



Sun Gathering Debug Data for Sun Java System Web Proxy Server

Sun Java™ Enterprise System Technical Note



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Sun Gathering Debug Data for Sun Java System Web Proxy Server

This technical note describes how to use Sun™ Gathering Debug Data (Sun GDD or GDD) to collect data that the Sun Support Center requires in order to debug problems with a Sun Java™ System Web Proxy Server system. By collecting this data before you open a Service Request, you can substantially reduce the time needed to analyze and resolve the problem. For more information on how this document and associated scripts can help you in better dealing with Web Proxy Server problems, see:

<http://www.sun.com/service/gdd/index.xml>

This document is intended for anyone who needs to raise a Service Request about Web Proxy Server with the Sun Support Center.

This technical note contains the following sections:

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- “1.4 Creating a Service Request with the Sun Support Center” on page 6
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1.1 Technical Note Revision History

Version	Date	Description of Changes
10	December 2006	Initial release of this technical note.

1.2 About This Technical Note

This document covers the following versions of Sun Java System Web Proxy Server on the Solaris™, HP-UX, Linux, and Microsoft Windows platforms:

- Sun Java System Web Proxy Server 3.6 Service Pack 9
- Sun Java System Web Proxy Server 3.6 Service Pack 8
- Sun Java System Web Proxy Server 3.6 Service Pack 7
- Sun Java System Web Proxy Server 3.6 Service Pack 6
- Sun Java System Web Proxy Server 3.6 Service Pack 5
- Sun ONE Web Proxy Server 3.6 Service Pack 4
- Sun ONE Web Proxy Server 3.6 Service Pack 3
- Sun ONE Web Proxy Server 3.6 Service Pack 2
- iPlanet Web Proxy Server 3.6 Service Pack 1

You can use this document in all types of environments, including test, pre-production, and production. Verbose debugging is not used (to reduce performance impact), except when it is deemed necessary. At the same time, it is possible that the problem could disappear when you configure logging for debug mode. However, this is the minimum to understand the problem. In the majority of cases, the debug data described in this document is sufficient to analyze the problem.

This document does not provide workarounds, techniques or tools to analyze debug data. It provides some troubleshooting, but you should not use this guide as an approach to troubleshooting Web Proxy Server problems.

If your problem does not fit into any of the specific categories, provide the general information described in “[1.5 What Web Proxy Server Debug Data Should You Collect?](#)” on page 7 and clearly explain your problem.

If the information you initially provide is not sufficient to find the root cause of the problem, Sun will ask for more details, as needed.

1.2.1 Prerequisites for Collecting Web Proxy Server Debug Data

The prerequisites for collecting debug data for Web Proxy Server are as follows:

- Make sure you have superuser privileges.
- For the Solaris platform, obtain the pkg_app script from the following location:
<http://www.sun.com/bigadmin/scripts/indexSjs.html>
- For Windows platform, download the free Debugging Tools for Windows to help in analyzing process hang problems.

Note – The debugger Dr. Watson is not useful for process hang problems because it cannot generate a crash dump on a running process.

Download the free Debugging Tools from the following location:

<http://www.microsoft.com/whdc/devtools/debugging/default.mspx>

Install the last version of Debugging Tools and the OS Symbols for your version of Windows. Also, you must add the environment variable `NT_SYMBOL_PATH`.

Use the command `drwtsn32 -i` to select Dr. Watson as the default debugger. Use the command `drwtsn32`, check all options, and choose the path for crash dumps.

1.2.2 Variables Used in This Technical Note

The following describes the variables used in the procedures in this document. Gather the values of the variables if you don't already know them before you try to do the procedures.

- *slapd-identifier*: The Directory Server instance name used during installation. The installation program automatically added the prefix `slapd-` to the name you specified. For example, if you named the identifier `tango`, the installation program created `slapd-tango`, it is the *slapd-identifier*.
- *proxy-pid*: Process ID of a Web Proxy Server daemon.
- *proxy-port*: Port number on which the Web Proxy Server is listening.
- *proxy-identifier*: The Web Proxy Server instance name used during installation. The installation program automatically adds the prefix `proxy-` to the name you specify. For example, if you name the identifier `server1`, the installation program creates `proxy-server1`.
- *proxy-instance*: The directory on the Web Proxy Server machine dedicated to holding configuration, maintenance, and information files for a specific instance. This directory is located under *server-root*.
- *server-root*: The directory on the Web Proxy Server machine dedicated to holding the server program, configuration, maintenance, and information files.
- *windbg-root*: The directory on the Windows Web Proxy Server machine dedicated to holding the Win Debugger program, and configuration, maintenance, and information files.

1.3 Overview of Collecting Debug Data for Web Proxy Server

Gathering debug data for a Web Proxy Server problem involves these basic operations:

1. Collecting system information.
2. Collecting specific problem information (installation problem, process hang, process crash, and so on).
3. Creating a `tar.gz` file of all the information and uploading it for the Sun Support Center.
4. Creating a Service Request with the Sun Support Center.

1.4 Creating a Service Request with the Sun Support Center

When you create a Service Request with the Sun Support Center, either online or by phone, provide the following information:

- A clear problem description
- Details of the state of the system, both before and after the problem started
- Impact on end users
- All recent software and hardware changes
- Any actions already attempted
- Whether the problem is reproducible; when reproducible, provide the detailed test case
- Whether a pre-production or test environment is available
- Name and location of the archive file containing the debug data

Upload your debug data archive file to the following locations:

<http://supportfiles.sun.com/upload>

<https://supportfiles.sun.com/upload>

For more information on how to upload files to this site, see:

<http://supportfiles.sun.com/show?target=faq>

Note – When opening a Service Request by phone with the Sun Support Center, provide a summary of the problem in a text file named `Description.txt`. Be sure to include `Description.txt` in the archive along with the rest of your debug data.

1.5 What Web Proxy Server Debug Data Should You Collect?

This section describes the various kinds of debug data that you need to provide to the Support center. The procedure to obtain debug data based on the kind of problem you are experiencing is described in-detail.

This section contains the following tasks:

- “To Collect Required Debug Data for Any Web Proxy Server Problem” on page 7
- “To Collect Debug Data on Web Proxy Server Installation Problems” on page 8
- “To Collect Debug Data on a Hung or Unresponsive Web Proxy Server Process” on page 9
- “To Collect Debug Data on a Web Proxy Server Crashed Process” on page 14

▼ To Collect Required Debug Data for Any Web Proxy Server Problem

To report problems described in this technical note, you need to collect some basic information. Basic information includes system details and date and time when the problem occurred. Follow these steps to collect the basic information.

- 1 **Note the day(s) and time(s) the problem occurred.**
- 2 **Provide a graphical representation of your deployment. Include all hosts and IP addresses, host names, operating system versions, role they perform, and other important systems such as load balancers, firewalls, and so on.**

- 3 **Note the version of the operating system.**

Solaris `uname -a`

HP-UX `uname -r`

Linux `more /etc/redhat-release`

Windows `C:\Program Files\Common files\Microsoft Shared\MSInfo\msinfo32.exe /report C:\report.txt`

- 4 **Note the patch level.**

Solaris `showrev -p`

HP-UX `swlist`

Linux `rpm -qa`

Windows Already provided in the C:\report.txt file.

5 Note the version of Web Proxy Server.

If a configured JDK is used instead of the default JRE then provide the output of the command `java -version`.

Web Proxy Server Version is indicated in the error log of the instance during the start.

- Start Instance Script

UNIX and Linux *server-root/proxy-identifier/start*

- Error logs

UNIX and Linux *server-root/proxy-identifier/logs/errors*

Windows *server-root\proxy-identifier\logs\errors*

- Access logs

UNIX and Linux *server-root/proxy-identifier/logs/access*

Windows *server-root\proxy-identifier\logs\access*

6 Create a tar file of the Web Proxy Server configuration directory.

- Sun Java System Web Proxy Server :

UNIX and Linux *server-root/proxy-identifier/config*

Create a tar file of the *server-root/proxy-identifier/config* directory.

Windows *server-root/proxy-identifier\config*

Create a tar file of the *server-root\proxy-identifier\config* directory.

Note – If possible, provide an explorer (SUNWexpl0) of the machine where the problem occurs.

▼ To Collect Debug Data on Web Proxy Server Installation Problems

If you are unable to complete the installation or if you get a failed status for the installation of Web Proxy Server, follow these steps.

- 1 **Collect the general system information as explained in “[To Collect Required Debug Data for Any Web Proxy Server Problem](#)” on page 7.**
- 2 **Specify if this is a first-time installation or a Hot Fix installation on a pre-existing Web Proxy Server instance.**

3 Get the installation logs.

Rerun the installation with the following command and save the resultant file.

Solaris `truss -ealf -rall -wall -vall -o /tmp/install-proxy.truss ./ns-setup`

HP-UX `tusc -v -feaIT -rall -wall -o /tmp/install-proxy.tusc.out ./ns-setup`

Linux `strace -fv -o /tmp/install-proxy.strace.out ./setup`

Windows Use Debug View: <http://www.sysinternals.com/Utilities/DebugView.html>

▼ To Collect Debug Data on a Hung or Unresponsive Web Proxy Server Process

A process hang is defined as one of the Web Proxy Server processes not responding to requests anymore while the process is still running locally. Web Proxy Server's processes are: ns-proxy.

If Web Proxy Server has a cache, there will be two parent processes and one of these processes has one child process. The other process has all the ns-proxy processes as its child processes.

Before You Begin Make sure that you collect all the data over the same time frame in which the problem occurs. See “1.6 Configuring Solaris to Generate Core Files” on page 21 if a core file is not generated.

Collect the following information for process hang problems. Run the commands in order when the problem occurs. Be sure to specify the time when the process hanged and list the affected processes, if possible.

1 Collect the general system information as explained in “To Collect Required Debug Data for Any Web Proxy Server Problem” on page 7.

2 Run the netstat command and save the output.

UNIX and Linux `netstat -an | grep proxy-server-port`

Windows `netstat -an`

3 Run the following commands and save the output.

Solaris `ps -aux | grep server-root`

`vmstat 5 5`

`iostat -x`

`top`

`uptime`

HP-UX `ps -aux | grep server-root`

`vmstat 5 5`

```
        iostat -x
        top
        sar

Linux   ps -aux | grep server-root
        vmstat 5 5
        top
        uptime
        sar

Windows Obtain the Proxy process PID: C:\windbg-root>tlist.exe

        Obtain process details of the Proxy running process PID:
        C:\windbg-root>tlist.exe proxy-pid
```

Note – Install the debugging tools to use the debug command. You can download the same at <http://www.microsoft.com/whdc/devtools/debugging/default.mspx>. Install the latest version of debugging tools and the OS symbols for the version of Windows that you are using. You must add the environment variable `_NT_SYMBOL_PATH`.

4 Get the swap information.

```
Solaris  swap -l
HP-UX    swapinfo
Linux    free

Windows Already provided in C:\report.txt as described in “To Collect Required Debug
        Data for Any Web Proxy Server Problem” on page 7.
```

5 If the Web Proxy Server uses a Directory Server, provide the access, errors and audit logs of the Directory Server used by the Web Proxy Server.

- Access log
 - UNIX and Linux `server-root/slapd-identifier/logs/access`
 - Windows `server-root\slapd-identifier\logs\access`
- Errors log
 - UNIX and Linux `server-root/slapd-identifier/logs/errors`
 - Windows `server-root\slapd-identifier\logs\errors`
- Audit log
 - UNIX and Linux `server-root/slapd-identifier/logs/audit` (if enabled)

Windows `server-root\slapd-identifier\logs\audit` (if enabled)

Note – The paths of these logs files are specified by the following parameters in the `dse.ldif` file: `nsslapd-accesslog`, `nsslapd-errorlog`, and `nsslapd-auditlog`

The `dse.ldif` file is located in the `config` directory:

UNIX and Linux: `server-root/slapd-identifier/config/dse.ldif`

Windows: `server-root\slapd-identifier\config\dse.ldif`

6 Provide network trace files between components, such as these:

- Browser and Proxy Server
- Proxy Server and Firewall
- Proxy Server and Directory Server
- Firewall and the Web

Here are examples of commands on the proxy server side:

Solaris `snoop -V -vvv -d <interface> -o /tmp/proxy-snoop-web <IP_WEB_SERVER>`

HP-UX `tcpdump -i <interface> -w /tmp/proxy-snoop-web host <IP_WEB_SERVER>`

Note – `tcpdump` for HP-UX is available at: <http://hpux.connect.org.uk>. You can also use the native command `nettl`.

Linux `tethereal -V -F snoop -i <interface> -w /tmp/proxy-snoop-web host <IP_WEB_SERVER>`

Note – You can use the graphical user interface for `tethereal` or use the command `tcpdump`. `tethereal` is available at: <http://www.ethereal.com>.

Windows `tethereal -vvv -i <interface> -w /tmp/proxy-snoop-web host <IP_WEB_SERVER>`

Note – You can use either the graphical user interface or the command for `tethereal`. `tethereal` is available at: <http://www.ethereal.com>.

Note – Clearly indicate IP and hostname for each component. This will help to read the network trace files correctly.

7 (Solaris OS only) If you are able to isolate the hanging process, get the following debug data for that process. Otherwise, get the following data for each of the Web Proxy Server processes.

For Windows System Get the following data for the process `ns-proxy.exe`.

For Solaris only Get a series of ten of the following commands (one every second for ten seconds):

```
pstack proxy-pid and pmap -x proxy-pid
```

Additionally, get the outputs of the following commands: `prstat -L -p proxy-pid`
`pfiles proxy-pid pmap proxy-pid`

8 Get the output of the following command.

Solaris `truss -ealf -rall -wall -vall -o /tmp/truss.out -p proxy-pid`

HP-UX `tusc -v -fealT -rall -wall -o /tmp/tusc.out -p proxy-pid`

Linux `strace -fv -o /tmp/strace.out -p proxy-pid`

Windows Use DebugView: <http://www.sysinternals.com/Utilities/DebugView.html>

Note – Wait for one minute after launching the appropriate command (`truss`, `strace`, `tusc`, or `DebugView`), then stop it by pressing **Control-C** in the terminal where you launched the command.

9 Get core files and the output of the following commands.

In a process hang situation, it is helpful to compare several core files to review the state of the threads over time. To not overwrite a core file, copy that core file with a new name, wait approximately one minute then rerun the following commands. Do this three times to obtain three core files.

Note – For HP-UX, you need the following two patches to use the `gcore` command: PHKL_31876 and PHCO_32173. If you cannot install these patch, use the HP-UX `/opt/langtools/bin/gdb` command from version 3.2 and later, or the `dumppcore` command.

Solaris `cd server-root/bin/proxy`
 `gcore -o /tmp/proxy-core proxy-pid`
 `pstack /tmp/proxy-core`

HP-UX

```
# cd server-root/bin/https/bin
gcore -p proxy-pid
(gdb) attach proxy-pid
Attaching to process proxy-pid
No executable file name was specified
(gdb) dumpcore
Dumping core to the core file core.proxy-pid
(gdb) quit
The program is running. Quit anyway (and detach it)? (y or n) y
Detaching from program: , process proxy-pid
```

Note – The file *core.<proxy-pid>* is generated in the proxy-instance/config directory.

Linux

```
# cd server-root/bin/https/bin
gdb
(gdb) attach proxy-pid
Attaching to process proxy-pid
No executable file name was specified
(gdb) gcore
Saved corefile core.proxy-pid

(gdb)backtrace
(gdb)quit
```

Windows Get the Proxy process PID:

```
C:\windbg-root>tlist.exe
```

Generate a crash dump on the Proxy running process PID:

```
C:\windbg-root>adplus.vbs -hang -p proxy-pid -o C:\crashdump_dir
```

Note – Provide the complete generated folder under *C:\crashdump_dir*.

- 10 (Solaris OS only) Archive the result of the script `pkg_app` (one core file is sufficient). See [To Run the pkg_app Script](#).**

```
./pkg_app.ksh proxy-pid corefile
```

The Sun Support Center must have the output from the `pkg_app` script to properly analyze the core file(s).

Note – Make sure the appropriate limitations are set by using the `ulimit` command, and that the user is not `nobody`. Also check the `coreadm` command for additional control. See “[1.6 Configuring Solaris to Generate Core Files](#)” on page 21 if a core file is not generated.

▼ To Collect Debug Data on a Web Proxy Server Crashed Process

Use this task to collect data when a Web Proxy Server process has stopped (crashed) unexpectedly. Run all the commands on the actual machine where the core file(s) were generated.

- 1 **Collect the general system information as explained in “[To Collect Required Debug Data for Any Web Proxy Server Problem](#)” on page 7.**
- 2 **Note whether you can restart Web Proxy Server.**
- 3 **If the Web Server is using a Directory Server, provide the access, errors and audit logs of the Directory Server used by the Web Server**
 - Access log

UNIX - Linux	<code>server-root/slapd-identifier/logs/access</code>
Windows	<code>server-root\slapd-identifier\logs\access</code>
 - Errors log

UNIX - Linux	<code>server-root/slapd-identifier/logs/errors</code>
Windows	<code>server-root\slapd-identifier\logs\errors</code>
 - Audit log

UNIX - Linux	<code>server-root/slapd-identifier/logs/audit</code> (if enabled)
Windows	<code>server-root\slapd-identifier\logs\audit</code> (if enabled)

Note – The paths of these logs files are specified by the following parameters in the `dse.ldif` file: `nsslapd-accesslog`, `nsslapd-errorlog`, and `nsslapd-auditlog`

The `dse.ldif` file is located in the `config` directory:

UNIX and Linux: `server-root/slapd-identifier/config/dse.ldif`

Windows: `server-root\slapd-identifier\config\dse.ldif`

4 Check if the problem is reproducible. If yes, provide a test case for reproducing the problem.**5 Get the output of the following commands.**

Solaris `ps -aux | grep server-root`
 `vmstat 5 5`
 `iostat -x`
 `top`
 `uptime`

HP-UX `ps -aux | grep server-root`
 `vmstat 5 5`
 `iostat -x`
 `top`
 `sar`

Linux `ps -aux | grep server-root`
 `vmstat 5 5`
 `top`
 `uptime`
 `sar`

Windows Obtain the PROXY process PID: `C:\windbg-root>tlist.exe`

Obtain process details of the PROXY running process PID:
`C:\windbg-root>tlist.exe proxy-pid`

Note – Install the debugging tools to use the debug command. You can download the same at <http://www.microsoft.com/whdc/devtools/debugging/default.mspx>. Install the latest version of debugging tools and the OS symbols for the version of Windows that you are using.

6 Get the swap information.

Solaris `swap -l`

HP-UX `swapinfo`

Linux `free`

Windows Already provided in `C:\report.txt` as described in “[To Collect Required Debug Data for Any Web Proxy Server Problem](#)” on page 7.

7 Get the system logs.

Solaris and Linux `/var/adm/messages`
 `/var/log/syslog`

HP-UX `/var/adm/syslog/syslog.log`

Windows Event log files:
Start> Settings>Control Panel> Event Viewer> Select Log
Then click Action> Save log file as

8 Get core files (called “Crash Dumps” by Windows).

Solaris See “[1.6 Configuring Solaris to Generate Core Files](#)” on page 21 if a core file was not generated.

Linux Core dumps are turned off by default in the `/etc/profile` file. You can make user-specific changes by editing your `~/.bash_profile` file. Look for the following line:

```
ulimit -S -c 0 > /dev/null 2>&1
```

You can either comment out the entire line to set no limit on the size of the core files or set your own maximum size.

Windows Generate a crash dump during a crash of Web Proxy Server by using the following commands:

```
Get the Proxy process PID : C:\windbg-root>tlist.exe  
Generate a crash dump when the Proxy process crashes:  
C:\windbg-root>adplus.vbs -crash -FullOnFirst -p proxy-pid -o  
C:\crashdump_dir
```

The `adplus.vbs` command watches `proxy-pid` until it crashes and will generate the `dmp` file. Provide the complete generated folder under `C:\crashdump_dir`.

Note – If you have not installed the Debugging Tools for Windows, you can use the `drwtsn32.exe -i` command to select Dr. Watson as the default debugger. Use the `drwtsn32.exe` command, check all options, and choose the path for crash dumps. Then provide the dump and the `drwtsn32.log` files.

9 (Solaris OS only) For each core file, provide the output of the following commands. See [To Run the pkg_app Script](#)

```
file corefile  
pstack corefile  
pmap corefile  
pflags corefile
```

10 (Solaris OS only) Archive the result of the script `pkg_app` (one core file is sufficient).

```
./pkg_app.ksh proxy-pid corefile
```

Note – The Sun Support Center must have the output from the `pkg_app` script to properly analyze the core file(s).

11 Provide network trace files between components, such as these:

- Browser and Proxy Server
- Proxy Server and Firewall
- Proxy Server and Directory Server
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Here are examples of commands on the proxy server side:

Solaris OS `snoop -V -vvv -d <interface> -o /tmp/proxy-snoop-web
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<IP_WEB_SERVER>`

Note – `tcpdump` for HP-UX is available at: <http://hpux.connect.org.uk>. You can also use the native command `nettl`.

Linux `tethereal -V -F snoop -i <interface> -w /tmp/proxy-snoop-web host
<IP_WEB_SERVER>`

Note – You can use the graphical user interface for `tethereal` or use the command `tcpdump`. `tethereal` is available at: <http://www.ethereal.com>.

Windows `tethereal -vvv -i <interface> -w /tmp/proxy-snoop-web host
<IP_WEB_SERVER>`

Note – You can use either the graphical user interface or the command for `tethereal`. `tethereal` is available at: <http://www.ethereal.com>.

Note – Clearly indicate IP and hostname for each component. This will help to read the network trace files correctly.

Note – The commands listed in this step must be executed on the machine where the core files were generated.

▼ To Collect Debug Data on Web Proxy Server Authentication Problems

Use this task to collect data when Web Proxy Server is experiencing authentication problems.

A Web Proxy Server authentication problem is when Proxy Server prohibits access when it should not, or the inability of the Proxy Server to authenticate a user correctly while using the Directory Server for authentication.

1 Collect the general system information as explained in “To Collect Required Debug Data for Any Web Proxy Server Problem” on page 7.

2 Provide all the files under the following directories:

UNIX and Linux *server-root/proxy-identifier/config*
 server-root/userdb
 server-root/httpacl
 server-root/adminacl

Windows *server-rootproxy-identifier\config*
 server-root\userdb
 server-root\httpacl
 server-root\adminacl

3 If the Web Proxy Server uses a Directory Server, provide the access, errors and audit logs of the Directory Server used by the Web Proxy Server.

■ Access log

UNIX and Linux *server-root/slapd-identifier/logs/access*

Windows *server-root\slapd-identifier\logs\access*

■ Errors log

UNIX and Linux *server-root/slapd-identifier/logs/errors*

Windows *server-root\slapd-identifier\logs\errors*

■ Audit log

UNIX and Linux *server-root/slapd-identifier/logs/audit* (if enabled)

Windows *server-root\slapd-identifier\logs\audit* (if enabled)

Note – The paths of these logs files are specified by the following parameters in the `dse.ldif` file: `nsslapd-accesslog`, `nsslapd-errorlog`, and `nsslapd-auditlog`

The `dse.ldif` file is located in the `config` directory:

UNIX and Linux: `server-root/slapd-identifier/config/dse.ldif`

Windows: `server-root\slapd-identifier\config\dse.ldif`

4 Provide network trace files between components, such as these:

- Browser and Proxy Server
- Proxy Server and Firewall
- Proxy Server and Directory Server
- Firewall and the Web

Here are examples of commands on the proxy server side:

Solaris `snoop -V -vvv -d <interface> -o /tmp/proxy-snoop-web <IP_WEB_SERVER>`

HP-UX `tcpdump -i <interface> -w /tmp/proxy-snoop-web host <IP_WEB_SERVER>`

Note – `tcpdump` for HP-UX is available at: <http://hpux.connect.org.uk>. You can also use the native command `nettl`.

Linux `tethereal -V -F snoop -i <interface> -w /tmp/proxy-snoop-web host <IP_WEB_SERVER>`

Note – You can use the graphical user interface for `tethereal` or use the command `tcpdump`. `tethereal` is available at: <http://www.ethereal.com>.

Windows `tethereal -vvv -i <interface> -w /tmp/proxy-snoop-web host <IP_WEB_SERVER>`

Note – You can use either the graphical user interface or the command for `tethereal`. `tethereal` is available at: <http://www.ethereal.com>.

Note – Clearly indicate IP and hostname for each component. This will help to read the network trace files correctly.

▼ To Collect Debug Data on Web Proxy Server Protocol Problems

Use this task to collect data when Web Proxy Server's functioning is not in conformance with an RFC.

- 1 Collect the general system information as explained in “[To Collect Required Debug Data for Any Web Proxy Server Problem](#)” on page 7.
- 2 Details of the RFC and the specific section that you believe the Proxy Server is not conforming to.
- 3 Check if the Proxy Server is displaying the same problem with a different browser. You can check in browsers like Internet Explorer, Mozilla, Netscape and so on.
- 4 Provide network trace files between components, such as these:
 - Browser and Proxy server
 - Proxy Server and Firewall
 - Proxy Server and Directory Server
 - Firewall and the Web

Here are examples of commands on the proxy server side:

```
Solaris    snoop -V -vvv -d <interface> -o /tmp/proxy-snoop-web  
          <IP_PROXY_SERVER>
```

```
HP-UX     tcpdump -i <interface> -w /tmp/proxy-snoop-web host <IP_PROXY_SERVER>
```

Note – tcpdump for HP-UX is available at: <http://hpux.connect.org.uk>. You can also use the native command nettl.

```
Linux     tethereal -V -F snoop -i <interface> -w /tmp/proxy-snoop-web host  
          <IP_PROXY_SERVER>
```

Note – You can use the graphical user interface for tethereal or use the command tcpdump. tethereal is available at: <http://www.ethereal.com>.

```
Windows   tethereal -vvv -i <interface> -w /tmp/proxy-snoop-web host  
          <IP_PROXY_SERVER>
```

Note – You can use either the graphical user interface or the command for `tethereal`. `tethereal` is available at: <http://www.ethereal.com>.

Note – Clearly indicate IP and hostname for each component. This will help to read the network trace files correctly.

1.6 Configuring Solaris to Generate Core Files

Core files are generated when a process or application terminates abnormally. You can manage the core files with the `coreadm` command. This section describes how to use the `coreadm` command to configure a system so that all process core files are placed in a single system directory. This will enable you to track problems by examining the core files in a specific directory whenever a Solaris OS process or daemon terminates abnormally.

Before configuring your system for the core files, make sure that the `/var` file system has sufficient space. Once you configure Solaris to generate the core files, a core file is written to the `/var/cores` directory every time a process crashes.

▼ To Configure Solaris OS to Generate Core Files

1 Run the following commands as root.

```
mkdir -p /var/cores
coreadm -g /var/cores/%f.%n.%p.core -e global -e process -e \
global-setid -e proc-setid -e log
```

2 View the core configuration.

```
# coreadm
    global core file pattern:
        init core file pattern: %f.%n.%p.core
        global core dumps: enabled
    per-process core dumps: enabled
    global setid core dumps: enabled
per-process setid core dumps: enabled
    global core dump logging: enabled
```

See the `coreadm` man page for further information.

3 Set the size of the core dumps to unlimited.

```
# ulimit -c unlimited
# ulimit -a

        coredump(blocks) unlimited
```

See the `ulimit` man page for further information.

4 You may find that when you issue a `kill -SEGV` or a `kill -BUS` commands, the core file is not generated even though you have done the necessary setting using the `coreadm` command. To enable the instance to generate the core file, add the following line to the Proxy Server start script.

The start file looks like (# more *server-root/proxy-identifier/start*):

```
#!/bin/sh
cd /proxyserver/p36sp5/bin/proxy: ./ns-proxy -d
/proxyserver/p36sp5/proxy-sun-proxy/config $@
```

Replace the start file with the following:

```
#!/bin/sh
cd /proxyserver/p36sp5/bin/proxy: ./ns-proxy -c -d
/proxyserver/p36sp5/proxy-sun-proxy/config $@
```

Note – The change is that `-c` is added before `-d`

Note – You must restart the modified Proxy Server instance. When you issue a `kill -SEGV` or a `kill -BUS`, it will generate a core file under the *proxy-instance/config* directory.

5 Verify core file creation.

```
# cd /var/cores
# sleep 100000 &
[1] PID
# kill -8 PID
# ls
```

1.7 Running the Web Proxy Server Debugging Scripts

This section describes how to run the `pkg_app` script.

▼ To Run the `pkg_app` Script

This script packages an executable and all of its shared libraries into one compressed tar file. You need to provide the *proxy-pid* and the name of the core file to be opened. The files are stripped of their directory paths and are stored under a relative directory named `app/` with their name only, allowing them to be unpacked in one directory.

On Solaris 9 OS or greater, the list of files is derived from the core file rather than the process image if it is specified. You still must provide the *proxy-pid* of the running application to assist in path resolution.

Two scripts are created to facilitate opening the core file when the tar file is unpacked:

- `opencore`. This is the script to be executed once unpacked. It sets the name of the core file and the linker path to use the `app/` subdirectory and then invokes `dbx` with the `dbxrc` file as the argument.
- `dbxrc`. This script contains the `dbx` initialization commands to open the core file.

1 Copy the script to a temporary directory on the system where Web Proxy Server is installed.

2 Become superuser.

3 Execute the `pkg_app` script in one of the following three ways:

- `./pkg_app proxy-pid corefile`
- `./pkg_app proxy-pid`
(The `pkg_app` scripts prompts for the *corefile* name.)
- `./pkg_app core file`

1.8 Reporting Problems

Use the following email aliases to report problems with this document and its associated scripts:

- To provide feedback: <http://gdd-feedbacksun.com>
- To report problems: <http://gdd-issue-trackersun.com>

1.9 Accessing Sun Resources Online

The docs.sun.com(docs.sun.com)SM web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. Books are available as online files in PDF and HTML formats. Both formats are readable by assistive technologies for users with disabilities.

To access the following Sun resources, go to <http://www.sun.com>:

- Downloads of Sun products
- Services and solutions
- Support (including patches and updates)
- Training
- Research
- Communities (for example, Sun Developer Network)

1.10 Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

1.11 Sun Welcomes Your Comments

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