Information Needed to Study TCP/IP Problem

Special Notices

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About This Document

This document describes how to collect TCP/IP information to send to AIX support for problem determination. This document applies to AIX 3.2 and 4.1.

This document assumes that you are working with AIX Support under one of the service options. For information on the AIX Support Family and Program Services (IBM's base support for code-related problems), request these faxes from 1-800-IBM-4FAX:

1537 Overview of AIX Support
1760 Using Program Services
2464 The AIX Support Family

Non U.S. Customers can requests documents by dialing (from a fax machine) 514-855-4FAX.

Steps

Please follow these steps to gather information about your TCP/IP problem for AIX support.

Note: Please be careful of the FILE NAMES and the REDIRECTION (don't use ">" instead of ">>").

In the following steps, replace <pmr#> with your problem report or item number.

1. Run the following commands:

```
mkdir /tmp/<pmr#>
netstat -ni > /tmp/<pmr#>/netstat.out
netstat -nr >> /tmp/<pmr#>/netstat.out
netstat -v >> /tmp/<pmr#>/netstat.out
netstat -m >>/tmp/<pmr#>/netstat.out
iptrace /tmp/<pmr#>/iptrac.rawfile
```

2. Reproduce the problem.
3. After reproducing the problem, run the following commands:

```
ps ax | grep iptrace         # to obtain the PID of "iptrace"
kill -9 <the PID of "iptrace" obtained from last command>
echo "RESULTS................" >> /tmp/<pmr#>/netstat.out
netstat -i >> /tmp/<pmr#>/netstat.out
netstat -v >>/tmp/<pmr#>/netstat.out
netstat -m >>/tmp/<pmr#>/netstat.out
errpt -a > /tmp/<pmr#>/errpt.out
arp -a > /tmp/<pmr#>/arp.out
```

4. In a README file, record what happened while the problem was being reproduced. Your description should include the following information:
   - Detail of which machines were used for client and server
   - How problem was reproduced
5. Choose one of the following commands to start the device driver trace. Be careful to use commas between the hook IDs (for example, "1cc,251,255").

   To start a trace for a High Performance Ethernet device driver, run the following command:

   ```
   trace -a -j 1cd,251,255
   ```

   To start a trace for an Integrated Ethernet device driver, run:

   ```
   trace -a -j 1cc,251,255
   ```

   To start a trace for a Token Ring device driver, run

   ```
   trace -a -j 1ce,251,256
   ```

   To start a trace for a FDDI device driver, run

   ```
   trace -a -j 262,263
   ```

6. Now, reproduce the problem again.
7. Then issue the following command to turn off the trace:

   ```
   trcstop
   ```

8. Now copy the raw trace file.

   For Ethernet:

   ```
   cp -p /usr/adm/ras/trcfile /tmp/<pmr#>/entdd.trace
   ```

   For Token-Ring:

   ```
   cp -p /usr/adm/ras/trcfile /tmp/<pmr#>/tokdd.trace
   ```

9. Now, compress and tar the whole <pmr#> directory.

   ```
   tar -cvf- <pmr#> | compress > <pmr#>.tar.Z
   ```

10. tar the compressed tar file to diskette or tape:

    ```
    tar -cvf /dev/(device) <pmr#>.tar.Z
    ```

11. Label the media with the problem report or item number and the branch office number and the command used to place the data on the media.

12. Send the data to one of the following addresses:

Standard or overnight mail:

Note: Look at the "file Naming Convention" section of this document and name testcases accordingly.

IBM Corp. / Zip 2900 / Bldg 42
Attn: AIX Testcase Dept. J66S
11400 Burnet Road
Austin, TX 78758-3493
Extension 3-4050

Note: NO overnight delivery service delivers directly to bldg. 42, instead they are delivered to IBM Receiving. Please keep this in mind when choosing a delivery time.

If you specify Saturday delivery you must first make special arrangements with an AIX Support specialist (1-800-225-5249 or 1-800-call-aix), otherwise there could be a delay of several days.

IBM Internal (VM)

Reminder: If you have absolutely no other available electronic method of sending a testcase, you can send it through VNET. This method only works for IBM internal customers. It is not automated, which could cause delays in testcase processing. **FTP is the preferred method for sending testcases**.

The testcase should be combined into a single compressed tar archive and uploaded in BINARY format.

Please name the file PPPPPBBB TARZBIN, where PPPPP is the PMR number and BBB is the branch office number (without the "b").

node = `AUSVMR` userid = `V3DEFECT`

E-Mail

Service Use Agreement

International Business Machines Corporation
Internet Testcase Delivery Service
Service Use Agreement

This is a legal agreement to which you are consenting to be bound. If you do not agree to all of the terms of this license, do not use the service.

- International Business Machines Corporation (IBM) grants you a non-exclusive access to the Testcase Delivery Service via the Internet.
- IBM makes no representations about the suitability of this service or about any content or information made accessible by the service, for any purpose. The service is provided "as is" without express or implied warranties, including warranties of merchantability and fitness for a particular purpose or noninfringement. This service is provided gratuitously and, accordingly, IBM shall not be liable for any damages suffered by you or any user of the service.
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Email Via Internet

Relatively small testcases can be sent via e-mail to aasc@austin.ibm.com. The allowable size of the testcase depends mostly on intermediate mail gateways. It is generally not advisable to send tescases larger than approximately 4MB via e-mail. Testcases sent via e-mail in the correct format are automatically proc-

essed, making them almost immediately available for analysis. See the "File Naming Convention" section of this document for more details.

FTP Via Internet

Sample file names for the tarred and compressed files:

```
ad1000.tar.Z         (item number.tar.Z)
1x234.001.tar.Z      (problem_report_#.branch_office_#.tar.Z)
1x234.1234567.tar.Z  (problem_report_#.customer_#.tar.Z)
```

FTP it to our testcase repository:

```
ftp 198.17.57.67       (or "ftp testcase.boulder.ibm.com")
login:  anonymous
password:  <your complete email address>
          (e.g., "customer@wallyworld.com")
bin                    (change to binary transfer mode)
cd aix
put 1x234.001.tar.Z   (for example)
ls -l
quit
```

File Naming Convention:

Note: Testcases should be archived into a compressed tar archive using relative path names. If FTPing, Do not create a separate directory on the testcase server.

Use of the following naming convention will allow our tools to automatically move the testcase to the proper directories and update the PMR to indicate that the testcase is available. Failure to use this naming convention could cause delays in processing the testcase.

If the testcase files cannot be associated with an existing PMR or XMENU item, they will be tagged as lost and eventually deleted.

Testcases associated with PMRs

```
 ppppp.bbb.ccc.tar.Z
     |   |   |   | |
     |   |   |   | Indicates that the archive is compressed.
     |   |   |   | If you have the gzip command available,
     |   |   |   | this will be .gz rather than .Z.
     |   |   |   |
     |   |   |   Indicates a tar archive.
     |   |   |
     |   |   The 3 character country code.
     |   |   (May be omitted if the country code is 000.)
     |   |
     |   The 3 character branch office number.
     |
     The 5 character PMR number.
```

Testcases associated with XMENU items

```
xxxxxx.tar.Z
     |   | |
     |   | Indicates that archive is compressed.
     |   | If you have the gzip command available,
     |   | this will be .gz rather than .Z.
     |   |
     |   Indicates a tar archive.
     |
    The XMENU item number.
```

Creating a Compressed tar Archive

Testcases should be archived into a compressed tar archive using relative path names. The following is an example of how to create a compressed tar archive.

- Place the testcase files into a separate directory using commands similar to those in the following example. In this example, we'll use a directory named /tmp/testcase.

  ```
  cd /tmp
  mkdir testcase
  cp file1 file2 file3 testcase
  ```

- Execute one of the following commands to create the compressed tar archive. Using the gzip command (if available), will generally produce a significantly smaller file.

  ```
  With the gzip command:
  tar -cf- testcase | gzip -9 >9x999.999.999.tar.gz
  Without the gzip command:
  tar -cf- testcase | compress >9x999.999.999.tar.Z
  ```

Testcases should be archived into a compressed tar archive using relative path names. The following example will uuencode and send the compressed tar archive created in the previous section. You should substitute the correct filename when sending your testcase.

```
uuencode 9x999.999.999.tar.gz 9x999.999.999.tar.gz | \
mail -s "AIX_Testcase:9x999.999.999.tar.gz" aasc@austin.ibm.com
```

01/31/96

Reader's Comments

Please fax this form to (512) 823-4009, attention "AIXServ Information". You may also e-mail comments to: elizabet@austin.ibm.com. These comments should include the same customer information requested below.

Use this form to tell us what you think about this document. If you have found errors in it, or if you want to express your opinion about it (such as organization, subject matter, appearance) or make suggestions for improvement, this is the form to use.

If you need technical assistance, contact your local branch office, point of sale, or 1-800-CALL-AIX (for information about support offerings). These services may be billable. Faxes on a variety of subjects may be ordered free of charge from 1-800-IBM-4FAX. Outside the U.S. call 415-855-4329 using a fax machine phone.

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

Note: If you have a problem report or item number, supplying that number may help us determine why a procedure did or did not work in your specific situation.

Problem Report or Item #: Branch Office or Customer #:

Be sure to print your name and fax number below if you would like a reply:

Name: Fax Number:

END OF DOCUMENT (tcpip.debug.tcp)