Block Multiplexer Diagnostic Hints

Special Notices

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> **Note:** The information in this document has **not** been verified for AIX 4.1.

Block Multiplexer Diagnostic Hints

ABOUT THIS DOCUMENT

This document is intended to help you diagnose common problems that may occur with the Block Multiplexer. Please read through this document and verify items 1-5 before contacting the defect support center for assistance.

PROCEDURE

NOTE: There is a subset of Block Multiplexer PTFs that are needed for proper configuration. The minimum requirements are U415742, U414756, U417775, U413617, U406215, U406223. These or their supercedes can be found in the 3.2.4/PMP upgrade with the blkmux subsystem. These need to be ordered and installed before you proceed.

1. Issue the following command:

   ```
   lslpp -h blkmux.obj
   ```

   If the release level shows 01.01.0000.0000, call 1-800-879-2755 for a new release of blkmux.

2. Before you can configure Block Multiplexer Channel Adapter Services, you must configure the RISC System/6000 blkmux adapter and interface, vary the channel on, and start TCP/IP. The following steps do these things and assume that IOCPGEN has already been done on the mainframe.

a. To configure the blkmux adapter, enter "smit chgcat" and change the following:

```
Channel SPEED               (must match on mainframe)
STARTING subchannel address (IOCP Definition on mainframe)
NUMBER of subchannel addresses (IOCP Definition on mainframe)
CLAW Mode
Host NAME                   (must match DEVICE statement in
tcpip.profile--case sensitive)
Adapter NAME                (must match DEVICE statement in
tcpip.profile--case sensitive)
subchannel set              (even subchannel for Claw set,
last two numbers in DEVICE
statement in tcpip.profile.)
```

b. To configure the blkmux interface, enter "smit chinet" and change the following:

```
INTERNET ADDRESS            (dotted decimal)
DESTINATION Address         (dotted decimal)
Subchannel Address          (even subchannel for CLAW set)
Current STATE               (change to up)
```

c. To vary on the mainframe subchannel, enter:

```
VARY [device address], ONLINE (MVS command)
VARY ON [device address] (VM command)
```

d. To verify subchannel status, enter:

```
D U ,,,[device address],[range of
addresses] (MVS command) status should be 'O'
QUERY [device address] (VM command)
```

e. To configure TCP/IP on the mainframe, set the following minimum requirements in tcpip.profile:

```
DEVICE [devicename]
CLAW [channel-subchannel] \
[Host NAME] [Adapter NAME] NONE
[read_buffers] \
[write_buffers] [read_size]
[write_size]
LINK [hostname] IP 0 [devicename]
HOME
[ip address] [hostname]
GATEWAY
[network] = [hostname]
[packet size(mtu on RS/6000)] \
[subn mask]
START [devicename]
```

f. Start TCP/IP on the mainframe and watch for errors. If the system is an MVS system, verify with the "D U" command:

```
primary subchannel 'A' and 'BSY'
secondary subchannel 'A'
```

If the system is a VM system, verify subchannel "A" with the QUERY command.

3. Verify connectivity by entering the following on the RISC System/6000:

   ```
   ping -c1 [host ip address]
   ```

4. Common Problems.

1. If you have problems while configuring the adapter:

   - Verify that the switch on the cable is set to "S" instead of "B"
   - Verify that the status is "Available" with the "lsdev -Cc adapter" command. The output will look similar to the following:

     ```
     cat0  Available    00-01    370 Parallel Channel Adapter
     ```

   If the state is "Defined" instead of "Available", then reseat the card and reboot. If the state is still "Defined", verify that the microcode is on the machine ("lslpp -h p370.mc"), and run hardware diagnostics.

2. If you have problems while configuring the interface:

   - Before you change anything, verify that the interface in the "DOWN" state.

3. If you have problems with varying on the channel on the mainframe, causes could be:

   - IOCPGEN was done improperly
   - The RISC System/6000 has an incorrect channel/subchannel configuration
   - RISC System/6000 is not online

4. If you have problems with bringing up TCP/IP on the mainframe:

   - Verify the mtu size on the RISC System/6000 matched packet
   - Verify that the channel/subchannel on the RISC System/6000 adapter configuration matches with DEVICE statement on the mainframe.
   - Verify the hostname and adapter name on the RISC System/6000 adapter configuration match with the DEVICE statement on the mainframe.

5. If you have problems with pinging the mainframe, the cause may be:

   - If the error is "network unavailable", then the channel is not configured properly and needs to be reconfigured.

6. Also note:

   - The RISC System/6000 must be configured, online, and up before mainframe channels can be brought on line. Prior to rebooting the RISC System/6000, detach the blkmux interface (i.e., "ifconfig caX detach" where X is the number of the interface). This will allow the RISC

System/6000 to recycle without requiring changes on the mainframe side.

- Do NOT try to verify blkmux configuration on the RISC System/6000 side by attempting to "ping" the local interface. This will not work.

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END OF DOCUMENT (blkmux.tcp,)