Sun Gathering Debug Data for Sun Java System Web Server

Sun Java™ Enterprise System Technical Note

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Sun Gathering Debug Data for Sun Java System Web Server

This technical note describes how to use Sun™ Gathering Debug Data (Sun GDD or GDD) that the Sun Support Center requires to debug problems with Sun Java™ System Web Server. By collecting this data at the time of raising 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 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 Server issues with the Sun Support Center.

This technical note contains the following sections:

1.1 Technical Note Revision History

Version	Date	Description of Changes
1.2	June 2007	Addressed review comments and added information about the new script `wshang.ksh`.
1.1	January 2007	Updated "To Configure Solaris to Generate Core Files" on page 22.
1.0	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 Server on the Solaris™, HP-UX, Linux, and Microsoft Windows platforms:

- Sun Java System Web Server 7.0
- Sun Java System Web Server 6.1 (SunONE Web Server)
- iPlanet™ Web Server 6.0

Note – The versions mentioned above include all update release or service packs for the products.

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 requirement 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.

Note – If your problem does not fit into any of the specific categories, provide the general information described in "1.5 Types of Web Server Debug Data" on page 9 and clearly explain your problem.

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

1.2.1 Prerequisites for Gathering Web Server Debug Data

The prerequisites for Sun GDD for Web Server are as follows:

- Make sure you have superuser privileges.

- For the Solaris platform, obtain the pkg_app and the wshang scripts and for UNIX and Linux, obtain the webinfo scripts from the following location:

  http://www.sun.com/bigadmin/scripts/indexSjs.html

- For Windows platform, download the free Debugging Tools for Windows to analyze the 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 latest version of Debugging Tools and the OS Symbols for your version of Windows. Also, you must add the environment variable NT_SYMBOL_PATH in the windows environment variable. Refer to Operating System version documentation or follow the installation guide for the OS Symbols package.

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

This section describes the variables used in the procedures in this document. Gather the values of the variables 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 is slapd-tango and slapd-tango is the *slapd-identifier*.

- *web-pid*: Process ID of a Web Server daemon.

- *web-port*: Port number on which the Web Server is listening.

- *web-identifier*: The Web Server instance name used during installation. The installation program automatically adds the prefix https- to the name you specified. For example, if you named the identifier tango, the installation program created https-tango, it is the *web-identifier*.

- *server-root*: The directory on the Web Server machine that stores the server specific information. This directory holds the server program, configuration, maintenance, and log files.
- *windbg-root*: The directory on the Windows Web Server machine that stores the Win Debugger program, and configuration, maintenance, and information files.

1.3 Overview of Gathering Debug Data for Web Server

Sun GDD for a Web Server problem involves these basic operations:

1. Gather system information.
2. Gather specific problem information (installation problem, process hang, Startup, or process crash.
3. Create a tar.gz file of all the debug information and upload it for the Sun Support Center.
4. Create 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 one of the following location:

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 Types of Web Server Debug Data

This section describes the various kinds of debug data that you need to provide to the Sun 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 topics:

- "To Gather General Debug Data for Any Web Server Problem" on page 9
- "To Gather Debug Data on Web Server Installation Problems" on page 11
- "To Gather Debug Data on Web Server Startup Problem" on page 12
- "To Gather Debug Data on a Hung or Unresponsive Web Server Process" on page 13
- "To Gather Debug Data on Web Server Crashed Process" on page 19

▼ To Gather General Debug Data for Any Web Server Problem

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

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 above.

5   Note the version of Web Server.

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

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

- Start Instance Script

  UNIX (Solaris and HP-UX) and Linux   cd *server-root*/*web-identifier*/`start`

- Error logs

  UNIX (Solaris and HP-UX) and Linux   cd *server-root*/*web-identifier*/`logs/errors`

  Windows   cd *server-root**web-identifier*\\`logs\errors`

- Access logs

  UNIX (Solaris and HP-UX) and Linux   cd *server-root*/*web-identifier*/`logs/access`

  Windows   cd *server-root**web-identifier*\\`logs\access`

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

- Sun Java System Web Server :

  UNIX (Solaris and HP-UX) and Linux   cd *server-root*/*web-identifier*/`config`
  Create a tar file of the *server-root*/`config` directory.

  Windows   cd *server-root**web-identifier*\\`config`
  Create a compressed file of the *server-root*\\`config directory`.

Note – If possible, provide an explorer (`SUNWexplo`) of the machine where the problem occurs. For UNIX and Linux systems, the customer can use the script `webinfo`. For more information on how to run the `webinfo` script, see "To Run the `webinfo` Script" on page 24.

▼ To Gather Debug Data on Web Server Installation Problems

Follow these steps if you are unable to complete the installation or if you get a "failed" installation status for Web Server.

1   See the following troubleshooting information:

- Sun Java Enterprise System 5:

    http://docs.sun.com/app/docs/doc/820-0464

- Sun Java Enterprise System 2005Q4:

    Troubleshooting

    http://docs.sun.com/app/docs/doc/819-2328

- Sun Java Enterprise System 2005Q1:

    http://docs.sun.com/source/819-0056/troubleshooting.html

- Sun Java Enterprise System 2004Q2:

    http://docs.sun.com/source/817-5760/troubleshooting.html

- Sun Java Enterprise System 2003Q4:

    http://docs.sun.com/source/816-6874/std-troubleshooting.html

If the problem persists after using this troubleshooting information, then continue with this procedure to gather the necessary data for the Sun Support Center.

2   Gather the general system information as explained in "To Gather General Debug Data for Any Web Server Problem" on page 9.

3   Specify whether this is a first-time installation or a Hot Fix installation on a pre-existing Web Server.

4   Get the installation logs.

- Sun Java System Web Server (Web Server 7.0):

    Web Server 7.0 log files mostly reside in the *server-root*/log directory. However, the initial configuration log files reside in the *server-root*/install directory, which also contains information on the initial configuration.

    Solaris   /var/sadm/install/logs
                               The log file names start with
                               Java_Enterprise_System*_install.B*datetime*, where *date* and
                               time correspond to the failing installing (for example, B12161532).

HP-UX and Linux	`/var/opt/sun/install/logs` The log file names start with `Java_Enterprise_System*_install.B`*datetime*, where *date* and *time* correspond to the failing installing (for example, `B12161532`).
Windows	`C:\DocumentsandSettings\`*current-user*`\LocalSettings\Temp` The log file names start with `MSI*.log` (usually a text file). The asterisk (*) represents a random number in the `Temp` directory for each MSI based setup.

- Sun Java System Web Server (Web Server 6.1):

  Web Server 6.1 log files mostly reside in the *server-root*/`log` directory. However, the initial configuration log files reside in the *server-root*/`install` directory, which also contains information on the initial configuration.

Solaris	`/var/sadm/install/logs` The log file names start with `Java_Enterprise_System*_install.B`*datetime*, where *date* and *time* correspond to the failing installing (for example, `B12161532`).
HP-UX and Linux	`/var/opt/sun/install/logs` The log file names start with `Java_Enterprise_System*_install.B`*datetime*, where *date* and *time* correspond to the failing installing (for example, `B12161532`).
Windows	`C:\DocumentsandSettings\`*current-user*`\LocalSettings\Temp` The log file names start with `MSI*.log` (usually a text file). The asterisk (*) represents a random number in the `Temp` directory for each MSI based setup.

- iPlanet Web Server (Web Server 6.0):

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

Solaris	`truss -ealf -rall -wall -vall -o /tmp/install-web.truss ./setup`
HP-UX	`tusc -v -fealT -rall -wall -o /tmp/install-web.tusc ./setup`
Linux	`strace -fv -o /tmp/install-web.strace ./setup`
Windows	Use DebugView tool. You can download this tool from `http://www.sysinternals.com/Utilities/DebugView.html`

▼ To Gather Debug Data on Web Server Startup Problem

Follow these steps if you are unable to start a Web Server instance.

1. **Gather the general system information as explained in** [“To Gather General Debug Data for Any Web Server Problem” on page 9](#).

2. **Run the** `netstat` **command and save the output.**

UNIX (Solaris and HP-UX) and Linux	`netstat -an	grep` *web-port*
Windows	`netstat -an`

3. **Run the following command on the Web Server start script and provide the resultant file.**

Solaris	`truss -eafl -wall -vall -rall -o /tmp/web-start.truss ./start`
HP-UX	`tusc -v -fealT -rall -wall -o /tmp/web-start.tusc ./start`
Linux	`strace -fv -o /tmp/web-start.strace ./start`
Windows	Use DebugView tool. You can download this tool from `http://www.sysinternals.com/Utilities/DebugView.html`

4. **If logs file does not contain any error message about the problem, do the following:**

   Edit and add the following line to the configuration file to get more debug information during the start.

UNIX (Solaris and HP-UX) and Linux	Edit the file *server-root*/*web-identifier*/`config/server.xml` and change the loglevel to finest: `loglevel=finest` in `server.xml`.
Windows	Edit the file *server-root**web-identifier*\\`config\server.xml` and change the loglevel to finest: `loglevel=finest` in `server.xml`.

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

A process hang is defined as one of the Web Server processes not responding to requests while the `httpd` process is still running.

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 22](#) if a core file is not generated.

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

1 **Gather the general system information as explained in "To Gather General Debug Data for Any Web Server Problem" on page 9.**

2 **For Solaris, use the** ptree **command on the** uxwdog **process to find about the process.**

> **Note** – If you are using Web Server 6.1 or Web Server 7.0, instead of the uxwdog process, use the webservd-wdog process.

Output

```
ptree 11449
11449 ./uxwdog -d /prods/crypto/60SP6/https-sun/config
 11450 ns-httpd -d /prods/crypto/60SP6/https-sun/config
  11451 ns-httpd -d /prods/crypto/60SP6/https-sun/config
```

> **Note** – Gather the data on the highest PID process, which in this example is 11451. The Web Process is either ns-httpd or webservd, depending on the Web Server version.

3 **Run the** netstat **command and save the output.**

| UNIX (Solaris and HP-UX) and Linux | netstat -an \| grep *web-port* |
| Windows | netstat -an |

4 **(For Solaris),** wshang **script captures the debug data.**

The wshang script is available at: http://www.sun.com/bigadmin/scripts/indexSjs.html

Run the script pkg_app on one of the core file generated by the wshang script. For more information on how to run the wshang script, see "To Run the wshang Script" on page 25.

5 **Run the following commands and save the output.**

Solaris

```
ps -aux
server-root
vmstat 5 5
iostat [ -t ] [ interval [ count ] ]
top
uptime
```

HP-UX

```
ps -aux
server-root
vmstat 5 5
```

```
iostat [ -t ] [ interval [ count ] ]
top
sar
```

Linux

```
ps -aux
server-root
vmstat 5 5
top
uptime
sar
```

Windows   Obtain the WEB process PID:

C:*windbg-root*>tlist.exe

Obtain the process details of the WEB running process PID:

C:*windbg-root*>tlist.exe *web-pid*

6   Get the swap information.

Solaris   `swap -l`

HP-UX   `swapinfo`

Linux   `free`

Windows   Already provided in C:\report.txt as described in

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

- Access log

  UNIX (Solaris and HP-UX) and Linux   *server-root*/slapd-*identifier*/logs/access

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

- Errors log

  UNIX (Solaris and HP-UX) and Linux   *server-root*/slapd-*identifier*/logs/errors

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

- Audit log

  UNIX (Solaris and HP-UX) and Linux   *server-root*/slapd-*identifier*/logs/audit

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

Note – The paths of these logs files are specified by the following parameters in the `dse.1dif` file. `nsslapd-accesslog`,`nsslap-errorlog`, and `nsslapd-auditlog`

The `dse.1dif` file is located in the `config` directory.

UNIX (Solaris and HP-UX) and Linux	*server-root*/slapd-*identifier*/config/dse.ldif
Windows	*server-root*\slapd-*identifier*\config\dse.ldif

---

8   (For Solaris) 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 Server processes.

For Solaris   Using the PID obtained in Step 3, get a series of five of the following commands (one every 10 seconds) :

pstack *web-pid*

pmap -x *web-pid*

Additionally, get the outputs of the following commands:

prstat -L -p *web-pid*

pfiles *web-pid*

pmap *web-pid*

9   Search for any core file that could have been dumped by one of the Web Server processes. If you find one, see "To Gather Debug Data on Web Server Crashed Process" on page 19.

10   Get the output of the following command.

Solaris   `truss -ealf -rall -wall -vall -o /tmp/WEBProc-PID -p` *web-pid*

HP-UX   `tusc -v -fealT -rall -wall -o /tmp/WEBProc-PID -p` *web-pid*

Linux   `strace -fv -o /tmp/WEBProc-PID.strace -p` *web-pid*

Windows   Use DebugView tool. You can download this tool from http://www.sysinternals.com/Utilities/DebugView.html

---

Note – Wait for a 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.

---

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

If a process hangs, it is helpful to compare several core files to review the state of the threads over time. Make a copy of the core file to a new name, wait for approximately one minute then rerun the following commands, so that the core files are not overwritten. Do this three times to obtain three core files.

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

Solaris
```
cd server-root/bin/https/bin;
gcore -o /tmp/web-core web-pid;
pstack /tmp/web-core
```

HP-UX

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

Note – The core.web-pid should be generated in the web-identifier/config directory.

Linux

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

(gdb)backtrace
(gdb)quit
```

Windows   Get the WEB process PID:

C:*windbg-root*>tlist.exe

Generate a crash dump on the WEB running process PID:

C:*windbg-root*>adplus.vbs -hang -p *web-pid* -o C:\crashdump_dir

---

Note – For Windows, provide the complete generated folder under C:\crashdump_dir.

---

12   For Solaris, Archive the result of the script pkg_app **(at least one core file is required).**

./pkg_app.ksh -c *[pid-of-application or corefile]* -p <full path to process binary of webservd>

The Sun Support Center requires the output from the pkg_app script to properly analyze the core file(s). For more information on how to run the pkg_app script, see "To Run the pkg_app Script" on page 25

Note – Make sure that 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 22 if a core file is not generated.

Note – If you are using Web Server 6.1 or Web Server 7.0, do not proceed further with the next step.

---

13   For UNIX and Linux, If JVM is used for the Web applications, provide the JVM Stack traces during a hang situation.

A series of three to five Stack traces will be required.

To enable thread dumps for version 6.0, perform the following steps:

a.   Edit the configuration file

server-root/https-*host*/obj.conf

b.   Modify the following line

Init fn="NSServletLateInit" LateInit=yes

to

Init LateInit="yes" fn="NSServletInit" CatchSignals="yes" Signals=SIGQUIT

    c. Add or modify the following line in */server-root*/https-*host*/jvm12.conf

       `jvm.printerrors=1`

    d. Restart Web Server.

Note – When a problem occurs during a restart, issuing a kill —3 against the process dumps the stack traces into the Web Server errors log.

▼ To Gather Debug Data on Web Server Crashed Process

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

1 Gather the general system information as explained in "To Gather General Debug Data for Any Web Server Problem" on page 9.

2 Try to restart Web 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 (Solaris and HP-UX) and Linux	*server-root*/slapd-*identifier*/logs/access
Windows	*server-root*\slapd-*identifier*\logs\access

- Errors log

UNIX (Solaris and HP-UX) and Linux	*server-root*/slapd-*identifier*/logs/errors
Windows	*server-root*\slapd-*identifier*\logs\errors

- Audit log

UNIX (Solaris and HP-UX) and Linux	*server-root*/slapd-*identifier*/logs/audit
Windows	*server-root*\slapd-*identifier*\logs\audit

> **Note** – The paths of these logs files are specified by the following parameters in the `dse.1dif` file. `nsslapd-accesslog`,`nsslap-errorlog`, and `nsslapd-auditlog`
>
> The `dse.1dif` file is located in the `config` directory.
>
> | UNIX (Solaris and HP-UX) and Linux | *server-root*/slapd-*identifier*/config/dse.ldif |
> | Windows | *server-root*\slapd-*identifier*\config\dse.ldif |

4 Get the output of the following commands.

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

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

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

Windows Obtain the WEB process PID:

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

Obtain process details of the WEB running process PID:

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

5 Get the swap information.

Solaris `swap -l`

HP-UX `swapinfo`

Linux `free`

Windows Already provided in `C:\report.txt` as described in "To Gather General Debug Data for Any Web Server Problem" on page 9.

6 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 and type the name for the resulting file.

7 Get core files (called "Crash Dumps" in Windows).

Solaris   See "1.6 Configuring Solaris to Generate Core Files" on page 22 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 Server by using the following commands:

Get the WEB process PID :

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

Generate a crash dump when the WEB process crashes, by executing the following commands:

```
C:\windbg-root>adplus.vbs -crash -FullOnFirst -p web-pid -o
C:\crashdump_dir
```

The `adplus.vbs` command monitors *web-pid* until it crashes and generates 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 -i` command to select Dr. Watson as the default debugger. Use the `drwtsn32` command, check all options, and choose the path for crash dumps. Then provide the dump and the `drwtsn32.log` files.

8 (Solaris) For each core file, provide the output of the following commands.

```
cd server-root/bin/https/bin
file corefile
pstack corefile
pmap corefile
pflags corefile
```

9 (Solaris) Archive the result of the script `pkg_app` **(one core file is sufficient).**

```
./pkg_app.ksh Pid-of-application corefile
```

Note – The Sun Support Center must have the output from the `pkg_app` script to properly analyze the core file(s). For more information on how to run the `pkg_app` script, see .

All these commands must be executed on the actual machine where the core file(s) were generated.

1.6 Configuring Solaris to Generate Core Files

Core files are generated when a process or an 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 enables you to track problems by examining the core files in a specific directory whenever a Solaris 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 to Generate Core Files

1 Run the following commands as `root`**.**

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

In this command:

-g   Specifies the global core file name pattern. Unless a per-process pattern or setting overrides it, core files are stored in the specified directory with a name such as *program*.*node*.*pid*.*time*.core, for example: `mytest.myhost.1234.1102010309.core`.

-e   Specifies options to enable. The preceding command enables:

- Use of the global (that is, system-wide) core file name pattern (and thereby location)
- Capability of setuid programs to also dump core as per the same pattern
- Generation of a syslog message by any attempt to dump core (successful or not)

-d   Specifies options to disable. The preceding command disables:

- Core dumps per the per-process core file pattern
- Per-process core dumps of setuid programs

The preceding command stores all core dumps in a central location with names identifying what process dumped core and when. These changes only impact processes started after you run the coreadm command. Use the coreadm -u command after the preceding command to apply the settings to all existing processes.

2   Display the core configuration.

```
# coreadmglobal core file pattern: /var/cores/%f.%n.%p.%t.core
      init core file pattern: core
           global core dumps: enabled
      per-process core dumps: disabled
     global setid core dumps: enabled
per-process setid core dumps: disabled
    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   If the Web Server instance is running in SSL mode, it does not generate a core file . To enable the instance to generate the core file, add the following line to the server start script start**.**

```
SSL_DUMP=1; export SSL_DUMP
```

Note – This step applies to Web Server 6.0 and 6.1. If you are using Web Server 7.0, this step must be skipped.

5   Verify the core file creation.

```
# cd /var/cores
# sleep 100000 &
[1] PID
```

```
# kill -8 PID
# ls
```

1.7 Running the Web Server Debugging Scripts

This section describes how to run the pkg_app, webinfo, and wshang scripts.

Note – The webinfo script is currently applicable to only Web Server 6.0.

▼ To Run the webinfo Script

There may be commands within the webinfoscript that you can run manually.

Note – You can download a new version of the script at the following URL:

http://www.sun.com/bigadmin/scripts/indexSjs.html

To run the webinfo script , perform the following steps:

1 **Move** webinfo_*version*.sh **to a temporary directory.**

2 **Change the following environment variable at the beginning of the file,** *info*.sh

SERVER_ROOT=

INSTANCE=

TMPDIR= /tmp

3 **Make sure that you have a space between the parameter** TMPDIR= **and the value that you entered.**

4 **Run the script.**
This creates the $TMPDIR/webinfo.*date* directory and a tar file of that directory $TMPDIR/webinfo.*date*.tar

Note – Run this script as the Web Server user rather than root.

5 **Send the tar file to The Sun Support Center.**
Clean up $TMPDIR, if necessary.

For error information which is related to your problem, see the Administrator or Web Server errors and access files.

▼ **To Run the** wshang **Script**

1   **The** wshang **script collects three snapshots of the following information at 15 seconds interval against the hung instance:**

pstack

pfiles

prstat -L -a

pflags

pmap –x

pldd

Note – You can modify the time interval by editing the script and changing the variable *DURATION*

2   **Run the** wshang **script. It shows a list of Web Server Process.**

3   **Choose the process that has the problem.**

▼ **To Run the** pkg_app **Script**

This script packages an executable and all of its shared libraries into one tar file. Optionally, you can provide the PID of the application and the name of the core file. The files are stripped of their directory paths and are stored under a relative directory named app/ allowing them to be unpacked in one directory.

On Solaris 9 or higher version, the list of files is derived from the core file rather than the process image if the core file is specified . You must provide the 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. Execute this script after you unpack the tar file. The script 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 Server is installed.**

2 **Login as superuser.**

3 **Execute the** pkg_app **script.**

```
./pkg_app.ksh -c [pid-of-application or corefile] -p <full path to process binary of
webservd>
```

1.8　Reporting Problems

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

- To provide feedback: **gdd-feedback@sun.com**
- To report problems: **gdd-issue-tracker@sun.com**

1.9　Accessing Sun Resources Online

The docs.sun.com℠ 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 made readable with the help of 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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