Enhanced Support Facility User's Guide

for System Data Output Tool Features

FUJITSU

Preface

Purpose

This manual is the Enhanced Support Facility User's Guide System Information Output Tool. This manual provides an overview of each function of the enhanced support facility (ESF). Read this manual before using the ESF for the first time.

This manual also includes explanations of server models, operating system versions, and functions supported by ESF 3.0 or earlier version. For details, see Chapter 3 of this manual and each separate manual.

Intended Readers

This manual is intended for the following readers:
- System administrators who introduce and operate this software
- Technicians who maintain system hardware

Organization

This manual is organized as follows:

Chapter 1: System Data Output Tool

Describes the System Data Output Tool. (TBD)

Notation

The following names, abbreviated expressions, and symbols are used in this manual:

Manual names

- This manual itself is referred to as "this manual."
- Any manual for this product is sometimes referred to by omitting "Enhanced Support Facility" at beginning of the formal name and supported server models at the end of the formal name. "User's Guide for System Data Output Tool" is one of such examples.
- Example: Enhanced Support Facility User's Guide for System Data Output Tool
  User's Guide for System Data Output Tool

Abbreviation

In this document, the formal names of the products below are abbreviated as follows:

Formal name	Abbreviation
Microsoft (R) Windows (R) XP Professional, Microsoft (R) Windows (R) XP Home Edition, Microsoft(R) Windows (R) 2000 Server, Microsoft (R) Windows (R) 2000 Advanced Server, Microsoft (R) Windows (R) 2000 Professional, Windows Server (TM) 2003 Standard Edition, or Windows Server (TM) 2003 Enterprise Edition	Windows (R)

Marks

In this manual, the marks below are used for cautionary messages and reference information.

Mark	Description
Note	Contains a warning or cautionary message. Make sure you read it carefully.
Point	Contains reference information that you will find useful.
See	Provides reference information. Refer to the information when necessary.

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Contents

Chapter 1   System Data Output Tool

This chapter describes the System Data Output Tool.

1.1 Feature Overview

This tool collects command execution result data and files about hardware and software configurations, environment settings, logs, and operational status. It then outputs all to a tape unit, etc. (approx. 200 types, and 2,000 files)

This tool only executes commands for copying and referencing files and uses the /var/tmp file system as a work area (default).

The collected data is only compressed, and its contents can be analyzed using the existing commands for each type of information.

If a system fault occurs, use this tool to collect system information when the execution of a command becomes possible, for example, when reboot was completed after system dump was collected. Over time, data so acquired to analyze faults may be erased.

It is recommended that you execute this tool as a superuser.

Note:

When the system reboots after it has crashed, Crash Dump Assistant invokes this tool and automatically saves a system data file named "fjsnap.X" into the same directory as the crash dump.

But if Savecore directory is defined as a directory other than the default directory (/var/crash/`uname -n`) on Solaris 2.6™OS, Crash Dump Assistant does not save system data automatically.

1.2 Collection Time and Collection Capacity

Collection time takes about 5 to 60 minutes.

Collection capacity is between 5 to 100 Mbytes.

These values vary depending on the number of installed products (packages).

1.3 Target System

The target systems are shown below

- Solaris 2.6 OS and later

1.4 Command Reference

NAME

fjsnap - System data output tool

FORMAT

/opt/FJSVsnap/bin/fjsnap [-H][-abhlns][-T directory] output
/opt/FJSVsnap/bin/fjsnap -C [-H][-abhlns][-T directory][-D directory] output

DESCRIPTION

fjsnap collects system data required to analyze faults.

OPTIONS

Each option of the lower-case letter specifies a group of data to be collected.   If omitted,
group information related to the basic system is collected (same as the -b option).
A group that can be specified is displayed in the Usage message (execute this command by
specifying the -H option).

The following options are available:

-H

Displays the following Usage message.

```
Usage: fjsnap [ -H ] [ -abhlns ] [ -T directory ] output
     : fjsnap -C [ -H ] [ -abhlns ] [ -T directory ] [ -D directory ] output
                 -H : Usage
                 -a : all
                 -b : basic software (default)
                 -h : high availability
                 -l : lp
                 -n : network
                 -s : storage array
                 -T directory : work directory
                 -C : Add crash dump information
                 -D directory : Savecore directory
                 output : ex. /dev/rmt/0
```

-a

Collects all defined data.

-b

Collects group information related to the basic system.

-h

Collects group information related to high reliability.

-l

Collects group information related to the printer.

-n

Collects group information related to the network.

-s

Collects group information related to the storage array.

-T

Specifies a work directory (work area) in the parameter "directory." If omitted, a directory defined in environment variable TMPDIR is used as a work area. Moreover, if the environment variable TMPDIR is not defined, /var/tmp directory is used as a work area. If the -T option and the environment variable TMPDIR are both specified, the -T option is used.

output

Specifies an output file name or special file name of the output medium.

-C

Adds an archive of crash dump file on the end of the archive of collected data in the output file.
In this case, specify a special file name of non-rewinding tape device (ex. /dev/rmt/0n) as an output medium in the argument "output." If a special file name of rewinding tape device (ex. /dev/rmt/0) is specified in the argument "output," the archive of collected data gets overwritten by an archive of crash dump file.

-D

Specifies where to arrange crash dump files (savecore directory) in the parameter "directory." This option is valid only when the -C option is specified. If the -T option is not specified, this command collects crash dump files under the Savecore directory that is currently defined on the system. If the Savecore directory does not exist on the system, crash dump files under /var/crash/`uname -n` are collected.

Example:

When the collected data is output to a regular file.

The file name is "all" in this case.

```
# cd /export/home/fjsnap <RETURN>
# /opt/FJSVsnap/bin/fjsnap -a all <RETURN>
<<< fjsnap * START !! >>>
<<< Path-name check * START !! >>>
          :
          :
<<< Output *  END !! >>>
<<< fjsnap *  END !! >>>
# ls <RETURN>
all
```

The collected data is output to "/export/home/fjsnap/all" file.

Example:

When -C option is not specified:

```
/opt/FJSVsnap/bin/fjsnap -a -T /work /dev/rmt/0 <RETURN>
```

Example:

Add a crash dump file:

```
/opt/FJSVsnap/bin/fjsnap -C -a -T /work /dev/rmt/0n <RETURN>
```

Work area size check

Uses a directory specified in the -T option or environment variable TMPDIR as a work directory (work area). If the -T option and the environment variable TMPDIR are not both specified, this command uses /var/tmp directory.

Collect data check

Checks whether the file to be collected exists. The check result is saved in a log file and an existing file is collected.

Collect data size check

Checks the size of an existing file.
If a file/directory whose size is over 128MB is found, this WARNING message is displayed and the file/directory is not collected by this command. Collect it responding to the system trouble individually when the message is displayed. Call the Fujitsu customer engineer when it is uncertain.

```
fjsnap:WARNING: XXXXX: Information size limit over : xxxxxxxxx
```

Available free space of the work area and the total size of collected data are displayed.

```
<<<   needed tmp-space size   >>>

9999 MB is left in xxxxxxxxx

9999 MB is needed
```

When the total size of collected data is larger than available free space as the work area, the ERROR message is displayed as below

```
fjsnap:ERROR: Not enough space in xxxxxxxxxx
```

Execute this command with specifying a work area has suppicient free space larger than the total size of collected data.

Example:

Specify a work directory (work area) with the -T option:

```
# /opt/FJSVsnap/bin/fjsnap -b -T /work /dev/rmt/0 <RETURN>
```

Example:

Define a work directory (work area) in the environment variable TMPDIR:

```
# TMPDIR=/work; export TMPDIR <RETURN>
```

Data collection

When collect data is configured as a file, it is copied to a work area.

```
find file-name -print | cpio -pdmuL work-directory/fjsnap.d <RETURN>
```

When collect data is configured as a directory, files under the directory are renamed to directory names using tar(1), and they are arranged into a work area.

```
tar cfh work-directory/fjsnap.d/collect-directory-name.tar collect-directory <RETURN>
```

This command then creates a list file of collected data, log file at execution, and file attribute information file of collected data.

fjsnap.result	List of collected data
fjsnap.elog	Log at execution of this command (including error information)
fjsnap.lsinf	Attribute information of collect information file (result of ls(1))

fjsnap.result contents

ST PROG	FILE	PHASE
-	/etc/system	50
Uarp_a	ARP_a	50
#EB -	/var/nis	50

ST   Collect result

    Space Collected normally.

    #EB A file to be collected was not found.

    #EP A collect procedure was not found.

    #ES The size of information to be collected was too large. (exceeding 128 Mbytes)

    #NG The collect procedure has terminated abnormally.

PROG   Collect procedure name

    (For more information, see "1.6 Collection Procedure List.")

FILE   File and directory to be collected
     (For more information, see "1.5 Collected Data List.")

PHASE   Collection order
     (Standard : 50)
The data collection command arranges data to be collected in a work area, uses compress(1)
to compress each file, and use tar(1) to write the compressed data to the output file.

```
tar cfb output 20 work-directory/fjsnap.d <RETURN>
```

Forbidden file (exclude)

All system data collected by this tool, such as command execution result and files, are defined in each group's collected data file under /opt/FJSVsnap/etc directory.

If you want to forbid this tool to collect a part of the system data, make a /etc/opt/FJSVsnap/exclude file.

With this method, you can forbid that this tool collects the system data listed in "1.5.2 Printer Related," for example, let us assume that you want to forbid this tool to collect the data related to the printer from the system data. The data related to the printer is generally collected in the directory /var/spool/lp/temp/. In this case, add a field named 'FILE (separated from the first field by spaces or tabs) to the printer related file named 'lp' under the /opt/FJSVsnap/etc directory. If you don't want to include printer data collected in the files like /var/spool/lp/temp/ or /var/spool/print include these files in the /etc/opt/FJSVsnap/exclude file.

Example:

/opt/FJSVsnap/etc/lp file:

#	PROG	FILE	PHASE
	-	/var/spool/lp/temp	60
	-	/var/spool/print	60

When you forbid that this tool collects /var/spool/lp/temp and /var/spool/ print directories, write these data into /etc/opt/FJSVsnap/exclude file as shown below

```
/var/spool/lp/temp
/var/spool/print
```

Even if a package is deleted, forbidden file exists.

Collect data reference

The collected data is restored using tar (1). This command creates a fjsnap.d directory in the current directory and arranges the collected data in the directory tree structure defined at collection under the fjsnap.d directory.

```
tar xf input <RETURN>
```

For input, specify a general file name or special file name according to a collect medium.

The collect file is compressed. Use uncompress (1) to uncompress the file before reference. If collected data is configured as a directory, it is saved as a archive file using tar (1).

In the case, expand the directory before reference.

When you restore crash dump files, specify a special file name of non-rewinding tape device to read an archive of collected data, and then restore an archive of crash dump files using tar (1). In this case, using tar (1) enables the user to restore an archive of crash dump files after forwarding a tape device using mt (1).

```
mt -f nrinput fsf 1 <RETURN>
tar xf nrinput <RETURN>
```

For nrinput, specify a special file name of non-rewinding tape device.

EXIT STATUS

When an error occurred during data collection, a diagnosis message is written to the fjsnap.elog file, the erroneous information is skipped, and the next information processing is continued.

This command returns the following values:

0 Ended normally
1 Ended abnormally
2 Invalid command syntax
3 Re-executed during execution of this command

FILES

work-directory/fjsnap.d/fjsnap.result
work-directory/fjsnap.d/fjsnap.elog
work-directory/fjsnap.d/fjsnap.lsinf

NOTES

Do not re-execute this command during execution of this command.
The load on the disk unit containing the work area temporarily increases to about 80 to 90%. When the /tmp directory is specified as the work area, the load of memory becomes high.
If this disk load causes problems in operation, reserve a work area on a file system on a disk unit not used by applications and systems.
CPU load rises very much, too, when there is no reserve strength in CPU power (For single CPU).
The system information is inaccessible by non-privileged users. It is recommended that you execute this tool as a superuser. For more information, see "1.7 Restricted System Information."
As for the file that the privileged user gathers, important information on the system is included. Please arrange from the general user to an inaccessible place, and do enough management.
When you use zones with Solaris 10 OS, collect information in each zone. If you collect information of a non-global zone, collect information of the global zone at the same time because it can be necessary for the investigation.
Two or more FJSVsnap packages have been installed, delete all FJSVsnap packages according to the following procedures first, and install only the newest package.

1.5 Collected Data List

The collected data in this section:

- Basic System related
- Printer related
- High reliability related
- Storage array related
- Network related

1.5.1 Basic System Related

The Basic System related collected data is shown below

- Hardware configuration
- Software configuration
- Environment setting
- Log
- Operation status

1.5.1.1 Hardware Configuration

System configuration	prtconf -v
	prtconf -vp
	prtconf -V
	prtconf -F
	format
	hrdconf -l
	prtpicl -v
	prtconf -DPv

1.5.1.2 Software Configuration

System name	uname -a
	showrev a
Pkg installation status	pkginfo -l
	pkginfo -i
	pkginfo -p
	/var/sadm/install/contents
	/var/sadm/pkg/*/pkginfo
Patch application status	showrev -p
	ls -l /var/sadm/patch
Kernel information	ls -l /platform/`uname -m`/kernel
	ls -l /platform/`uname -i`/kernel
Loaded device driver list	Modinfo
System installation	/var/sadm/softinfo/INST_RELEASE
	ls -ld /var/sadm
Instruction set architectures	isainfo -kv

1.5.1.3 Environment Setting

System tuning parameter	/etc/system
System definition	sysdef
	sysdef -d
	/etc/name_to_major
	/etc/path_to_inst
	/etc/release
	/etc/*.conf
Inittab	/etc/inittab
System procedure	/etc/rc*/*
Driver definition	/kernel/drv/*.conf
	/platform/`uname -m`/kernel/drv/*.conf
	/platform/`uname -i`/kernel/drv/*.conf
	/platform/SUNW,SPARC-Enterprise/kernel/drv/*.conf
Device definition	/etc/device.tab
	/etc/dgroup.tab
	/etc/security/*
	/etc/devlink.tab
EEPROM	eeprom
Device special file	ls -lin /dev/rdsk
	find /dev -print | grep '/dsk/' | xargs ls -linL
	find /dev -type d -print | xargs ls -lL
	ls -lR /dev
Mount default value	/etc/vfstab
Free disk capacity	df -k
	df -a
	df -e
	df -g
	df -Z
Partition configuration	prtvtoc /dev/rdsk/c*s2
Environment setting parameter	/etc/default/*
User group definition	/etc/passwd
	/etc/group
System dump output destination definition	/etc/init.d/sysetup
	"minfree" file under Savecore directory or
	/var/crash/`uname -n`
Message related	/etc/syslog.conf
Port monitor definition	/etc/saf/*
Power management	/autoshutdown
	/etc/power.conf
At activation definition	/var/spool/cron/atjobs/*
Cron information	/var/spool/cron/crontabs/*
AUDIT related	/etc/security/audit/*
Network	ifconfig -a
	/etc/inet/*
	/etc/netconfig
	/etc/resolv.conf

	/etc/rpc
	/etc/defaultdomain
	/etc/defaultrouter
	/etc/ethers
	/etc/hostname.*
	/etc/named.boot
	/etc/nodename
UUCP	/etc/uucp/*
Remote execution	/etc/hosts.equiv
Mail related	/etc/mail/* ls -l /usr/lib/sendmail
SNMP definition	/etc/snmp/*
NIS+, NIS	/var/nis/* /etc/nsswitch.conf /var/yp/* ls -l /var/yp/binding
autofs definition	/etc/auto_master /etc/auto_home
Dial calling passwd	/etc/d_passwd /etc/dialups
FLEXlm	File can be specified using /etc/opt/FSUNlicense/FSU_LICENSE_FILE.
Option	/etc/opt/*
Web-Based Admin View environment definition	/etc/opt/FJSVwvbs/etc/webview.cnf
WWW Server for Admin View environment definition	/etc/opt/FJSVwwcnf/etc/WEBCNF.conf
Crash Dump Assistant	/etc/opt/FJSVdmp/fjdmpadm.conf
System Service Processor (SSP) UE10000	/etc/ssphostname /var/opt/SUNWssp/.ssp_private/* /var/opt/SUNWssp/adm/*
LMF environment setting information	lmadmin -r
Core file information	Information can be specified using coreadm
Machine administration	/opt/FJSVcsl/usr/* /opt/FJSVcsl/lib/console.dat /opt/FJSVcsl/lib/machine.dat /opt/FJSVcsl/lib/my_console.dat /opt/FJSVcsl/lib/my_segment.dat /opt/FJSVcsl/lib/network.dat /opt/FJSVcsl/lib/pid.dat /etc/FJSVscsl.hostname /opt/FJSVcsl/bin/hcpversion -a /opt/FJSVcsl/bin/serialid_all /usr/sbin/FJSVmadm/hcpversion -v /usr/sbin/FJSVmadm/serialid -a /var/opt/FJSVmadm/msgaddon/* /var/opt/FJSVmadm/etc/errtimedb /var/opt/FJSVmadm/etc/diskerrdb /var/opt/FJSVmadm/evh/evh.conf* /var/opt/FJSVmadm/evh/evh_log* /var/opt/FJSVmadm/etc/diskswapdb

	/var/opt/FJSVmadm/etc/errtime.conf
	/var/opt/FJSVmadm/etc/iostat_data
	/var/opt/FJSVmadm/etc/modelfile
	/var/opt/FJSVmadm/etc/hw_cache
	/var/opt/FJSVmadm/etc/hw_lsb_list
System Management Console	/opt/FJSVscsl/log/*
	/etc/FJSVscslif
	/etc/FJSVscslcntl
	/etc/FJSVscsltargets
	/etc/FJSVclowners
	/etc/FJSVclguiusers
	/opt/FJSVscsl/etc/ntp.conf
Partition Installer	/opt/FJSVclis/tmp/*
	/opt/FJSVclis/etc/*
	/var/tmp/FJSVclis/*
	/var/tmp/FJSVclis_setup_script.log
	/var/tmp/FJSVclis_log
	/var/opt/FJSVclis/log/*
	/etc/bootparams
	/etc/opt/FJSVclis/etc/*
Emulex Adapter	/kernel/dev/lpfc.conf
	/kernel/dev/qla.conf
	/opt/SMAW/sbin/prtcfg
Resource management information (pool)	/usr/sbin/poolcfg -c info
	/usr/sbin/poolcfg -dc info
	/usr/bin/poolstat -r all
	/usr/sbin/rcapadm
Console-related information	/usr/sbin/fbconfig -list
	/usr/sbin/fbconfig -propt
	/usr/sbin/fbconfig -prconf
Execution environment information	/usr/bin/env
	/usr/bin/locale
	/usr/bin/locale -a
	/usr/java/bin/java -fullversion
Auto push setting	/etc/iu.ap
ZFS	/sbin/zpool status -v
	/sbin/zpool list
	/sbin/zfs list
	/sbin/zfs list -t snapshot
	/sbin/zfs list -t filesystem
	/sbin/zfs list -t volume
	/sbin/zfs mount
	/sbin/zpool status -x
	/sbin/zpool iostat -v
tty	/etc/ttydefs
	/bin/strconf < /dev/console
	/bin/stty -a < /dev/console
	/bin/stty -a < /dev/cua/a
	/bin/stty -a < /dev/cua/b
LDoms	/var/opt/SUNWldm/*
	/opt/SUNWldm/bin/ldm -V

	/opt/SUNWldm/bin/ldm list -l
	/opt/SUNWldm/bin/ldm list-bindings -e
	/opt/SUNWldm/bin/ldm list-config
	/opt/SUNWldm/bin/ldm list-devices -a

1.5.1.4 Log

System diagnosis information	/opt/FJSVhwr/sbin/fjprtdiag -v
	or /usr/platform/`uname -i`/sbin/prtdiag -v
Message log	/var/adm/messages
	dmesg
	/var/log/syslog
	/var/log/authlog
	/var/log/sysidconfig.log
User accounting processing information	/var/adm/utmp
	/var/adm/utmpx
	/var/adm/wtmp*
	/var/adm/wtmpx*
	uptime
Volume management log	/var/adm/vold.log*
Last login log	/var/adm/lastlog
Login failure log	/var/adm/loginlog
su execution log	/var/adm/sulog*
spell command log	/var/adm/spellhist*
cron log	/var/cron/log*
Port monitor	/var/saf/*
Installation	/var/sadm/install/logs/*
	/var/sadm/install_data
	/var/sadm/patch
	/var/sadm/ptf
	/var/sadm/smcptf
	/var/sadm/system/logs/*
Root mail	/var/mail/root
Network	netstat -a
	netstat -an
	netstat -s
	netstat -m
	netstat -p
	netstat -r
	netstat -i
	netstat -k or kstat
	netstat -pn
	netstat -rn
	arp -a
	nfsstat
	nfsstat -m
NIS+	nisshowcache -v
Connection server log	/var/adm/log/*
UUCP	/var/uucp/*
Modem	/var/adm/aculog

Process account	/var/adm/pacct
	/var/adm/acct/*
FLEXlm	/var/opt/FSUNlicense/*
	/tmp/license_log
Web-Based Admin View trace	/var/opt/FJSVwvbs/logs/*
WWWServer for Admin View trace	/var/opt/FJSVwvcnf/logs/*
Storplex/LMF Server	/var/opt/FJSVlmfs/*
Machine administration monitor log	/var/opt/FJSVmadm/log/*
Machine administration hardware error monitor database	/var/opt/FJSVmadm/etc/madmdb
Watchdog log	/var/opt/FJSVhwr/wdlog/*
SCF error log	/var/opt/FJSVhwr/scferrlog
Power log	/var/opt/FJSVhwr/scfpwrlog
Hardware holt log	/var/opt/FJSVhwr/hltlog/*
TCPTRACE	/var/opt/FJSVssf/tcptrace/*
Netcompo Communication Service 1.0	/var/opt/FSUNnet/cmsv/log/errlog/pathfile*
Crash Dump Assistant	/var/opt/FJSVdmp/log/*
Machine administration	/var/opt/FJSVcsl/log
System Management Console	/var/opt/FJSVscsl/log/*
Crash dump analysis file	<crash dump dir>/ana*
Enhanced Support Facility Information Management	/opt/FJSVbse/etc/esfinfo.data
	/opt/FJSVbse/etc/install.log
	/opt/FJSVbse/etc/remove.log
	/opt/FJSVbse/etc/ver_comp.log
	/opt/FJSVbse/etc/order.data
Web-Based Admin View	/etc/opt/FJSVwvbs/etc/bin/wvCntl glogs -all
Modification information of Fujitsu middleware	/var/opt/FJMWupdate/showup.sh
	/var/opt/FJMWupdate/showup.sh -p
WebSysAdmin	/opt/SMAW/bin/getwsalog
Patch Management Tool	/opt/FJSVpmgw/sbin/fjpm_snap
PRIMEPOWER Server Manager	/var/opt/FJSVutm/*
System Parameter Diagnosis	/var/opt/FJSVparam/log/*
SNMP	/var/snmp
	/etc/sma/snmp
	/var/sma_snmp
	/var/log/snmpd.log
Tape Driver Configuration Tool	/var/opt/FJSVdcnf/log/pfca_conf_set.log1
	/var/opt/FJSVdcnf/log/pfca_conf_set.log2
	/var/opt/FJSVdcnf/log/st.log1
	/var/opt/FJSVdcnf/log/st.log2

1.5.1.5 Operation Status

Process list	ps -ecfjl or ps -ecfjlZ
	ptree
Inter-process communication status	ipcs -a or ipcs -aZ
Processor management information	psrinfo -v
SWAP	swap -l
	swap -s
SCF dump (Restricted to GP7000F model	/var/opt/FJSVmadm/scfdump

200/200R/400/400A/400R/600/600R, and PRIMEPOWER200/400/600)	
Crash dump	ls -l Savecore directory or ls -l /var/crash/`uname -n`
System activity	/var/adm/sa/*
File system mounting	/etc/mnttab
NFS	/etc/dfs/sharetab /etc/dfs/dfstab
NIS	ypwhich -m
RPC management information	rpcinfo rpcinfo -m
FLEXlm	lmstat -a
MTL library device status	lmdisplay
RC2000	Information is output by rcgetinfo.
RC2000 (Java)	/etc/opt/FJSVrcon/bin/rcgetinfo2 -u
SPARC Enterprise	SPARC Enterprise information (explorer)
Dynamic Reconfiguration	Information defined by /etc/opt/FJSVhwr/adrc.conf /opt/FJSVhwr/sbin/drcstat -board all /opt/FJSVhwr/sbin/drcstat -device /opt/FJSVhwr/sbin/drcstat -system
Parallelnavi	/opt/FJSVpnrm/bin/pnavisnap
SRFS over BLASTBAND HPC	/opt/FJSVsrfs/bin/srfssnap
BLASTBAND HPC	/opt/FJSVbbdts/bin/bbsnap
System V IPC	/etc/project /usr/bin/prctl 1
Zones	/etc/zones/* /usr/bin/zonename
Service Management Facility	/lib/svc/* /var/svc/* /etc/svc/* /usr/bin/svcs -apv /usr/bin/svcs -xv
Fault Management	/var/fm/* /usr/sbin/fmstat /usr/sbin/fmstat -a /usr/sbin/fmstat -a -m<module> /usr/sbin/fmstat -m<module> /usr/sbin/fmstat -s -m<module> /usr/sbin/fmdump eV /usr/sbin/fmdump V /usr/sbin/fmadm faulty /usr/sbin/fmadm faulty -a
I/O driver	/usr/bin/iostat -E
data-link interfaces	/sbin/dladm show-link /sbin/dladm show-link -s /sbin/dladm show-dev /sbin/dladm show-dev -s /sbin/dladm show-aggr /sbin/dladm show-aggr -L /sbin/dladm show-aggr -s

	/sbin/dladm show-linkprop
	/etc/aggregation.conf
ntp	/usr/sbin/ntpq -p
	/usr/sbin/ntptrace
	/var/ntp/*
IP driver	/usr/sbin/ndd /dev/ip ipv4_ire_status
	/usr/sbin/ndd /dev/ip ipv6_ire_status
	/usr/sbin/ndd /dev/tcp tcp_status
IP Filter	/etc/ipf/*
	/usr/sbin/ipfstat -ionh
Routing information	/usr/sbin/routeadm -p
LDAP	/var/ldap/*

1.5.2 Printer Related

The printer related collected data is shown below

Log information of lp command activation	/var/lp/logs/*
Alert information	/var/mail/lp
Printing copied to spool area data and error/option information	/var/spool/lp/temp/* /var/spool/print/*
Lp print service definition information	/etc/lp/*
Information collection of print request, printer definition, and system	lpstat -lt lpstat -Lt lpget list ls -alR /var/spool/lp ls -alR /var/fonts
Systemwalker/PrintMGR SE related	/var/opt/FJSVppn/log/* /etc/opt/FJSVppn/conf/*
BSNPS related	/var/opt/FJSVbsnps/bsnps/* /etc/opt/FJSVbsnps/bsnps/* /var/opt/FJSVlp/FJSVbsnps/* /var/opt/FJSVlp/ovl/* /var/opt/FJSVlp/page/* /var/opt/FJSVpralt/log/* /etc/opt/FJSVpralt/* /var/opt/FSUNmsgm/user /var/opt/FSUNmsgm/user.idx

1.5.3 High Reliability Related

The high reliability related collected data is shown below

SynfinityCluster	Information file is output by clgetrschinfo.
SynfinityDisk	Information file is output by sdxsnap.sh.
SynfinityFile	Information file is output by sfxsnap.sh.
SynfinityFile/Global	Information is output by sfcsnap.sh.
Synfinity-VIA	Information is output by scnet_error.
SynfinityCluster/HA for Oracle	Information is output by clgetoralog. /etc/opt/FJSVclora/* /var/opt/FJ

	SVclora/*.log
SynfinityLink	/etc/hanet.conf /etc/opt/FJSVhanet/*
	/var/opt/FJSVhanet/*
AP-Net Basic Software	Information is output by apnet_log.
BLASTBAND	/etc/opt/FJSVibhd/sbin/ibsmap
Systemwalker Resource Coordinator	/opt/FJSVrcxmr/sbin/rcxmgrsnap　or
/Server System Manager	/opt/FJSVrcxat/sbin/rcxagtsnap　or
	/opt/FJSVutmms/sbin/rcxmgrsnap
PRIMECLUSTER Wizard for NetWorker	/etc/opt/FJSVclagent/bin/clgetagent
Cluster Standby Patrol Facility	/var/opt/FJSVclptl/logs/*
PRIMECLUSTER Shutdown Facility	Information file is output by clgetrschinfo.
Dynamic Configuration Core Command	/var/opt/FJSVdr/log/*

1.5.4 Storage Array Related

The storage array related collected data is shown below

SPARCstorage Array	ls -l /dev/esInformation is collected by luxadm and ssaadm.
Volume Manager	Information is collected by vxprint, vxdg, vxinfo, vxdisk, and vxstat.
Metadevice configuration information SPARCserver Manager, Solstice DiskSuite	Information is collected by metastat, metaset, and metadb.
Raid Manager	/usr/lib/osa/rmparams
	/usr/lib/osa/rmlog.log
	/kernel/drv/sd.conf
	/kernel/drv/rdnexus.conf
	/kernel/drv/rdriver.conf
	ls -l /dev/osa/dev/dsk/*
	ls -l /dev/osa/dev/rdsk/*
	Information is collected by drivutil, rdacutil, raidutil, nvutil, healthck, and lad.
FUJITSU PCI SCSI Adapter Driver 1.0/2.0	/kernel/drv/fjmsa.conf
	/kernel/drv/fjlvsa.conf
Hard Disk Driver Control Software	/kernel/drv/hddv_sd_backup
	/kernel/drv/hddv_mphd.conf_backup
	/kernel/drv/hddv_mplb.conf_backup
FUJITSU Fibre Channel Driver	/kernel/drv/fjpfca.conf
	/usr/sbin/FJSVpfca/fc_info -a
	/usr/sbin/FJSVpfca/fc_info -p
	/usr/sbin/FJSVpfca/fc_info -c
Multipath Disk Control load balance option (MPLB) 4-paths/8-paths 2.x	/var/opt/FJSVmplb/multi-path-config.log
	/var/opt/FJSVmplb/multi-path-config.log2
	/kernel/drv/mplb.conf
	/usr/opt/FJSViomp/bin/iompadm -c mplb version
	/usr/opt/FJSViomp/bin/iompadm -c mplb -p info
MultiPath Disk Control	/kernel/drv/mphd.conf
	/var/opt/FJSVmphd/mphdmon/mphdmon.log
	/var/opt/FJSVmphd/mphdmon/mphdmon_bak.log

	/usr/opt/FJSViomp/bin/iompadm-c mphd - pinfo /etc/opt/FJSVmphd/bin/mphdsnap.sh
ETERNUS Multipath Driver	/etc/driver_aliases /var/opt/FJSVmplb/* /usr/sbin/FJSVpfca/chk_conf -v
ETERNUS SF Storage Cruiser	/opt/FJSVssmgr/sys/scmgrfjsnap -dir <save> -all

1.5.5 Network Related

The network related collected data is shown below

Solstice Firewall-1 related	fw ver
Netcompo HICS 1.0.2 related	/tmp/FSUNhics.info
Netcompo NMC Server	Information is collected by trcnmcgw
IDCM	dspidcm showpsys -vp idcminf -d snap file is created after executing trcidcm. /var/opt/FSUNnet/lzcs/lzcs.trace file is created after executing trclzcs.
NETSTAGE	Information is collected by dspigw infgenigw and transigw

1.6 Collection Procedure List

The table below lists the collection procedures.

Uarp_a	Collects the result of arp -a.
Ucp_LICENSE	Collects the file that can be specified using/etc/opt/FSUNlicense/FSU_LICENSE_FILE.
Udf_a	Collects the result of df -a.
Udf_e	Collects the result of df -e.
Udf_g	Collects the result of df -g.
Udf_k	Collects the result of df -k.
Udf_Z	Collects the result of df -Z.
Udmesg	Collects the result of dmesg.
Udrcstat	Collects the information related to Dynamic Reconfiguration.
Ueeprom	Collects the result of eeprom.
Uetc_opt	Collects all files and directories under /etc/opt.
Ufind_dev	Collects the result of find /dev -type d -print | xargs ls -lL
Uformat	Collects the result of format.
Uifconfig_a	Collects the result of ifconfig -a.
Uipcs_a	Collects the result of ipcs -a.
Ulmstat_a	Collects the result of lmstat -a.
Uls_lL_dev_dsk	Collects the result of ls -linL /dev/*dsk/*.
Uls_l_binding	Collects the result of ls -l /var/yp/binding.
Uls_l_dev_rdsk	Collects the result of ls -l /dev/rdsk.
Uls_l_patch	Collects the result of ls -lin /var/sadm/patch.
Uls_l_platform	Collects the result of ls -l /platform/`uname -m`/kernel.
Uls_l_sendmail	Collects the result of ls -l /usr/lib/sendmail.
Uls_l_uname_n	Collects the result of ls -l Savecore directory or ls -l /var/crash/`uname -n`.
Uls_ld_sadm	Collects the result of ls -ld /var/sadm.
Umodinfo	Collects the result of modinfo.
Unetstat_a	Collects the result of netstat -a.
Unetstat_an	Collects the result of netstat -an.
Unetstat_i	Collects the result of netstat -i.
Unetstat_k	Collects the result of netstat -k.
Unetstat_m	Collects the result of netstat -m.
Unetstat_p	Collects the result of netstat -p.
Unetstat_pn	Collects the result of netstat -pn.
Unetstat_r	Collects the result of netstat -r.
Unetstat_rn	Collects the result of netstat -rn.
Unetstat_s	Collects the result of netstat -s.
Unfsstat	Collects the result of nfsstat.
Unfsstat_m	Collects the result of nfsstat -m.
Unisshowcache_v	Collects the result of nisshowcache -v.
Upkginfo_i	Collects the result of pkginfo -i.
Upkginfo_l	Collects the result of pkginfo -l.
Upkginfo_p	Collects the result of pkginfo -p.
Uplatform_drv_conf	Collects the files of /platform/`uname -m`/kernel/drv/*.conf.
Uprtconf_V	Collects the result of prtconf -V.

Uprtconf_v	Collects the result of prtconf -v.
Uprtconf_vp	Collects the result of prtconf -vp.
Uprtdiag_v	Collects the result of prtdiag -v.
Uprtvtoc	Collects the result of prtvtoc /dev/rdsk/c*s2.
Ups_ecfjl	Collects the result of ps -ecfjl.
Upsrinfo_v	Collects the result of psrinfo -v.
Uptree	Collects the result of ptree.
Urc2000	Collects the information related to RC2000.
Urpcinfo	Collects the result of rpcinfo.
Urpcinfo_m	Collects the result of rpcinfo -m.
Uscf	Collects the information related to SCF after executing scfdump, scferrlog, scfpwrlog, and scfhltlog.
Ushowrev_a	Collects the result of showrev -a.
Ushowrev_p	Collects the result of showrev -p.
Uswap_l	Collects the result of swap -l.
Uswap_s	Collects the result of swap -s.
Usysdef	Collects the result of sysdef.
Usysdef_d	Collects the result of sysdef -d.
Uuname_a	Collects the result of uname -a.
Uuptime	Collects the result of uptime.
Uvar_crash	Collects "minfree" file under Savecore directory or /var/crash/`uname -n`.
Uvar_opt	Collects all files and directories under /var/opt.
Uvar_sadm_pkg	Collects the file of /var/sadm/pkg/*/pkginfo.
Uypwhich_m	Collects the result of ypwhich -m.
Ulpget_list	Collects the result of lpget list.
Ulpstat_Lt	Collects the result of lpstat -Lt.
Ulpstat_lt	Collects the result of lpstat -lt.
Uls_alR_fonts	Collects the result of ls -alR /var/fonts.
Uls_alR_spl_lp	Collects the result of ls -alR /var/spool/lp.
Uls_l_es	Collects the result of ls -l /dev/es.
Uvx1 Uvx2	Collects the information related to Volume Manager.
Uluxadm Ussa	Collects the information related to SPARCstorage Array.
Umeta1 Umeta2	Collects the information related to Solstice DiskSuite.
Uraid	Collects the information related to Raid Manager.
Ufire	Collects the information related to Solstice FireWall-1.
Ucl	Collects the information related to SynfinityCluster.
Uclgetoralog	Collects the information related to SynfinityCluster/HA for Oracle.
Usdx	Collects the information related to SynfinityDisk.
Usfx	Collects the information related to SynfinityFile.
Usfc	Collects the information related to SynfinityFile/Global.
Uscnet_erro	Collects the information related to Synfinity-VIA
Uapnet_log	Collects the information related to AP-Net Basic Software.
Ulmadmin	Collects the result of lmadmin -r.
Ulmdisplay	Collects the result of lmdisplay.

Udspidcm Ushowpsys Uidcminf Utrcidcm Utrclzcs	Collects the information related to IDCM.
Udspigw Uinfgenigw Utransigw	Collects the information related to NETSTAGE.
Unetcompo_nmc	Collects the information related to Netcompo NMC Server.
Uhrdconf	Collects the result of hrdconf -l.
Uisainfo	Collects the result of isainfo -kv.
Ucoreadm	Collects the core file information that can be specified using coreadm
Uexplo	Collects the information related to SPARC Enterprise
Uprtcfg	Collects the information related to Emulex Adapter
Uana	Collects the files of crash dump analysis.
Upnavi	Collects the information related to Parallelnavi
Upfcd	Collects the information related to Fibre Channel Driver.
Uwvbs	Collects the information related to Web-Based Admin View
Umplb	Collects the information related to Multipath Disk Control load balance option (MPLB) 4-paths/8-paths 2.x
Umphd	Collects the information related to MultiPath Disk Control.
Uls_lR_dev	Collects the result of ls -lR /dev.
Usrfs	Collects the information related to SRFS over BLASTBAND HPC.
Uibhd	Collects the information related to BLASTBAND .
Ubbdts	Collects the information related to BLASTBAND HPC.
Umwupdate	Collects the information related to all modification information of Fujitsu middleware.
Umwupdate_p	Collects the information related to modification information of Fujitsu middleware.
Uwebsysadmin	Collects the information related to WebSysAdmin.
Urcxmr	Collects the information related to Systemwalker Resource Coordinator
Uclagent	Collects the information related to PRIMECLUSTER Wizard for NetWorker
Untp	Collects the information related to ntp
Upmgw	Collects the information related to Patch Management Tool
Uhcpver	Collects the information related to Machine administration
Userialid	Collects the information related to serial id
Uprctl	Collects the information related to System V IPC
Uzonename	Collects the information related to zonename
Usvcs	Collects the information related to Service Management Facility
Ufmstat Ufmstat_a Ufmstat_a_m Ufmstat_m Ufmstat_s_m	Collects the information related to Fault Management

Ufmdump Ufmadm	
Uprtpicl_v	Collects the result of prtpid -v.
Upoolcfg	Collects resource management information.
UFJSVmadm_log	Collects machine administration monitor log.
UFJSVcsl_log	Collects System Management Console.
Ussmgr	Collects the information related to ETERNUS SF Storage Cruiser
Ustty	Collects the information related to tty

1.7 Restricted System Information

If you execute this tool as a non-privileged user, the system information from inaccessible directories and files cannot be collected. Also, you cannot collect some or all of the system information that the following procedures collect.

- Ucoreadm
- Uetc_opt
- Uvar_opt
- Uformat
- Uprtvtoc
- Uhrdconf
- Uls_l_uname_n
- Uvar_crash
- Urc2000
- Uscf
- Utransigw
- Unfgenigw
- Unetcompo_nnc
- Uprtcfg
- Uneta1
- Uneta2
- Uluxadm
- Uraid
- Ussa
- Uvx1
- Uvx2
- Usdx
- Usfc
- Usfx
- Uls_alR_spl_lp
- Ucl
- Udspidcm
- Ushowpsys
- Uidcminf
- Utrcidcm
- Utrclzcs
- Udrcstat
- Uscnet_error
- Uapnet_log
- Uclgetoralog
- Uana
- Upnavi
- Upfcd
- Uwwbs
- Umplb
- Usrfs
- Uibhd
- Ubbdts
- Unwupdate
- Unwupdate_p
- Uwebsysadmin

- Urcxmr
- Uclagent
- Untp
- Upngw
- Uhcpver
- Userialid
- Uprctl
- Usvcs
- Ufmstat
- Ufmstat_a
- Ufmstat_a_m
- Ufmstat_m
- Ufmstat_s_m
- Udf_Z
- Ussngr
- Ustty
- Ufmadm