuration specified in its router default resource file.

TCP/IP Configuration

Before you can run any of the DME executables, you must install and configure the TCP/IP stack.

You must configure your machine so that it knows its own hostname and address. Further, given the hostname it must be able to discover the address of all other computers connecting to it with DME.



If the stack is configured to use a local host file, make sure that all these computers are entered into the file. Your machine must also be in the file. If the stack is configured to use DNS (Domain Name Service), the name server must know all these computers, including yours.

You should pay particular attention to any computer that uses a dynamic host address protocol such as PPP (Point-to-Point Protocol) or DHCP (Dynamic Host Configuration Protocol). For both of these protocols, the address of your host is not determined until you connect it to the network, and this address changes each time you connect. Any other computer that connects to the dynamically addressed computer using DME must still be able to discover this dynamic IP address.

Once you have your computer's TCP/IP stack configured, you should verify its operation using ping. You should be able to ping between your computers in both directions, and in a loopback. You should also be able to telnet or ftp between them.

FireWalls and Gateways

If your company uses a firewall or gateway for security, you need to ensure that your configuration will not interfere with the proper operation of DME. DME uses port numbers starting with 2440_{16} (9280_{10}). If you use subnet n , DME transmits on port $(2440_{16} + n)$. Your network must be configured to allow packets on some of these port numbers. If only some of these port numbers are enabled, you should use the corresponding subnet numbers when running DME applications.