

MIMER

Installation Guide for Client/Server with TCPware

OpenVMS AXP and OpenVMS VAX

Version 7.2.1

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1 INTRODUCTION

1.1 Document objectives

This guide is a supplement to the *MIMER Installation Guide for VMS* for those customers that use the network product TCPware on OpenVMS AXP or OpenVMS VAX together with the MIMER client/server software. The guide describes how MIMER client/server should be configured to be used with the TCPware product.

The reader should have a working knowledge of system management within the VMS environment. Familiarity with the TCPware product is also recommended.

1.2 Acronyms and trademarks

TCPware TCPware is a registered trademark of Process Software Corporation.

(All other trademarks are the property of their respective holders.)

1.3 Software requirements

This document assumes that TCPware for OpenVMS V4.0-4 (or a later compatible version) is installed, and that the MIMER version is V7.2.1.

The MIMER/DB client/server and TCP/IP support is included in the DB module. The installation procedure (MIMBUILD) automatically selects which TCP/IP product it should link its images against. When MIMBUILD selects the TCPware product, the following lines are displayed:

```
Building DB
Using TCPWare TCP/IP routines found in sys$share:tcpware_socklib_shr.exe
```

AXP

The MIMBUILD procedure cannot support the TCPware product unless the following files are present:

- [MIMAXP7.MDR]TCPWARE.OBJ
- [MIMAXP7.MDR]TCPWLINK.COM

VAX

The MIMBUILD procedure cannot support the TCPware product unless the files following files are present:

- [MIMVAX7.MDR]TCPWARE.OBJ
- [MIMVAX7.MDR]TCPWLINK.COM

If there are several TCP/IP products on your system, the MIMBUILD procedure may choose another product. To force MIMBUILD to use TCPware, alter the TCPIP parameter in the CONFIG.DAT file to TCPW. Please read the *MIMER Installation Guide for VMS* for details.

The rest of this document assumes that you have executed the MIMBUILD procedure, and that it has included support for the TCPware product.

2 CLIENT/SERVER WITH TCPWARE

2.1 TCPware Installation

To use MIMER/DB with TCPware, the correct TCP/IP interface must have been included in the MIMER/DB shareable libraries. When the MIMBUILD procedure builds the DB module, a message is displayed on the screen indicating whether support for TCPware is included.

For more information about TCPware management, please read the publication *TCPware for OpenVMS Management Guide* from Process Software Corporation.

2.2 Enter the MIMER port number

A record should be entered in the file TCPWARE:SERVICES. (note: no file type). Add the following line somewhere in the file:

```
mimer          1360/tcp
```

This line will define the symbolic name "mimer" for the port 1360.

The port number 1360 is reserved by Sysdeco Mimer AB at the Internet Assigned Numbers Authority. Although you may use another port number, you are strongly recommended to use port number 1360 for MIMER client/server communication.

2.3 Define the MIMER service

This section describes how to configure TCPware to start server processes for external clients. If your system only needs to act as a client to an external database, this section may be omitted.

Whenever a client requests access to a database on the server node, the TCPware product should create a server process for the client. If the service MIMER is properly defined in the Network Control Utility (NETCU) program, this is done automatically.

To define the MIMER service, use the following command:

```
$ NETCU ADD SERVICE MIMER TCP MIMEXE7:NETSRVM
```

This command will use port number 1360 for incoming MIMER client/server requests, since the service name **mimer** was defined for this port in the previous section.

The ADD SERVICE command can take several additional qualifiers which are described in the *TCPware for OpenVMS Management Guide*. You can use these qualifiers to alter the process names or UIC (User Identification Code) for the server processes.

To limit access to the MIMER client/server function, you can define an **access list** with the NETCU command ADD ACCESS_LIST. Access lists can deny or permit access from different nodes on the network. Please see the *TCPware for OpenVMS Management Guide* for details.

2.4 Using TCPware on the client node

Apart from setting up a remote database entry in the SQLHOSTS file (as described in the *MIMER Installation Guide for VMS*), no extra steps are required to enable your applications to use TCPware to reach remote databases.

2.5 Troubleshooting

2.5.1 Failed to attach

Test the client/server connection by starting BSQL or QL on the client node, and try to log in on the server node. If you fail to log in, check the following:

- Has the client process defined the MIMER_DATABASE logical name?
- Check the database host file, MIMLIB7:SQLHOSTS.DAT. Is the database in question specified? Check upper/lower case. E.g. the database name and the port name are case sensitive. Check both the client and the server node host files, where the database should be defined in the LOCAL section on the server node, and in the REMOTE section on the client node.
- Is SQLHOSTS.DAT readable for the user on the client machine?
- Check that the MIMER service is properly installed by running the command below. A line should be displayed that shows that the TCPware software is listening to port **mimer** (or 1360).

```
$ NETCU SHOW SERVICES
  Protocol      Port Active Limit Connects Errors Image
  -----
TCP           mimer      0 none      0         0 MIMEXE7:NETSRVM
```

- Check that the server node is reachable from the client node. You can use the ping command on the client node to do this:

```
$ PING server_node_name
```

(Note, the PING command is a symbol that should be defined in the file TCPWARE_COMMANDS.COM, included in the TCPware product and employed at installation time).

- Check that the server node is reachable from the client node, using the port number 1360 dedicated for the MIMER service:

```
$ TELNET server_node_name 1360
```

(Note, when the connection is established any further input will lead to server disconnection, due to the fact that MIMER will not recognize the data received).

- Check that the client connection requests reach the server by running the command:

```
$ NETCU SHOW SERVICES
Protocol      Port Active Limit Connects Errors Image
-----
TCP          mimer      0 none      2         0 MIMEXE7:NETSRVM
```

The connection counter "Connects" should be incremented each time a client tries to reach the server.

- If you suspect that a MIMER server was started, but has died, you can modify the MIMER service definition and add log file specifications. This may enable you to catch any error messages that the server process produces. This is done by running the following command:

```
$ NETCU MODIFY SERVICE MIMER TCP /ERROR=disk:<dir>file.log
```

Make sure that the server process may write to the file.

To list the profile of the services defined, e.g. for verification of the service update performed, the following command can be used:

```
$ NETCU SHOW SERVICES /FULL
Protocol      Port Active Limit Connects Errors Image
-----
TCP          mimer      0 none      9         0 MIMEXE7:NETSRVM
              /ROUTINE=create_server_process
              /LOG
              /ERROR=FR_1:<TMP>TCPWARE.ERR
              /PRIVILEGES=(CMKRNL,CMEXEC,SYSNAM,GRPNAM,ALLSPOOL,-
              DETACH,DIAGNOSE,LOG_IO,GROUP,ACNT,-
              PRMCEB,PRMMBX,PSWAPM,SETPRI,SETPRV,-
              TMPMBX,WORLD,MOUNT,OPER,EXQUOTA,NETMBX,-
              VOLPRO,PHY_IO,BUGCHK,PRMGBL,SYSGBL,-
              PFNMAP,SHMEM,SYSPRV,BYPASS,SYSLCK,-
              SHARE,UPGRADE,DOWNGRADE,GRPPRV,READALL,-
              SECURITY)
```

- If you suspect that a MIMER server was started, but has died, you may also use the VMS accounting system to check the termination status for recently executed processes. This is done by running the following command:

```
$ ACCOUNT/FULL/SINCE="<very recently>" /TYPE=PROCESS
```

This will help determine whether the request from the client node resulted in the creation of a process on the server side.

2.5.2 Client process cleanup

A MIMER multi-user system depends upon the network software to detect any crashed clients. TCPware can do this by using the KEEPALIVE feature. This feature makes TCPware send probe messages to all clients to see whether they are still there. The feature is enabled by default when TCPware is started (see the documentation for NETCU START/TCP in the *TCPware for OpenVMS Management Guide* for more information).