Enhanced Support Facility 4.0
INSTALLATION GUIDE
for Oracle Solaris

The Customer acknowledges and agrees that the Product is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use, and ordinary industrial use, but is not designed, developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter "High Safety Required Use"), including without limitation, nuclear reaction control in nuclear facility, aircraft flight control, air traffic control, mass transport control, medical life support system, missile launch control in weapon system. The Customer, shall not use the Product without securing the sufficient safety required for the High Safety Required Use. In addition, Fujitsu (or its agents) shall not be liable against the Customer and/or any third party for any claims or damages arising in connection with the High Safety Required Use of the Product.

Preface

Introduction

Enhanced Support Facility 4.0 supports the combination of the SPARC Enterprise T series,M series and Solaris 11 OS. Enhanced Support Facility 3.2.1 supports the combination of the SPARC Enterprise T series,M series and Solaris 10 OS. The version management of Enhanced Support Facility will differ according to Solaris OS. Please refer to "Enhanced Support Facility Update Information" for the generation management of Enhanced Support Facility.

Purpose

This document describes the procedure for installing this product and performing the environment settings.

This product supports the combination of the following machine models and Solaris 11 OS.

- Models
    - SPARC Enterprise T series
    - SPARC Enterprise M series

This product does not support the combination of the following machine models. For the following machines, please use Enhanced Support Facility attached to the device.

- Models
    - PRIMEPOWER1/100/200/250/400/450/600/650/800/850/900/1000/1500/2000/2500
    - GP7000F Model 200/200R/400/400R/400A/600/600R/1000/2000

Intended Readers

This document is intended for system administrators who use the Enhanced Support Facility. Readers of this document should understand computer network concepts and terminology and have basic knowledge of the system management of the Solaris OS.

Organization

This document is organized as follows:

Chapter 1 Program Components
Programs composing the system are described.
Chapter 2 Online Manuals
Online manuals related to this product are described.
Chapter 3 Operating Environment
Operational environment of this product is described.
Chapter 4 Restrictions and Notes
Restrictions and notes are described.
Chapter 5 Installation
Installation of this product is described.
Chapter 6 Extended Installation
Extended installation of this product is described.
Appendix
The Appendix explains supplementary items.

Trademark Acknowledgements

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Notations Used

Oracle Solaris might be described as Solaris, Solaris Operating System, or Solaris OS.
Oracle VM Server for SPARC might be described as Logical Domains, or LDoms.
In this document, the following names, abbreviated names are used.
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 Machine Administration", or "User's Guide for REMCS" is one of such examples.
Example: Enhanced Support Facility User's Guide for REMCS
--> User's Guide for REMCS
Abbreviation

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

Formal name	Abbreviation
SPARC T3-1/T3-2/T3-4 SPARC Enterprise T1000/T2000/T5120/T5140/T5220/T5240/T5440	SPARC Enterprise T series
SPARC Enterprise M3000/M4000/M5000/M8000/M9000	SPARC Enterprise M series

In this document, abbreviated names are used for supported machine models.

The following shows the relation between the abbreviated names and platforms.

Model name	Abbreviation	Platform
SPARC T3-1/T3-2/T3-4	LE	ORCL,SPARC-T3-1 ORCL,SPARC-T3-2 ORCL,SPARC-T3-4
SPARC Enterprise T1000/T2000/T5120/T5140/T5220/T5240/T5440		SUNW, SPARC-Enterprise-T1000 SUNW, SPARC-Enterprise-T2000 SUNW, SPARC-Enterprise-T5120 SUNW,T5140 SUNW,SPARC-Enterprise-T5220 SUNW,T5240 SUNW,T5440
SPARC Enterprise M3000/M4000/M5000/M8000/ M9000	CW	SUNW, SPARC-Enterprise

Revision History

Edition	Date	Description
1	October 18, 2011	First Edition

Contents

Chapter 1 Program Components

The programs that are components forming a system are called a package.

This software product consists of the components and packages listed in the following table.

For the program configuration of each model, see Appendix C, "Component Programs by Model".

Table 1-1　　Component Programs List

No.	Component	Package	VL	Function
1	Enhanced Support Facility Information Management	FJSVbse	4.0	Installation management of Enhanced Support Facility.
2	SCF/SCSI Fault LED support option	FJSVscfsc	2.0	The SCF/SCSI Fault LED support option is optional software that supports the command for accessing the RCI interface included in high-end and mid-range SPARC Enterprise Server models and the DISK hot swapping of SCSI DISK provided by Machine Administration.
3	Machine Administration	FJSVmadm	2.0.0	Machine Administration is software that supports repair work for any failure that occurs, by monitoring the status of main unit hardware.
		FJSVamadm	2.0.0	
		FJSVamcl	1.0.0	
		FJSVamle	2.0.0	
4	Remote Support	FJSVrlib	8.3.0	The REMote Customer Support system (REMCS) is a system that provides operational support to customers 24 hours a day and 365 days a year through connections between the customers' equipment and the REMCS Center via networks.
		FJSVragt	2.9	
		FJSVrmaos	3.1	
		FJSVrrda	2.9	
		FJSVracm	2.9	
		FJSVsirms	4.1	
		FJSVamrm	2.0	
		FJSVlmrm	2.0	
5	Auto Power Control System	FJSVapcs	1.5.0	Automatic powering on or off of main cabinet power to a specified schedule.
6	Server Default Configuration	FJSVssf	4.0	Server Default Configuration sets up parameters for gathering trace information in order to improve server maintainability.
7	System Data Output Tool	FJSVsnap	2.7	Collects data regarding command execution results, files about hardware and software configurations, environment settings, logs, and operational status, then outputs the system information for system fault analysis to a tape unit, etc.
8	Crush Dump Assistant	FJSVdmp	1.7	During the creation of a crash dump file at system reboot, Crash Dump Assistant invokes the "System Data Output Tool" to save necessary system data for problem investigation.

No.	Component	Package	VL	Function
9	Auto Dump Analize Tool	FJSVana	3.0	Provides the tool (cocore) to gather core dump related files.
10	HRM-S	FJSVhrmse	6.1.1	HardwareResourceMonitor (referred to as HRM, in this document) is a maintenance work support tool.
		FJSVhrmcp	6.1.1	HardwareResourceMonitor (referred to as HRM, in this document) is a maintenance work support tool.
11	Tape Driver Configuration Tool	FJSVdcnf	1.2	Tape Driver Definition Setting Tool is a tool that automatically sets a tape driver definition for use of a tape device that requires the tape driver definition to be set.
12	Solaris System Safety Compliance Assessment Tool	FJSVs3cat	1.0	Solaris System Safety Compliance Assessment Tool uses the target system's setup files and output of commands as diagnosis ingredients to find out any contradiction in the system which may impede proper functioning of it, or the presence of any non-recommended setup.

Chapter 2 Online Manuals

2.1 Manuals Related to Enhanced Support Facility

These manuals are stored in both Enhanced Support Facility 4.0 DVD/CD as PDF files.

Table 2.1-1 Enhanced Support Facility-related Manuals List

No.	Manual title	File name	Explanation
1	Enhanced Support Facility 4.0 Installation Guide	install_guide_ome.pdf	Enhanced Support Facility installation procedure.
2	Enhanced Support Facility Update Information	update_ome.pdf	History of added or altered functions of each component.
3	Enhanced Support Facility Technical Guide	technical_guide_ome.pdf	Information on the daemons and services supported by each component.
4	Enhanced Support Facility User's Guide	esfug_ome.pdf	Outline of the functions of individual components aggregated to Enhanced Support Facility.

The following manuals are user's manuals of individual components, and they are provided as separate volumes.

Table 2.1-2 Enhanced Support Facility User's Guide List

No.	Manual title	File name	Explanation
1	Enhanced Support Facility User's Guide for Machine Administration	madm_ome.pdf	Explains the functions and operation method of Machine Administration.
2	Enhanced Support Facility User's Guide for REMCS	remcs_ome.pdf	Explains the setting method for enabling the REMCS function and the procedure for collecting software investigation information.
3	Tape driver configuration tool 1.2 Update2 User's Guide	dcnf_ome.pdf	Explains the function that automatically sets a tape driver definition.
4	Enhanced Support Facility User's Guide for System Data Output Tool Features	fjsnap_ome.pdf	Provides an outline of the function of the system information collection tool and explains how to operate the tool.
5	Enhanced Support Facility User's Guide for Machine Administration Automatic power control function (Supplement edition)	apcs_ome.pdf	Explanation of Automatic power control function to SPARC Enterprice M series.

Each manual is deployed in the following directories on the Enhanced Support Facility 4.0 DVD/CD.

English manuals: /cdrom/cdrom0/manual.pdf/english/

2.2 Referencing Methods

The Enhanced Support Facility 4.0 DVD/CD include manuals formatted in PDF.
The latest version of Adobe(R) Reader(R) or Acrobat Reader from Adobe Systems Incorporated is required for viewing a PDF file.
Download the latest version of Adobe(R) Reader(R) or Acrobat Reader appropriate to your environment from the Adobe Systems Incorporated's Web site.

2.2.1. Using a PC

1) Insert the DVD/CD disk into the DVD/CD drive.

2) Use Acrobat Reader to open the file to be referenced.
   Example: Referencing the Installation Guide (English)

   ```
   DVD/CDdrive:\MANUAL.PDF\ENGLISH\INSTALL_GUIDE_OME.PDF
   ```

2.2.2 Using a Solaris OS

1) Insert the DVD/CD disk into the DVD/CD drive.

2) Use Acrobat Reader to open the file to be referenced.
   Example: Referencing the Installation Guide (English)

   ```
   /cdrom/cdrom0/manual.pdf/english/install_guide_ome.pdf
   ```

2.3 Printed Manual (Supplied with the Product)

None

Chapter 3 Operating Environment

To use this software, the following software and hardware prerequisites must be satisfied.

3.1 Software Environment

3.1.1 Basic Software prerequisites

When using this software, the following basic software is necessary.
- Solaris 11 OS

3.1.2 Software requirements

Install the following packages using the pkg(1) command.
- pkg:/text/locale

3.1.3 Excluded software

None

3.2 Hardware Environment

This product supports the combination of Solaris 11 OS and the following model.
Please refer to Enhanced Support Facility 3.2.1 or newer for the combination with Solaris 10 OS.
- Models
  - SPARC Enterprise T series
  - SPARC Enterprise M series
This product does not support the combination of the following machine models. For the following machines, please use Enhanced Support Facility attached to the device.
- Models
  - PRIMEPOWER1/100/200/250/400/450/600/650/800/850/900/1000/1500/2000/2500
  - GP7000F Model 200/200R/400/400R/400A/600/600R/1000/2000

3.3 Static Disk Requirements

The disk space requirements for this software are shown below.

3.3.1 Disk requirements

The following tables list the disk space requirements for installing this software. If disk space is insufficient, expand the size of the appropriate file systems.

Table 3.3.1-1 Disk Capacity List

No.	Directory	Disk space requirement (in Mbytes) Solaris 11
1	/	500.0
2	/usr	3.0
3	/var	70.0
4	/export/home	0
5	/opt *	200.0

*) Do not attempt to install this software in a directory other than "/opt".

3.3.2 Work area requirements

When you install this software with the following installation procedures, additional disk workspace as shown below might be required.

Table 3.3.2-1 Working Area List

No.	Via spool directory	Directory	Disk space requirement (in Mbytes)	Remarks
1	No	/tmp	0.5	

3.4 Dynamic Disk Resources

The dynamic disk space requirements for this software are shown below.

3.4.1 Disk space requirements

When you use this software for the following operations, additional disk space might be required in the directories listed in Section 3.3, "Static Disk Requirements". If disk space is insufficient, expand the size of the appropriate file systems as shown.

Abbreviated names of machine models are used in the table below. For more information, please refer to "Notations Used" in "Preface".

Table 3.4.1-1 Disk Capacity List

No.	Component	Directory	Additional disk space requirement (in M bytes)	Operation
1	Machine Administration	/var	4.3	Operation log, temporary file
2	Tape Driver Configuration Tool	/var	0.3	Log information
3	System Data Output Tool	Location that a user specified or /var/tmp	10.0	When System Data Output Command is executed
4	Auto Dump Analize Tool	Location that a user specified or /var/tmp	10.0 (*)	When executing the command used to gather core dump related files. *)The size of the archive file depends on the size of the gathered files.

3.5 Memory Requirements

The following table shows the memory required when you use this software for the following operations

Table 3.5-1 Memory Capacity List

No.	Component	Memory required (unit: MB)	Operation
1	Tape Driver Configuration Tool	1.1	During command execution
2	System Data Output Tool	40.0	When System Data Output Command is executed

3.6 Swap Space

The following shows the swap space requirement of this software in normal operation.
The swap space requirement depends on the system situation.
The total swap space can be calculated as the sum of each individual swap space requirement.
If the swap space provided by the system is insufficient, it must be expanded.

Table 3.6-1 Swap Capacity List

No.	Component	Swap capacity (unit: Mbytes)	Description
1	Machine Administration	46.7	Standard use (daemon, GUI menu)
2	Remote Support	4.2	Standard use (daemon)
3	Tape Driver Configuration Tool	1.1	During command execution

Chapter 4 Restrictions and Notes

4.1 Restrictions

None

4.2 Cautions when Upgrading

The cautions when upgrading from the previous level to this software level are described below.

4.2.1 User data compatibility

There are no user data incompatibilities between this version and the previous version of this software.

4.2.2 Environment definition file compatibility

There are no environment definition file incompatibilities between this version and the previous version of this software.

4.3 Notes

The following notes apply to the installation of this software.
Refer also to Appendix E, "Notes".

Table 4.3-1 Notes List

No.	Component	Description
1	Enhanced Support Facility Information Management	This product does not support the following machine models. For the following machines, please use Enhanced Support Facility attached to the device. - PRIMEPOWER1/100/200/250/400/450/600/650/800/850/900/1000/1500/2000/2500 - GP7000F Model 200/200R/400/400R/400A/600/600R/1000/2000
		Install this product in the global zone. This product cannot be installed in the non-global zone. If esfadd is executed in the non-global zone, it terminates with the following message: esfadd: Error: This product cannot be installed in the non-global zone. If esfadd -c is executed in the non-global zone, it terminates with the following message: grep: /var/sadm/system/admin/INST_RELEASE cannot be opened. esfadd: Error: The operating system does not support this product.
		Notes when using Oracle VM Server for SPARC/Logical Domains(LDoms) are available. Please refer to "4.2 Notes on Oracle VM Server for SPARC/Logical Domains(LDoms)" in "Enhanced Support Facility User's Guide".
2	SCF/SCSI Fault LED support option	The SCF/SCSI Fault LED support option is a dedicated function for SPARC Enterprise Server. This component cannot be installed on any unit other than the above.
3	Remote Support	Under the following machine models, There is a note when using DHCP service. 1) In case of SPARC Enterprise T series. Please refer to "Appendix E.1 Solaris network installation using DHCP service".

4	Tape Driver Configuration Tool	When one of the following tape drives is connected during installation, this product automatically adds the tape driver definition to /kernel/drv/st.conf if that, applicable definition has not been included before:
		    DDS4 : PW023DT3, PW023DT4, PW0G3DT1
		    DAT72: PW023DT5, PW023DT6, PW0R3DT3, PW0G3DT2

5	Auto Power Control System	Under the following conditions, messages are output to the console, but you can ignore the messages.
		1) In case of SPARC Enterprise M3000/M4000/M5000/M8000/M9000.
		2) In case of rebooting in single user mode.
		
		  FJSVapcs: cron may not be running - call your system administrator
		  FJSVapcs: Cannot register a cron job.

Chapter 5 Installation

This product supports the combination of Solaris 11 OS and the following model.
Please refer to Enhanced Support Facility 3.2.1 or newer for the combination with Solaris 10 OS.
- Models
  - SPARC Enterprise T series
  - SPARC Enterprise M series

This software can be installed in one of two modes: basic installation and extended installation.

Installation

Installation in this mode requires no option commands.
This chapter explains the following procedures:

New installation (5.2, "Installation Procedure")

Deletion (5.3, "Removing Enhanced Support Facility ")

Installation in Oracle VM Server for SPARC/Logical Domains (LDoms) (5.4 "About Oracle VM

Server for SPARC/Logical Domains (LDoms)")

Oracle VM Server for SPARC/Logical Domains (LDoms) is a virtualization technology provided by Oracle,

which can be used to run several different operating systems on a single computer.

Oracle VM Server for SPARC/Logical Domains (LDoms) can be used on SPARC T3-1/T3-2/T3-4, SPARC

Enterprise T5120/T5140/T5220/T5240/T5440.

For more information on the Logical Domains Manager, control domain, guest domain, please refer to

"SPARC Enterprise Oracle VM Server for SPARC Guide".

Extended installation

Installation in this mode requires option commands.
Chapter 6 explains the following procedures:

Table 5-1 Advanced Installation List

No.	Installation method	Description	Remarks
1	OS Upgrade	Save the Enhanced Support Facility environment before OS upgrade, Enhanced Support Facility after OS upgrade, and then restore the Enhanced Support Facility environment.	See Section 6.1, "OS Upgrade ".
2	Component Group Specified Installation	By specifying component groups during installation, packages to be installed can be restricted according to system requirements.	See Section 6.2, "Specifying a Component Group for Installation".

5.1 Models to be Installed

Use the DVD/CD drive equipped in the main unit to install the Enhanced Support Facility.

SPARC T3-4, SPARC Enterprise T1000 are not equipped with internal DVD/CD.

You need to install Enhanced Support Facility using the DVD/CD drive of the installation server.

- For initial installation, see Section 5.2, "Installation Procedure".
- Oracle VM Server for SPARC/Logical Domains (LDoms) can be used on SPARC T3-1/T3-2/T3-4, SPARC Enterprise T5120/T5140/T5220/T5240/T5440. To install Enhanced Support Facility in the guest domain you need to network mount the DVD/CD drive of the installation server.

To use the DVD/CD drive of the installation server, please refer to "Appendix F Mounting the DVD/CD".

5.2 Installation Procedure

5.2.1 Important Notes Before the Installation

Table 5.2.1-1 Important Notes List

Single user mode	You need to install this product in single user mode.
Mounting the file system	This product is installed into "/opt". If "/opt" is another file system, "/opt" is not mounted in single user mode. Therefore please be sure to mount "/opt" with "zfs mount -a", "mountall -l" before installing this product.
User authority	To install this software, cron must be set up for execution with root and adm user authority. At installation, "/etc/cron.d/cron.allow" must be set so that users with root or admin authority can use cron. By default, these users are permitted to use cron and, therefore, the setting need not be changed unless the corresponding permissions were changed. Also, for the login shell of root users and adm users written in the "etc/passwd" file, set a shell program that can be used as a command interpreter (for example, /sbin/sh). If you set a shell program that cannot be used as a command interpreter (for example, /bin/false), Enhanced Support Facility installation will fail.

5.2.2 Installation time

It takes about 15 minutes to install this software. Note that this installation time excludes any time for rebooting, as that depends on the system configuration.

5.2.3 Instructions

1) Insert Enhanced Support Facility 4.0 DVD/CD into the DVD/CD drive.

2) Type "su" at the shell prompt.

```
% /usr/sbin/su <Return>
```

3) Enter the root (superuser) password.

```
Password:password <Return>
#
```

4) Enter the OpenBoot environment.

```
# /usr/sbin/shutdown -y -g0 -i0 <Return>
```

If you are prompted like below, please select "o".

```
r)eboot, o)k prompt, h)alt? o
```

5) Boot the system in single-user mode.

```
{?} ok boot -s <Return>
```

Enter the user name and password.

```
Requesting System Maintenance Mode
SINGLE USER MODE


Enter user name for system maintenance (control-d to bypass): root <Return>
Enter root password (control-d to bypass): password <Return>
```

6) Mount the required file system.

```
# /usr/sbin/zfs mount -a <Return>
```

When installing in a directory on a UFS filesystem, execute the following commands.

```
# /usr/sbin/mountall -l <Return>
```

Note) If there are some file systems (/opt) which are not mounted by the 'mountall -l' command while you are making preparations for the patch application, please mount them by the mount(1M) command one by one.

7) Mount the DVD/CD.
The mounting procedure depends on the model.

For details of mounting the DVD/CD, see Appendix F, "Mounting the DVD/CD".

8) Install Enhanced Support Facility with the esfadd command.

```
# bin/esfadd <Return>
```

A confirmation message like the one shown below appears. Enter "yes" to continue installation.

Example

```
Enhanced Support Facility 4.0 will be installed.


     Platform: SUNW,SPARC-Enterprise-T5120
     OS Release: Solaris 11


Do you want to continue with this installation? [yes or no ?]: yes
<Return>
```

- **If the file system has not been mounted**

  If the file system has not been mounted, the alarm message shown below is displayed. Enter "no" to terminate the esfadd command.

  Example

```
esfadd: ERROR: The directory (/opt) where the packages will be
installed does not exist.
Interrupt installation and mount the /opt.


Select (n) no stop install.
Select (y) yes continue to install. [yes or no ?]:
```

  Note) If you installed this product without mounting "/opt", please mount "/opt" after removing this product following the instructions in "5.3 Removing Enhanced Support Facility"and then re-install this product.

9) Unmount the DVD/CD drive.

```
# cd / <Return>
# /usr/sbin/umount /cdrom <Return>
```

or

```
# cd / <Return>
# /usr/sbin/umount /cdrom/cdrom0 <Return>
```

10) Eject Enhanced Support Facility 4.0 DVD/CD.

11) Reboot the system.

```
# /usr/sbin/shutdown -y -g0 -i6 <Return>
```

12) Check the version of the individual packages included in the installed Enhanced Support Facility 3.2 using the esfver command.

```
# /opt/FJSVbse/bin/esfver -l <Return>
```

Example

```
esfver: INFO: Individual Packages Version of already installed Enhanced Support
Facility.
PKGNAME          VERSION          REVISION
--------------------------------------
FJSVbse          4.0              2011.08.0300
                  :
                  :
FJSVdmp          1.7              2011.08.0300
--------------------------------------

```

Note) The individual package versions displayed by this command may be later than the version listed in the program components table. But the installation will be OK.

5.2.4 Messages appearing during installation

Note 1: Cancel installation if the following occurs.

When the following message is displayed during the installation, type "n" to exit the installation process.

This message will be displayed when the *<pkginst>* package installation fails.

For more information, please refer to "D.1.2 Resolution of problems occur when package is installed(II)".

```
A version of the <pkginst> package is already installed on this machine.
Current administration ds not allow new instances of an existing package
to be created, nor existing instances to be overwritten.


No changes were made to the system.


There are n more packages to be installed.


Do you want to continue with installation [y,n,?]
```

Note 2: The message shown below may be displayed but the installation can be performed without any problems.

In case of a Solaris 11 OS in which the following language packages are not installed, messages like the following are displayed when installing the FJSVamle,FJSVamadm package, but there is no problem.

- pkg:/system/osnet/locale/ja

- pkg:/system/locale/ja-extra

```
Processing package instance <FJSVamadm> from
</cdrom/ESF40/Platform/CW/11>


Machine administration common package(sparc) 2.0.0,REV=2011.10.2100
Using </> as the package base directory.
## Processing package information.
## Processing system information.
WARNING: setting mode of </usr/lib/locale/ja_JP.eucJP> to default mode
(755)
WARNING: setting mode of </usr/lib/locale/ja_JP.eucJP/LC_MESSAGES> to
default mode (755)
   23 package pathnames are already properly installed.
## Verifying disk space requirements.
```

5.2.5 Environment setting after installation

The following table lists the environment settings required to use this software.
For documentation information, refer to "2 Online Manuals".

Table 5.2.5-1 Environment Settings List

No.	Component	Description
1	SCF/SCSI Fault LED support option	To use the command provided by the SCF/SCSI Fault LED support option, the PATH environment variable must be changed. For details, see Section 3.3.1.2, "Setting for when the server is installed" in Section 3.3, " SCF/SCSI Fault LED Support Option [SPARC Enterprise Server]" of "Enhanced Support Facility User's Guide".
2	Remote Support	The remote support function's investigation data collection function The remote support function's investigation data collection function uses three system semaphore identifiers for program resource management. However, system parameters need not be changed. (By default 128 semaphore identifiers can be used.) If more semaphore identifiers are required, use the prctl(1) command to increase the value of project.max-sem-ids. For details, refer to the manual page of the prctl(1) command. In the following example, the value of project.max-sem-ids for project name user.root is 138. prctl -n project.max-sem-ids -t privileged -r –v 138 -i project user.root

5.2.6 Applying modifications

If a fix is available, apply the latest version.
Please refer to the attached manual for information on how to apply the fix.

5.3 Removing Enhanced Support Facility

The following procedures describe how to remove all of the packages provided in this software.
Use the DVD/CD drive equipped in the main unit to delete the Enhanced Support Facility.
SPARC T3-4, SPARC Enterprise T1000 are not equipped with internal DVD/CD.
Use the DVD/CD drive with the install server to delete the Enhanced Support Facility.
To use the DVD/CD drive of the installation server, please refer to "Appendix F Mounting the DVD/CD".

5.3.1 Important Notes Before the Removal

Table 5.3.1-1 Important Notes List

Single user mode	You need to remove this product in single user mode.
Mounting the file system	This product is installed into "/opt". If "/opt" is another file system, "/opt" is not mounted in single user mode. Therefore please be sure to mount "/opt" with "zfs mount -a ", "mountall -l" before removing this product.
User authority	This software uses cron via the root and adm users. Before removing this software, cron ensure that the root and adm users are not disabled. By default these users are allowed to use cron, so there is no need to check your system if no changes have been made. If any change has been made to the system, remove this software after you revert to the default settings.
	(For example, the adm user must not be set to /bin/false in the /etc/passwd file.)

5.3.2 Removal of Software

1) Insert Enhanced Support Facility 4.0 DVD/CD into the DVD/CD drive.

2) Type "su" at the shell prompt.

```
% /usr/sbin/su <Return>
```

3) Enter the root(superuser) password.

```
Password:password <Return>
#
```

4) Enter the OpenBoot environment.

```
# /usr/sbin/shutdown -y -g0 -i0 <Return>
```

If you are prompted like below, please select "o".

```
r)eboot, o)k prompt, h)alt? o
```

5) Boot the system in single-user mode.

```
{?} ok boot -s <Return>
```

Enter the user name and password.

```
Requesting System Maintenance Mode
SINGLE USER MODE


Enter user name for system maintenance (control-d to bypass): root <Return>
Enter root password (control-d to bypass): password <Return>
```

6) Mount the required file system.

```
# /usr/sbin/zfs mount -a <Return>
```

When installing in a directory on a UFS filesystem, execute the following commands.

```
# /usr/sbin/mountall -l <Return>
```

Note) If there are some file systems (/opt) which are not mounted by the 'mountall -l' command
while you are making preparations for the patch application, please mount them by the
mount(1M) command one by one.

7) Mount the DVD/CD.
For details of mounting the DVD/CD, see Appendix F, "Mounting the DVD/CD".

8) Remove Enhanced Support Facility with the esfrm command.
For detailed information on the esfrm command, please refer to "A.2 esfrm (1M) command".

```
# bin/esfrm <Return>
```

When the following message is displayed, type "all.","no"or "part".

If the display stops, press the space key to restart the display.

```
Enhanced Support Facility 4.0 will be removed.


FJSVbse         Enhanced Support Facility Information Management
                (sparc) 4.0,REV=2011.08.0300
                        :
                        :
FJSVsnap        System Information Output Tool
                (all) 2.6,REV=2006.06.1300


There is a possibility to cause problem(s) in the system when the
packages where "*" adheres to the head of the package name is deleted.


Please input "all" when you want to remove all packages,input "no"
when you want to interrupt the uninstallation, or input "part" when
you want to remove only packages where "*" does not adhere.


Please select. [no, all or part]:
```

If a package has an asterisk mark ("*"), be sure to select "part".

Please select "part" not to remove packages having an asterisk ("*").

A package with an asterisk ("*") at the head of its name has been installed with a product other than Enhanced Support Facility.

If you select "all", packages having an asterisk ("*") are removed and the behavior of products other than Enhanced Support Facility is affected by this.

[Example: If a package has an asterisk mark ("*")]

```
Enhanced Support Facility 4.0 will be removed.


FJSVbse         Enhanced Support Facility Information Management
                (sparc) 4.0,REV=2011.08.0300
*FJSVsnap      System Information Output Tool
                (all) 2.6,REV=2006.06.1300
                                :
                                :
FJSVdmp         Crash Dump Assistant
                (sparc) 1.7,REV=2011.08.0300


There is a possibility to cause problem in the system when the
packages where "*" adheres to the head of the package name is deleted.


Please input "all" when you want to remove all packages,input "no"
when you want to interrupt the uninstallation, or input "part" when
you want to remove only packages where "*" does not adhere.


Please select. [no,all or part]:
```

Confirmation messages will be displayed when removing the packages. Type "y" to continue the removal.

Do not remove packages that are depended on by other packages. If you attempt to remove the package, the following message will be displayed. Type "n".

```
WARNING:
    The <pkg> package depends on the package currently
    being removed.
Dependency checking failed.


Do you want to continue with the removal of this package [y,n,?,q] n <Return>
```

If the following message is displayed, type "y" to continue the removal.

```
Do you want to continue with package removal [y,n,?,q] y <Return>
```

9) Unmount the DVD/CD.

```
# cd / <Return>
# /usr/sbin/umount /cdrom <Return>
```

or

```
# cd / <Return>
# /usr/sbin/umount /cdrom/cdrom0 <Return>
```

10) Eject Enhanced Support Facility 4.0 DVD/CD.

11) Reboot the system.

```
# /usr/sbin/shutdown -y -g0 -i6 <Return>
```

5.3.3 Messages Display When Removing Software

Note 1: The following messages may be displayed, but these messages do not affect the removal.

Note1-1

The following message may be displayed when removing FJSVrlib package, but the removal will be complete normally.

```
mkdir: Faild to make directory "/opt/FJSVrlib/etc/apply"; No such file or
directory
```

Note1-2

The following message may be displayed when removing FJSVmadm package, but the removal will be complete normally.

```
rm:/var/opt/FJSVmadm/xxx/xxxxxxxx is a directory
```

Note1-3

There is no problem in the deletion though the following messages might be displayed in the zone environment while deleting the package.

```
pkgrm: ERROR: unable to perform preremoval check of package <FJSVxxxx> in zone
< zonearea >
```

5.4 About Oracle VM Server for SPARC/Logical Domains (LDoms)

Oracle VM Server for SPARC/Logical Domains (LDoms) is a virtualization technology provided by Oracle, which can be used to run several different operating systems on a single computer.
Oracle VM Server for SPARC/Logical Domains (LDoms) can be used on SPARC T3-1/T3-2/T3-4, SPARC Enterprise T5120/T5140/T5220/T5240/T5440.
Notes when using Oracle VM Server for SPARC/Logical Domains (LDoms) are available.
Please refer to "4.2 Notes on Oracle VM Server for SPARC/Logical Domains (LDoms)" in "Enhanced Support Facility User's Guide".

5.4.1 Flowchart of Building Oracle VM Server for SPARC/Logical Domains (LDoms) Environment

To install the Enhanced Support Facility in Oracle VM Server for SPARC/Logical Domains (LDoms) environment, two installation methods are available.
One is to install it into the control domain, and another is to install it into the guest domain.

This chapter explains the installation steps.
1) The installation procedure to install the Enhanced Support Facility into the control domain is explained in "5.4.2 Building Procedure for the Enhanced Support Facility in the Control Domain". Please see flowchart (1)-(4) below for the installation steps.

2) The installation procedure to install the Enhanced Support Facility into the guest domain is explained in "5.4.3 Building Procedure for the Enhanced Support Facility in the Guest Domain". Please see flowchart (5) below for the installation steps.

```
                    ┌─────────────────┐
                    (     START       )
                    └─────────────────┘
                             │
        ┌────────────────────────────────────┐
        │ 1) Install the OS and              │
        │     Enhanced Support Faciliry      │
        └────────────────────────────────────┘
                             │
              ◇ 2) Build the control ◇─── No ───┐
              ◇     domain          ◇           │
                    │ Yes                        │
        ┌────────────────────────────────────┐  │
        │ 3) Set up the control domain       │  │
        └────────────────────────────────────┘  │
                             │                   │
        ┌────────────────────────────────────┐  │
        │ 4) Set up the guest domain on the  │  │
        │     control domain                 │  │
        └────────────────────────────────────┘  │
                             │                   │
        ┌────────────────────────────────────┐  │
        │ 5) Install the OS and Enhanced     │  │
        │     Support Facility on the guest  │  │
        │     domain                         │  │
        └────────────────────────────────────┘  │
                             │◄──────────────────┘
                    ┌─────────────────┐
                    (      END        )
                    └─────────────────┘
```
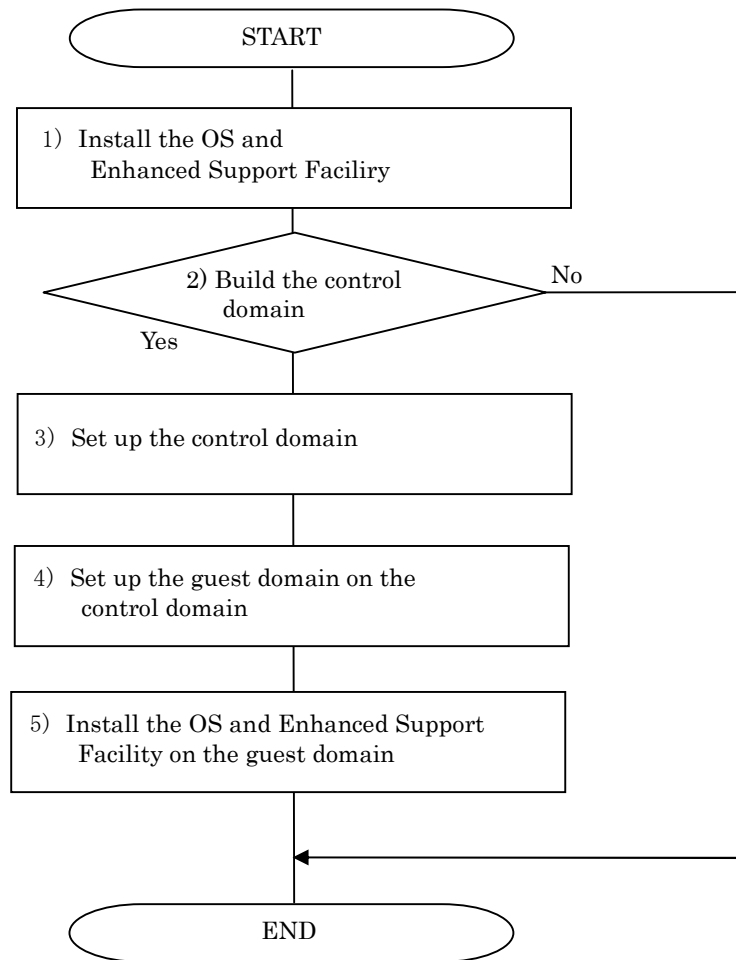
Figure 5.4.1-1 Flowchart of Building Oracle VM Server for SPARC/Logical Domains (LDoms) Environment

5.4.2 Building Procedure for the Enhanced Support Facility in the Control Domain

This section explains how to set up the Enhanced Support Facility in the control domain.

1) Install the OS into the mainframe.
   For more information, please refer to "SPARC Enterprise Server Hardware Platform Guide".

2) Install the Enhanced Support Facility.
   For more information, please refer to "5.2.3 Instructions".

3) Set up the control domain.
   For more information, please refer to "SPARC Enterprise Oracle VM Server for SPARC Guide".

4) Set up the guest domain by the control domain.
   For more information, please refer to "SPARC Enterprise Oracle VM Server for SPARC Guide".

Please refer to "5.4.3 Building Procedure for the Enhanced Support Facility in the Guest Domain" when you set up the guest domain and install the Enhanced Support Facility in it.

5.4.3 Building Procedure for the Enhanced Support Facility in the Guest Domain

This section explains how to set up the Enhanced Support Facility in the guest domain.

1) Install the OS into the guest domain.
   For more information, please refer to "SPARC Enterprise Server Hardware Platform Guide".

2) Install the Enhanced Support Facility into the guest domain.
   For more information, please refer to "5.2.3 Instructions".

   When installing the Enhanced Support Facility, use the DVD/CD of the installation server.

   Regarding the network mount, please refer to "Appendix F.2 Mounting a DVD/CD of an installation server".

Chapter 6 Extended Installation

6.1 OS Upgrade

In this chapter, we will explain the case of using the Enhanced Support Facility environment setup file for Solaris 10 OS on Solaris 11 OS. Before upgrading the OS, please save the Enhanced Support Facility environment setup file. After upgrading, install Enhanced Support Facility and restore the Enhanced Support Facility environment using the setup file previously saved.

6.1.1 OS Upgrade workflow

The OS upgrade workflow is shown in Figure 6.1.1-1.
For detailed procedures, refer to the respective sections indicated in individual frames.
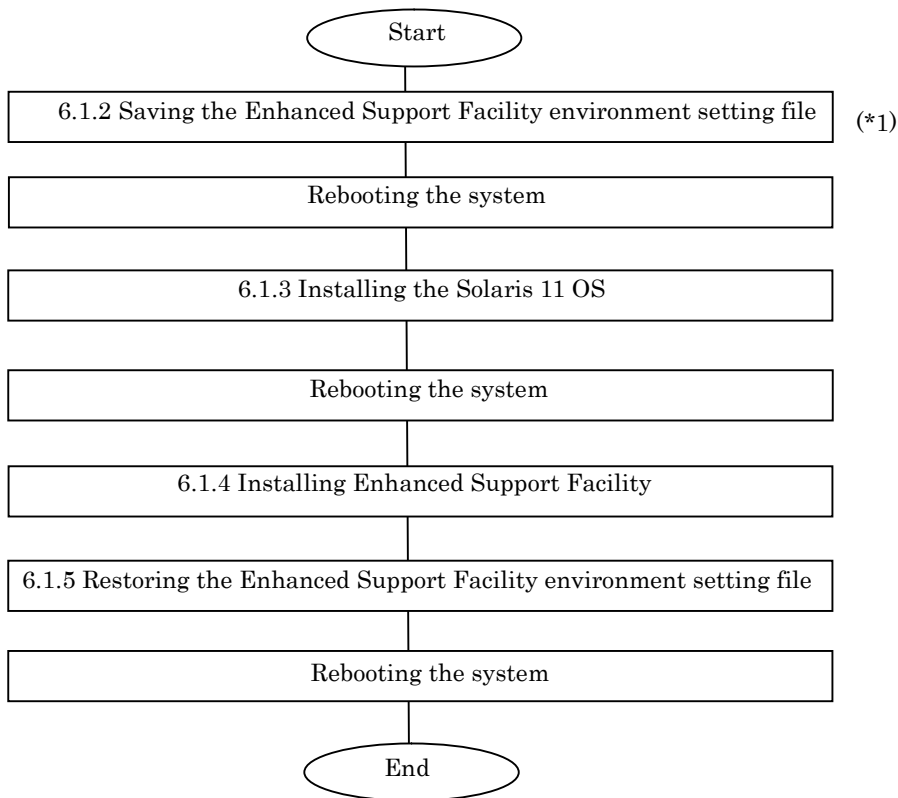
Figure 6.1.1-1 Workflow for OS upgrading

*1 Before upgrading the OS, be sure to save the Enhanced Support Facility environment setting file and uninstall Enhanced Support Facility.

6.1.2 Saving the Enhanced Support Facility environment setting file

Before starting OS upgrading, be sure to save the environment setting file.
The file to be saved varies depending on the installed package.
Please save the environment setting file on a different disk than the system volume disk. If the environment setting file is not saved on a different disk, it will be overwritten at the time of installation of Solaris 11 OS.

6.1.2.1 For SPARC Enterprise M series

SCF/SCSI Fault LED support option
Save the SCF/SCSI Fault LED support option setting files.

```
# cd / <Return>
# /usr/bin/ls /etc/opt/FJSVhwr/adrc.conf | cpio -o -O save_file <Return>
```

Machine Administration/Remote Support
If you are using Machine Administration or Remote Support, save the environment setting files of the packages constituting Machine Administration and Remote Support with the savelogs command.

```
# /usr/sbin/FJSVmadm/savelogs -mo save_file_directory <Return>
```

Auto Power Control System
If you are using the Auto Power Control System, save the older version of the environment setting file for the FJSVapcs package.

```
# cd / <Return>
# /usr/bin/find /var/opt/FJSVapcs/ -print -depth | /usr/bin/cpio -o -O save_file
<Return>
```

6.1.2.2 For SPARC Enterprise T series

Machine Administration/Remote Support
If you are using Machine Administration or Remote Support, save the environment setting files of the packages constituting Machine Administration and Remote Support with the savelogs command.

```
# /usr/sbin/FJSVmadm/savelogs -mo save_file_directory <Return>
```

6.1.3 Installing the Solaris 11 OS

Installing the Solaris 11 OS.
For details, refer to "SPARC Enterprise Server Hardware Platform Guide".

6.1.4 Installing Enhanced Support Facility

After OS installation is finished, install Enhanced Support Facility.
For details, refer to Section 5.2.3, "Instructions".

6.1.5 Restoring the Enhanced Support Facility environment setting file

After installing Enhanced Support Faciltiy, restore the environment setting file saved on a different disk by "6.1.2 Saving the Enhanced Support Facility environment setting file", to the system volume disk. The file to be saved varies depending on the installed package.

6.1.5.1 For SPARC Enterprise M series

SCF/SCSI Fault LED support option
Restore the SCF/SCSI Fault LED support option setting files.

```
# cd / <Return>
# /usr/bin/cpio -iu -I save_file <Return>
# /usr/bin/chown root /etc/opt/FJSVhwr/adrc.conf <Return>
# /usr/bin/chgrp root /etc/opt/FJSVhwr/adrc.conf <Return>
```

Machine Administration/Remote Support
Restore the environment setting file of the Machine Administration and Remote Support with the savelogs command.

```
# /usr/sbin/FJSVmadm/savelogs -r save_file_directory <Return>
```

Auto Power Control System
Restore the environment setting file of the Auto Power Control System.

```
# /usr/bin/cpio -iu -I save_file <Return>
```

6.1.5.2 For SPARC Enterprise T series

Machine Administration/Remote Support
Restore the environment setting file of the Machine Administration and Remote Support with the savelogs command.

```
# /usr/sbin/FJSVmadm/savelogs -r save_file_directory <Return>
```

6.2 Specifying a Component Group for Installation

For a normal installation, you would install all the packages provided for the target system. In some cases, however, you may wish to install only the required minimum number of packages for a certain requirement level. In such cases, this software provides for installation of packages defined in a component group. You can choose packages to install by specifying a component group based on system requirements.

This appendix explains how to specify an installation component group.

Note) If CORE or BASIC is specified for the component group, some components supplied as functions of this software are not installed.

6.2.1 Notes on using the component group specification option

- This option ds not support Boot Environments.

  Use the normal installation procedure.

6.2.2 Component groups

The components to be installed are determined by specifying a component group.

The following two component groups are provided by this software.

If a component group is not specified, the FULL component group will be installed.

Table 6.2.2-1 Component Groups List

Component-group	Description
CORE	Component group of basic functions of Enhanced Support Facility. Mandatory components for operation of system such as Machine Administration, Server Default Configuration, System Data Output Tool, Crash Dump Assistant, and Auto Dump Analyze Tool will be installed. These components make hardware and software operation more reliable.
BASIC	CORE component group plus user utility components such as auto matic power control.
FULL	BASIC component group plus HRM-S system operation support function. All components including Machine Administration, HRM-S system operation support function will be installed.

See Chapter 2.3, "About an installation specifying the component group and an individual installation" in the "Enhanced Support Facility Technical Guide" for more detail information.

Refer to Appendix C, "Component Programs by Model," for information on the packages that are installed in each component group.

Note) The component groups are mutually exclusive; only one can be selected at a time.

6.2.3 Specifying a component group for installation

To specify a component group for installation, use the following component group specification option.

Format　esfadd　[-O *COMPONENT-GROUP*]

For *COMPONENT-GROUP*, specify the component group to be installed.

Execution example (SPARC Enterprise T5120, Solaris 11 OS , and BASIC component installation)

1) To perform installation, specify the option in the esfadd command.

```
# bin/esfadd -O BASIC <Return>
```

The following message is displayed.

```
Enhanced Support Facility 4.0 will be installed.


   Platform: SUNW,SPARC-Enterprise-T5120
   OS Release: Solaris 11
   COMPONENT GROUP: BASIC


Do you want to continue with this installation? [yes or no ?]: yes <Return>
```

For notes on installation, see Section 5.2.3, "Instructions".

Note 1

The following message is displayed when a package component which is not included in the specified component group, is installed on the system.

```
Enhanced Support Facility 4.0 will be installed.


     Platform: SUNW,SPARC-Enterprise-T5120
     OS Release: Solaris 11
     COMPONENT GROUP: BASIC


NOTE: The following package(s) not included in the specified component group
is installed.
PACKAGENAME1 PACKAGENAME2


Do you want to continue with this installation? [yes or no ?]:
```

Type "no" to exit the installation and check the system environment.

If the package has been installed by other software, there is no problem about this message. Please continue the installation.

2) To check the version of each installed package, use the esfver command (as in a normal installation).

```
# /opt/FJSVbse/bin/esfver -1 <Return>
```

The version of each package is displayed.

```
esfver: INFO: Individual Packages Version of already installed Enhanced
Support Facility.
COMPONENT-GROUP:BASIC
PKGNAME         VERSION    REVISION
----------------------------------
FJSVbse         4.0        2011.08.0300
                  :
                  :
FJSVdmp         1.7        2011.08.0300
----------------------------------
```

3) To delete a package, use the esfrm command (as in a normal uninstallation).No options are required.

```
# bin/esfrm <Return>
```

The following message is displayed.Type "all", "part" or "no".

```
Enhanced Support Facility 4.0 will be removed.
COMPONENT-GROUP:BASIC


FJSVbse         Enhanced Support Facility Information Management
                (sparc) 4.0,REV=2011.08.0300
                 :
                 :
FJSVdmp         Crash Dump Assistant
                (sparc) 1.7,REV=2011.08.0300



There is a possibility to cause problem in the system when the
packages where "*" adheres to the head of the package name is deleted.

Please input "all" when you want to remove all packages,input "no"
when you want to interrupt the uninstallation, or input "part" when
you want to remove only packages where "*" does not adhere.

Please select. [no, all or part]:
```

6.2.3.1 Flowchart of Building Oracle VM Server for SPARC/Logical Domains (LDoms) Environment

The following describes how to install the Enhanced Support Facility by specifying component groups to create Oracle VM Server for SPARC/Logical Domains (LDoms).

This chapter explains the installation steps.

1) The installation procedure to install the Enhanced Support Facility into the control domain is described in "6.2.3.2 Building Procedure for the Control Domain".

2) The installation procedure to install the Enhanced Support Facility into the guest domain is described in "6.2.3.3 Building Procedure for the Guest Domain".

6.2.3.2 Building Procedure for the Control Domain

Install the Enhanced Support Facility by specifying component groups.

1) Install the OS into the mainframe.
    For more information, please refer to "SPARC Enterprise Server Hardware Platform Guide".

2) Install the Enhanced Support Facility by specifying component groups to install the Logical Domains Manager.
    Please refer to "6.2 Specifying a Component Group for Installation".

3) Set up the control domain.
    For more information, please refer to "SPARC Enterprise Oracle VM Server for SPARC Guide".

4) Set up the guest domain by the control domain.
    For more information, please refer to "SPARC Enterprise Oracle VM Server for SPARC Guide".

6.2.3.3 Building Procedure for the Guest Domain

1) Install the OS into the guest domain.
    For more information, please refer to "SPARC Enterprise Oracle VM Server for SPARC Guide".

2) Install the OS and Enhanced Support Facility into the guest domain you set up.
    Please refer to "6.2 Specifying a Component Group for Installation".

Appendix A Command Reference

A.1 esfadd (1M)

NAME

    esfadd - Install Enhanced Support Facility onto the system

SYNOPSYS

    esfadd [-c] [-R *mountpoint*] [-O *component-group*]

DESCRIPTION

    esfadd determines the system platform automatically and installs Enhanced Support Facility onto the system using the Enhanced Support Facility media(DVD/CD).If an older versions of Enhanced Support Facility is already installed on the system, this command will upgrade them.

OPTIONS

    The following options are available:

    -c

        Display the current version and the new version of the packages to be updated.

    -R *mountpoint*

        Enhanced Support Facility will be installed in the Boot Environment specified by *mountpoint.*

    -O *component-group*

        Specifying a Component Group for Installation. If the -O option isn't specified, Full component group will be installed.See Section 6.2, "Specifying a Component Group for Installation" for more details.

        Moreover, this parameter is non-compliant with 'Boot Environment' and thus, cannot be used in conjunction with the '-R' parameter.

EXIT STATUS

    The following exit values are returned:

        0   Successful execution.
        1   Fatal error.
        2   Usage or Warning.
        3   Interruption.
        4   Administration.
     10   Reboot after installation of all packages.
     20   Reboot after installation of this package.

SEE ALSO

    esfrm(1M), pkgrm(1M), pkgadd(1M)

NOTES

    -    When the -c option is specified, Enhanced Support Facility will not be installed.This option is used to check for previous revisions of Enhanced Support Facility installed on the system.

    -    When two or more packages are installed, the following messages are displayed, and the installation is ended. Please reinstall Enhanced Support Facility after restoring the system. (Refer to appendix D.1.1.)

```
esfadd: ERROR: Two or more instances of the following package(s) are existing on
the system.
PACKAGE PACKAGE.2


Exit installation.
```

A.2 esfrm (1M)

NAME

    esfrm - Remove Enhanced Support Facility from the system

SYNOPSYS

    esfrm [-n] [-R *mountpoint*]

DESCRIPTION

    esfrm removes a previously installed Enhanced Support Facility from the system.

    The default state for the command is in interactive mode, meaning that prompt messages are given during processing to allow the administrator to confirm the actions being taken for the removal of the Enhanced Support Facility. Non-interactive mode can be requested with the -n option.

    When this command is invoked, the package list to be removed is displayed, and then the prompt with the input "all" displayed. The esfrm commands operates as follows after the prompt.

    1. For the package(s) with the "*"(warning) mark is displayed in the package list, exist.

       -    "all" : The esfrm command removes all packages in the list.

       -    "no": The esfrm command terminates, and ds not remove any Enhanced Support Facility packages.

       -    "part": The esfrm command removes all package(s) with out the "*"(warning) displayed in the list.

    2. For the package(s) with the "*"(warning) mark is displayed in the package list, do not exist.

       -    "all" : The esfrm command removes all packages in the list.

       -    "no": The esfrm command terminates, and ds not remove any Enhanced Support Facility packages.

       -    "part": Same result as "all".

OPTIONS

    The following option is available:

    -n

        If this option is specified, Enhanced Support Facility is removed from the system in non-interactive mode.

        Packages are removed compulsorily even if those packages require interaction.

    -R *mountpoint*

        Enhanced Support Facility will be removed from the Boot Environment specified by the *mountpoint*.

EXIT STATUS

    The following exit values are returned:

        0   Successful execution.
        1   Fatal error.
        2   Usage or Warning
        3   Interruption.
        4   Administration.
        10   Reboot after removal of all packages.
        20   Reboot after removal of this package.

SEE ALSO

    esfadd(1M), pkgrm(1M)

NOTES

    -    If the display stops when executing the esfrm(1M) command, press the space key to restart the display.
    -    Be aware that other optional products may have dependencies on the packages in Enhanced Support Facility. In this case, esfrm will display WARNING messages as the result of dependency checking and ask you to verify the removal of the package.Do not remove any package on which other software products depend, and type "y" to continue execution.Note that if the -n option is specified, such important dependencies will not be checked.
    -    A "*"(warning) mark will be displayed when a package installed on the system is newer than the package on the DVD/CD. Be careful when removing the package because the package cannot be reinstalled with the DVD/CD. There may be other products on the system that require the package and removing the package may cause serious problems.

A.3 esfver (1M)

NAME

    esfver - Display the version of the installed Enhanced Support Facility

SYNOPSYS

    esfver [-l] [-R *mountpoint*]

DESCRIPTION

    The esfver command displays the version number of the Enhanced Support Facility installed on the system.
    With the -l option, it displays the version number of each package.
    Regarding the packages of the Enhanced Support Facility to be installed on the system, please refer to
    "Appendix C Component Programs by Model".

OPTIONS

    The following option is available:

    -l

        The version of each package included in the Enhanced Support Facility is displayed.

    -R *mountpoint*

        The version of Enhanced Support Facility installed in Boot Environment specified by *mountpoint* will
        be displayed.

EXIT STATUS

    The following exit values are returned:

        0   Successful execution.
        1   Fatal error.
        2   Usage.

SEE ALSO

    esfadd(1M), esfrm(1M), pkgparam(1M)

NOTES

    -   If the display stops when executing the esfver(1M) command, press the space key to restart the display.
    -   If two or more packages are installed on the system, the following messages appear.

    After recovering the system, re-install the Enhanced Suport Facility. (Refer to the Appendix D.1.1)

```
# /opt/FJSVbse/bin/esfver


esfver: INFO: Integrated Version of already installed Enhanced Support Facility.
VERSION=4.0  REVISION=2011.08.0300,



-- WARNING --
Two or more instances of the following packages have been installed on the system.
PACKAGE PACKAGE.2
#
```

- If no installed packages exist, the following messages appear.

  After a list of existing packages is displayed, a list of non-existing packages is displayed.

  In addition, regarding the packages of the Enhanced Support Facility to be installed on the system,

  please refer to "Appendix C Component Programs by Model".

```
# /opt/FJSVbse/bin/esfver -l

esfver: INFO: Individual Packages Version of already installed Enhanced Support Facility.
PKGNAME     VERSION    REVISION
---------------------------------
FJSVbse     4.0        2011.08.0300
  :
  :
FJSVdmp     1.7        2010.08.0300
Fail to get information of FJSVana.
---------------------------------

#
```

Note) Refer to Appendix D.1.2 if you want to restore any packages.

EXAMPLES

EXAMPLE1

```
# /opt/FJSVbse/bin/esfver

esfver: INFO: Integrated Version of already installed Enhanced Support Facility.
VERSION=4.0  REVISION=2011.08.0300,

#
```

EXAMPLE2 Example of displaying each package.

```
# /opt/FJSVbse/bin/esfver -l

esfver: INFO: Individual Packages Version of already installed Enhanced Support Facility.

PKGNAME     VERSION    REVISION
---------------------------------
FJSVbse     4.0        2011.08.0300
 :
 :
FJSVdmp     1.7        2011.08.0300
FJSVana     3.0        2011.08.0300
---------------------------------

#
```

Appendix B Messages

In this chapter, the meaning of messages displayed when the esfadd(1M)command, esfrm(1M)command, esfver(1M)command are executed, and what action you can take when the messages are displayed are explained.

B.1 esfadd(1M)

In this chapter, the meaning of messages displayed when the esfadd(1M)command is executed, and what action you can take when the messages are displayed are explained. Please refer to "A.1 esfadd(1M) " about the details of the esfadd(1M) command.

B.1.1 Notice Messages

In this chapter, notice messages of the esfadd(1M) command are explained.

Message	`!!!!!!!!!!!!!!!!!!!!!!!!!!!!`
	`!!! IMPORTANT NOTICE !!!`
	`!!!!!!!!!!!!!!!!!!!!!!!!!!!!`
	
	`The Remote service which uses the REMCS function appended to PRIMEPOWER is`
	`required for the quick recovery from the failure of your system.`
	
	`Please execute the following command after the reboot, by the root(superuser).`
	`/usr/sbin/FJSVmadm/remcsmain`

Meaning	The services related to REMCS are explained.
Workaround	Execute the command (/usr/sbin/FJSVmadm/remcsmain) when the REMCS service is used. No action is required when the REMCS service is not used.

Message	`Enhanced Support Facility < VERSION > will be installed.`
	
	`        Platform: < PLATFORM >`
	`        OS Release: < Solaris OS >`
	`        COMPONENT GROUP: < COMPONENT GROUP >`
	
	`Do you want to continue with this installation? [yes or no ?]:`

Meaning	Displayed when the -O option of the esfadd command is entered correctly and the installation is started.
Workaround	Please enter either "yes" or "no".

Message	`Enhanced Support Facility < VERSION > will be installed.`
	
	`        Platform: < PLATFORM >`
	`        OS Release: < Solaris OS >`
	
	`Do you want to continue with this installation? [yes or no ?]:`

Meaning	Displayed when the esfadd command is entered and the installation is started.
Workaround	Please enter either "yes" or "no".

Message	Enhanced Support Facility < VERSION > will be installed.
	
	      INSTALL-ROOT: < MOUNTPOINT >
	      Platform: < PLATFORM >
	      OS Release: < Solaris OS >
	
	Do you want to continue with this installation? [yes or no ?]:

Meaning	Displayed when the -R option of the esfadd command is entered correctly and the installation is started.
Workaround	Please enter either "yes" or "no".

Message	Check the package that will be updated.
	
	      Platform: < PLATFORM >
	      OS Release: < Solaris OS >
	
	esfadd: INFO: This software is not installed on the system.

Meaning	Displayed when the -c option of the esfadd command is entered and Enhanced Support Facility is not installed.
Workaround	None.

Message	Installation of Enhanced Support Facility was successful.
Meaning	Indicates that installation finished normally.
Workaround	None.

| Message | ```
Check the package that will be updated.


        Platform: < PLATFORM >
        OS Release: < Solaris OS >


PKGNAME    CURRENT   VERSION          FUTURE    VERSION
----------------------------------------------------------------
FJSVbse    <CURRENT>  REV=<VERSION>   <FUTURE>  REV=<VERSION>
    :          :          :               :          :
<PKGNAME>  <CURRENT>  REV=<VERSION>   <FUTURE>  REV=<VERSION>
----------------------------------------------------------------
Please save data according to the INSTALLATION GUIDE if the package(s) for
which the save of data is necessary exist in the above-mentioned package(s).
``` |
| Meaning | The -c option of the esfadd command is entered and each package version number of Enhanced Support Facility is displayed. |
| Workaround | For packages whose environment setting file needs to be copied, please copy the environment setting file by seeing "6.1.2 Saving the Enhanced Support Facility environment setting file". |

| Message | ```
Enhanced Support Facility < VERSION > will be installed after the following packages
are removed.


        Packages: < PKGNAME > < PKGNAME.2 >


        Platform: < PLATFORM >
        OS Release:  < Solaris OS >


Do you want to continue with this installation? [yes or no ?]:
``` |
| Meaning | Packages included in Enhanced Support Facility existed when the esfadd command is entered.
Enhanced Support Facility (FJSVbse package) does not exist, therefore, install Enhanced Support Facility after removing the displayed packages. |
| Workaround | Please enter "no" to exit, and after executing "esfadd -c" to confirm the package version number you are going to update, install Enhanced Support Facility. |

| Message | ```
Enhanced Support Facility < VERSION > will be installed after the following packages
are removed.


        Packages: < PKGNAME > < PKGNAME.2 >


        Platform: < PLATFORM >
        OS Release:  < Solaris OS >
        COMPONENT GROUP: < COMPONENT GROUP >


Do you want to continue with this installation? [yes or no ?]:
``` |
| Meaning | Packages included in Enhanced Support Facility existed when the -O option of the esfadd command is entered.
Enhanced Support Facility (FJSVbse package) does not exist, therefore, install Enhanced Support |

	Facility after removing the displayed packages.
Workaround	Please enter "no" to exit, and after executing "esfadd -c" to confirm the package version number you are going to update, install Enhanced Support Facility.

B.1.2 Warning Messages

In this chapter, warning messages of the esfadd(1M) command are explained.

Message	Enhanced Support Facility < VERSION > will be installed.
	
	      Platform: < PLATFORM >
	      OS Release: < Solaris OS >
	      COMPONENT GROUP: < COMPONENT GROUP >
	
	 NOTE: The following package(s) not included in the specified component group is installed.
	 < PACKAGENAME1 > < PACKAGENAME2 >
	
	 Do you want to continue with this installation? [yes or no ?]:

Meaning	If "CORE" or "BASIC" is specified as the -O option of the esfadd command, a caution message is output when some packages are already installed.
Workaround	Please enter "no" to terminate the installation and confirm the system environment. For more information, please see "6.2.3 Specifying a component group for installation".

Message	NOTE: -R option Do you want to continue with this installation? [yes or no ?]:
Meaning	When you install Enhanced Support Facility newly by using the -R option e.g. Boot Environments or remote application, the above message is displayed.
Workaround	Please enter either "yes" or "no".

B.1.3 Error Messages

In this chapter, error messages of the esfadd(1M) command are explained.

Message	ERROR: Please enter yes or no.
Meaning	Displayed when you enter any value other than "yes" or "no" in the dialog when you install Enhanced Support Facility.
Workaround	Please enter either "yes" or "no".

Message	esfadd: ERROR: Installation of packages failed.
Meaning	Installation of packages failed at the time of installation.
Workaround	Please confirm the error code of the package you failed to remove.

Message	esfadd: ERROR: This Hardware Platform is not supported.
Meaning	The hardware platform is not supported.
Workaround	For supported hardware platform, please see "Appendix C Component Programs by Model".

Message	esfadd: ERROR: The OS release of this system is not supported.
Meaning	The OS of this system is not supported.
Workaround	For OS of the supported system, please see "Appendix C Component Programs by Model ".

Message	esfadd: ERROR: Mountpoint does not exist.
Meaning	A mount point specified by "esfadd -R" does not exist.
Workaround	Specify the correct mount point with absolute path.

Message	esfadd: ERROR: Mountpoint must be specified with a absolute path.
Meaning	A mount point specified by "esfadd -R" is not specified with absolute path (whose head is '/').
Workaround	Specify the correct mount point with absolute path.

Message	esfadd: ERROR: Failed to install. The following old ESF packages already exists in < MOUNTPOINT >.
Meaning	Packages included in Enhanced Support Facility exist in the directory specified as a mount point.
Workaround	After removing the Enhanced Support Facility packages in the mount point, please re-execute the command.

Message	esfadd: ERROR: Failed to install. The ESF product already exists in < MOUNTPOINT >.
Meaning	Enhanced Support Facility (FJSVbse package) exist in the directory specified as a mount point.
Workaround	After removing Enhanced Support Facility in the mount point, please re-execute the command.

Message	esfadd: ERROR: Can not obtain COMPONENT GROUP < COMPONENT GROUP >.
Meaning	Displayed when a component group other than "FULL","BASIC","CORE" was entered.
Workaround	Please specify FULL, BASIC, or CORE as a component group, and execute the command. For supported component group, please see "6.2.2 Component groups".

Message	esfadd: ERROR: Two or more instances of the following package(s) are existing on the system. < PKGNAME > < PKGNAME.2 > Exit installation.
Meaning	Displayed when two or more instances of the displayed packages exist on the system.
Workaround	Remove the packages having the problem. Please remove the packages by seeing "D.1.1 Resolution of problems which occur when package is installed (I)".

Message	esfadd: ERROR: The directory (/opt) where the packages will be installed does not exist. Do you want to continue with this installation? [yes or no ?]:
Meaning	The /opt directory dose not exist.(is not mounted.) This message is output when the command is executed without mounting /opt when the system is started in single user mode.
Workaround	In single user mode, /opt is not mounted. Therefore, please see "5.2.3 Instructions" to mount /opt.

Message	esfadd: ERROR: The directory (/opt) where the packages will be installed does not exist. Interrupt installation and mount the /opt. Select (n) no to stop installation. Select (y) yes to continue to install. [yes or no ?]:
Meaning	The /opt directory dose not exist.(is not mounted.) This message is output when the command is executed without mounting /opt when the system is started in single user mode.
Workaround	In single user mode, /opt is not mounted. Therefore, please see "5.2.3 Instructions" to mount /opt.

Message	esfadd:ERROR: Partially installed package(s) was found. See the Installation Guide and remove the following package(s).
Meaning	Partially installed packages was found.
Workaround	Please remove the packages displayed following the message.

Message	esfadd: ERROR: The vfstab file is not found.
Meaning	The vfstab file does not exist.
Workaround	After making /etc/vfstab, please reinstall Enhanced Support Facility.

Message	esfadd: ERROR: Stop of DMPSV service failed.
Meaning	When Dump Assistant Package is removed (for update), stop of SMF service provided by Dump Assistant failed.
Workaround	Please check the state of DMPSV.

B.2 esfrm(1M)

In this chapter, the meaning of messages displayed when the esfrm (1M)command is executed, and what action you can take when the messages are displayed are explained. Please refer to "A.2 esfrm (1M) " about the details of the esfrm (1M) command.

B.2.1 Notice Messages

In this chapter, notice messages of the esfrm (1M) command are explained.

Message	Enhanced Support Facility <VERSION> will be removed.
	
	FJSVbse Enhanced Support Facility Information Management
	      (sparc) < VERSION >,REV=< REVISION >
	         :
	         :
	< PKGNAME >
	    < VERSION >,REV=< REVISION >
	
	There is a possibility to cause problem in the system when the
	packages where "*" adheres to the head of the package name is deleted.
	
	Please input "all" when you want to remove all packages,input "no"
	when you want to interrupt the uninstallation, or input "part" when
	you want to remove only packages where "*" does not adhere.
	
	Please select. [no,all or part]:

Meaning	Displayed when the esfrm command is entered and Enhanced Support Facility is removed.
Workaround	If there is a package having "*" at the head of its name, enter "part". Such a package is installed from a product other than Enhanced Support Facility. For more information, please see "5.3.2 Removal of Software".

Message	Enhanced Support Facility <VERSION> will be removed.
	COMPONENT-GROUP:<COMPONENT-GROUP>
	
	FJSVbse Enhanced Support Facility Information Management
	      (sparc) < VERSION >,REV=< REVISION >
	         :
	         :
	< PKGNAME >
	    < VERSION >,REV=< REVISION >
	
	There is a possibility to cause problem in the system when the
	packages where "*" adheres to the head of the package name is deleted.
	
	Please input "all" when you want to remove all packages,input "no"
	when you want to interrupt the uninstallation, or input "part" when
	you want to remove only packages where "*" does not adhere.

	```Please select. [no,all or part]:```
Meaning	Displayed when the esfrm command is entered and Enhanced Support Facility is removed.
	Displayed when the -O component group was specified when Enhanced Support Facility was installed.
Workaround	If there is a package having "*" at the head of its name, enter "part". Such a package is installed from a product other than Enhanced Support Facility.
	For more information, please see " 5.3.2 Removal of Software".

Message	```Do you want to continue with uninstallation?[yes of no ?]:```
	```Uninstallation of Enhanced Support Facility was terminated.```
Meaning	Displayed when the removal of packages failed and you do not continue the removal. Uninstallation of Enhanced Support Facility is not completed.
Workaround	None.

Message	```*Important confirmation*```
	```When some ESF packages which can not support to Remote Install exist in < MOUNTPOINT >```
	```there is a possibility that not only the installation target system but also the```
	```system operating now may be destroyed.```
	```You should delete those packages from < MOUNTPOINT > according to the INSTALLATION GUIDE.```
	```Have you referred to the INSTALLATION GUIDE and confirmed the package versions [yes or no ?]:```
Meaning	Displayed when packages are removed with the esfrm -R mount point.
Workaround	Please check the version of Enhanced Support Facility.
	Please remove the packages by using the same version DVD/CD as the installed Enhanced Support Facility.

B.2.2 Warning Messages

No messages are displayed when the esfrm(1M) command is executed.

B.2.3 Error Messages

In this chapter, error messages of the esfrm (1M) command are explained.

Message	ERROR: Please enter no,all or part.
Meaning	Displayed when any value other than "no", "all","part" is entered in a dialog when Enhanced Support Facility is removed.
Workaround	Please enter "no","all",or "part".

Message	Do you want to continue with uninstallation?[yes of no ?]:
Meaning	Displayed during a dialog when Enhanced Support Facility is removed, and you are required to select continuing or cancelling the installation after failing the removal of packages.
Workaround	Please enter either "yes" or "no".

Message	ERROR: Please enter yes or no.
Meaning	Displayed when any value other than "yes", "no" is entered in a dialog when you remove Enhanced Support Facility.
Workaround	Please enter either "yes" or "no".

Message	esfrm: ERROR: Mountpoint does not exist.
Meaning	A mount point specified by "esfrm -R" does not exist.
Workaround	Specify the correct mount point with absolute path.

Message	esfrm: ERROR: Mountpoint must be specified with a absolute path.
Meaning	A mount point specified by "esfrm -R" is not specified with absolute path(whose head is '/').
Workaround	Specify the correct mount point with absolute path.

Message	esfrm: ERROR: The OS release of this system is not supported.
Meaning	The OS of this system is not supported.
Workaround	For OS the supported system, please see "Appendix C Component Programs by Model". Please remove Enhanced Support Facility by using the same version DVD/CD as the installed Enhanced Support Facility.

Message	esfrm: ERROR: Fail for deleting.
Meaning	Displayed then Enhanced Support Facility is not installed.
Workaround	The command was executed for a machine where Enhanced Support Facility is not installed. This command is a command to remove Enhanced Support Facility.

Message	`esfrm: ERROR: Two or more instances of the following package(s) are existing on the`
	`system.`
	`< PKGNAME >  < PKGNAME.2 >`
	
	`Exit installation.`

Meaning	Displayed when two or more instances of the displayed packages exist on the system.
Workaround	Remove the packages having the problem. Please see "D.2.1 Resolution of problems, which occurred when package was removed (I)".

Message	`Removal of < PACKAGENAME > failed.`
	
	`esfrm: ERROR: Failed to remove a < PACKAGENAME > package.`

Meaning	Removal of a package failed when Enhanced Support Facility is uninstalled.
Workaround	Please check the error code of the package you failed to remove.

B.3 esfver(1M)

In this chapter, the meaning of messages displayed when the esfver (1M)command is executed, and what action you can take when the messages are displayed are explained. Please refer to "A.3 esfver (1M) " about the details of the esfver (1M) command.

B.3.1 Notice Messages

In this chapter, notice messages of the esfver (1M) command are explained.

Message	`esfver: INFO: Integrated Version of already installed Enhanced Support Facility.`
	
	`VERSION=<VERSION>  REVISION=<REVISION>`

Meaning	The esfver command is entered and integrated version of Enhanced Support Facility is displayed.
Workaround	None.

Message	`esfver: INFO: Individual Packages Version of already installed Enhanced Support`
	`Facility.`
	`PKGNAME    VERSION    REVISION`
	`----------------------------------`
	`FJSVbse    <VERSION>   <REVISION>`
	`     :                    :`
	
	`----------------------------------`

Meaning	The -l option of the esfver command is entered and each package version of Enhanced Support Facility is displayed.
Workaround	None.

Message	`esfver: INFO: Integrated Version of already installed Enhanced Support Facility.`
	`COMPONENT-GROUP:< COMPONENT GROUP >`
	`VERSION=<VERSION>  REVISION=<REVISION>`

Meaning	The esfver command is entered and integrated version of Enhanced Support Facility is displayed. COMPONENT-GROUP is displayed when you install Enhanced Support Facility by specifying -O component group.
Workaround	None.

| Message | ```
esfver: INFO: Individual Packages Version of already installed Enhanced Support
Facility.
COMPONENT-GROUP:< COMPONENT GROUP >
PKGNAME    VERSION    REVISION
----------------------------------
FJSVbse    <VERSION>   <REVISION>
    :                  :


----------------------------------
``` |
| Meaning | The -l option of the esfver command is entered and each package version of Enhanced Support Facility is displayed.

COMPONENT-GROUP is displayed when you install Enhanced Support Facility by specifying -O component group. |
| Workaround | None. |

B.3.2 Warning Messages

In this chapter, warning messages of the esfver (1M) command are explained.

Message	`esfver: INFO: This software is not installed on the system.`
Meaning	Enhanced Support Facility (FJSVbse package) is not installed.
	The command was executed for the machine where Enhanced Support Facility is not installed. This is a command to check the version of Enhanced Support Facility and included packages and their versions.
Workaround	None.

Message	`-- WARNING --` `Two or more instances of the following packages have been installed on the system.`
Meaning	Displayed when two or more instances exist in the system.
	One possible reason for this is that a package provided another middle ware exists.
Workaround	None.

Message	`Fail to get information of <Package>.` `---------------------------------`
Meaning	Packages which have not been installed from Enhanced Support Facility are displayed. A list of non-existing packages following a list of existing packages is displayed.
Workaround	None.

B.3.3 Error Messages

In this chapter, error messages of the esfver (1M) command are explained.

Message	`esfver: ERROR: mountpoint does not exist.`
Meaning	A mount point specified by "esfver -R" does not exist.
Workaround	Specify the correct mount point with absolue path.

Message	`esfver: ERROR: mountpoint must be specified with a absolute path.`
Meaning	A mount point specified by "esfver -R" is not specified with absolute path "whose head is '/').
Workaround	Specify the correct mount point with absolue path.

Message	`esfver: ERROR: Partially installed package(s) was found. See the Installation Guide and remove the following package(s).`
Meaning	Partially installed packages was found.
Workaround	Remove packages displayed following the message.

Appendix C Component Programs by Model

Abbreviated names of machine models are used in the table below. For more information, please refer to "Notations Used" in "Preface".

Component group
    C: CORE
    B: BASIC
    F: FULL
O: Supported, -: Not supported

Table C -1 Component Programs List

No.	Component	Package name	VL	Abbreviation		Component group		
				CW	LE	C	B	F
1	Enhanced Support Facility Information Management	FJSVbse	4.0	O	O	O	O	O
2	SCF/SCSI Fault LED support option	FJSVscfsc	2.0	O	-	O	O	O
3	Machine Administration	FJSVmadm	2.0.0	-	O	O	O	O
		FJSVamadm	2.0.0	O	-	O	O	O
		FJSVamcl	1.0.0	O	-	O	O	O
		FJSVamle	2.0.0	-	O	O	O	O
4	Remote Support	FJSVamrm	2.0	O	-	O	O	O
		FJSVlmrm	2.0	-	O	O	O	O
		FJSVrlib	8.3.0	-	O	O	O	O
		FJSVragt	2.9	-	O	O	O	O
		FJSVrmaos	3.1	-	O	O	O	O
		FJSVrrda	2.9	-	O	O	O	O
		FJSVracm	2.9	-	O	O	O	O
		FJSVsirms	4.1	O	O	O	O	O
5	Auto Power Control System	FJSVapcs	1.5.0	O	-	-	O	O
6	Server Default Configuration	FJSVssf	4.0	O	O	O	O	O
				O	O	O	O	O
7	System Data Output Tool	FJSVsnap	2.7	O	O	O	O	O
8	Crash Dump Assistant	FJSVdmp	1.7	O	O	O	O	O
9	Auto Dump Analyze Tool	FJSVana	3.0	O	O	O	O	O
10	HRM-S	FJSVhrmse	6.1.1	O *1	O *1	-	-	O *1
		FJSVhrmcp	6.1.1	O *1	O *1	-	-	O *1
11	Tape Driver Configuration Tool	FJSVdcnf	1.2	O	O	O	O	O
12	Solaris System Safety Compliance Assessment Tool	FJSVs3cat	1.0	O *1	O *1	O *1	O *1	O *1

*1:Package is installed, but not supported.

Appendix D Troubleshooting

D.1 Resolution of problems which occur when package is installed

Case1

Refer to Appendix D.1.1 when the following messages are displayed while installing.

```
esfadd: ERROR: Two or more instances of the following package(s) are existing on the
system.
package_name package_name.2


Exit installation.
```

Case2

Refer to Appendix D.1.2 when the following messages are displayed while installing.

```
A version of the <pkginst> package is already installed on this machine.
Current administration ds not allow new instances of an existing package to be created,
nor existing instances to be overwritten.


No changes were made to the system.
esfadd: ERROR: Installation of packages failed.
```

Case3

Refer to Appendix D.1.3 when the following messages are displayed while installing.

```
# esfadd
    :
Installation of <pkginst> failed (error).
esfadd: ERROR:Installation of packages failed.
```

Case4

Refer to Appendix D.1.4 when the following messages are displayed while deleting the package.

```
# esfadd
    :
Removed of <pkginst> failed.
esfadd:ERROR:Removal of packages failed.
```

D.1.1 Resolution of problems which occur when package is installed (I).

If the following message is displayed during installation, and the installation terminates abnormally, use the following solution.

```
esfadd: ERROR: Two or more instances of the following package(s) are existing on the
system.
package_name package_name.2

Exit installation.
```

Problem Cause

This message will be displayed when multiple instances of a particular package have already been installed on this system. Please execute the following procedures as the corrective action.

Solution

1) If an environment setting file exists for the package where the problem occurred, save the environment setting file.
   (Refer to Section 6.1.2, "Saving the Enhanced Support Facility environment setting file" for details.)

2) Check the version of the package where the problem occurred.

   ```
   # /usr/bin/pkginfo -x package_name.\* <Return>
   ```

3) Remove all packages where the problem has occurred.

   ```
   # /usr/sbin/pkgrm package_name.\* <Return>
   ```

4) If the version of the problem package is later than that provided in the software, install the later version of the package.

5) Go on to the procedures in Section 5.2.3, "Instructions".

6) Restore the previously saved environment setting file, using the procedures in Section 6.1.5, "Restoring the Enhanced Support Facility environment setting file".

D.1.2 Resolution of problems which occur when package is installed (II).

If the following message is displayed during installation, and the installation terminates abnormally, use the following solution.

```
A version of the <pkginst> package is already installed on this machine.
Current administration ds not allow new instances of an existing package to be created,
nor existing instances to be overwritten.


No changes were made to the system.


esfadd: ERROR: Installation of packages failed.
```

Problem Cause

This message will be displayed when the *<pkginst>* package installation fails. In particular, this message will be displayed when multiple instances of the *<pkginst>* package have already been installed on the system. Execute the following procedure as the correction action.
Attention: Depending on the state of the system, this message might be displayed in addition to other display causes.
Therefore, you need to confirm whether there are other abnormalities, before proceeding.

Solution

1) If an environment setting file exists for the package where the problem occurred, save the environment setting file.
(Refer to Section 6.1.2, "Saving the Enhanced Support Facility environment setting file" for details.)

2) Check the version of the package where the problem occurred.

```
# /usr/bin/pkginfo -x package_name.\* <Return>
```

3) Remove all of the packages where problems occurred.

```
# /usr/sbin/pkgrm package_name.\* <Return>
```

4) Remove the FJSVbse package.

```
# /usr/sbin/pkgrm FJSVbse <Return>
```

5) If the version of the problem package is later than the one provided in the software, install the later version of the package.

6) Go on to the procedures in Section 5.2.3, "Instructions".

7) Restore the previously saved environment setting file, using the procedures in Section 6.1.5, "Restoring the Enhanced Support Facility environment setting file".

D.1.3 Resolution of problems which occur when package is installed (III).

If the following message is displayed during installation, and the installation terminates abnormally, use the following solution.

```
# esfadd<Return>
    :
Installation of <pkginst> failed (error).
esfadd: ERROR:Installation of packages failed.
```

Problem Causes

This message will be displayed when the *<pkginst>* package installation fails. In particular, the message will be displayed if the software was installed under the following situations.

1. Lack of disk space (Refer to Section 3.3.1, "Disk requirements").

2. If using NFS to mount the DVD/CD drive on the system prior software installation, the options on the NFS mount are not appropriately specified.

3. The operator has executed procedures other than those described in the Installation Guide.

Attention: Depending on the state of the system, this message might be displayed for other reasons than those mentioned above. Therefore, you need to confirm whether there are other abnormalities before proceeding.

Solution

1) If an environment setting file exists for the package where the problem occurred, save the environment setting file.
   (Refer to Section 6.1.2, "Saving the Enhanced Support Facility environment setting file" for details.)

2) Remove package where problem occurred.

```
# /usr/sbin/pkgrm package_name <Return>
```

3) Remove the FJSVbse package.

```
# /usr/sbin/pkgrm FJSVbse <Return>
```

4) Go on to the procedures in Section 5.2.3, "Instructions".

5) Restore the previously saved environment setting file, using the procedures in Section 6.1.5, "Restoring the Enhanced Support Facility environment setting file".

Attention:

Even if the FJSVbse package is removed according to procedure3, the /opt/FJSVbse directory might not be deleted. However, this will not cause any operational problems.

D.1.4 Resolution of problems which occur when package is installed (IV).

If the following message is displayed during package removal, and the removal terminates abnormally, use the following solution.

```
# esfadd<Return>
    :
Removed of <pkginst> failed.
esfadd:ERROR:Removal of packages failed.
```

Problem Causes

This message will be displayed when the *<pkginst>* package removal fails. In particular, this message will be displayed if:
1. The *<pkginst>* package has dependence with other package(s).
2. The installed package instance has broken.
3. The operator executed procedures other than those described in the Installation Guide.

Attention: Depending on the state of the system, this message might be displayed in addition to others.
Therefore, you need to confirm whether there are other abnormalities before proceeding.

Solution

1) If an environment setting file exists for the package where the problem occurred, save the environment setting file.
(Refer to Section 6.1.2, "Saving the Enhanced Support Facility environment setting file" for details.)

2) Remove package where problem occurred.
```
# /usr/sbin/pkgrm package_name <Return>
```

3) Remove the FJSVbse package.
```
# /usr/sbin/pkgrm FJSVbse <Return>
```

4) Go on to the procedures in Section 5.2.3, "Instructions".

5) Restore the previously saved environment setting file, using the procedures in Section 6.1.5, "Restoring the Enhanced Support Facility environment setting file".

Attention:
Even if the FJSVbse package is removed according to procedure3, the /opt/FJSVbse directory might not be deleted. However, this will not cause any operational problems.

D.2 Resolution of problems which occur when package was removed

Case1

Refer to Appendix D.2.1 when the following messages are displayed while deleting the package.

```
esfrm: ERROR: Two or more instances of the following package(s) are existing on the system.
package_name package_name.2


Exit installation.
```

D.2.1 Resolution of problems, which occurred when package was removed (I).

If the following message is displayed during software removal, and the remove terminates abnormally, use the following solution.

```
esfrm: ERROR: Two or more instances of the following package(s) are existing on the system.
package_name package_name.2


Exit installation.
```

Problem Cause

This message will be displayed if multiple instances of a particular package have been installed on the system. Please execute the following procedures as the corrective action.

Solution

1)   Remove package where problem occurred.

```
# /usr/sbin/pkgrm package_name.\* <Return>
```

2)   Go on to step 8 provided in Section 5.3.2, "Removal of Software".

Appendix E Notes

E.1 Solaris network installation using DHCP service

If network installation is performed using DHCP service, the system behaves as a DHCP client. In the case of SPARC Enterprise T series, Enhanced Support Facility should be installed after the system is configured to use a static IP address.

If Enhanced Support Facility is installed while the system is running as a DHCP client, the following symptoms may occur.

- Remote Support

   Influence: When using the following connection type, reporting can not be performed.
   1) Point-to-Point (PtoP) Connection (ISDN)
   2) Point-to-Point (PtoP) Connection (ISDN: Mail Only)

   Recommended action: After configuring the system to use a static IP address, please request a service engineer to change the setting of the router for REMCS PtoP (ISDN) connection.

Appendix F Mounting the DVD/CD

F.1 Using a built-in DVD/CD drive

Machines other than SPARC T3-4, SPARC Enterprise T1000 are equipped with main unit internal DVD/CD. If you use internal DVD/CD drive allocated to a domain of SPARC Enterprise T series (except SPARC T3-4, SPARC Enterprise T1000), or SPARC Enterprise M series, you can mount a DVD/CD by the following procedure.

Regarding allocation of DVD/CD drive to a domain,please refer to "SPARC Enterprise Mxxxx series Server Administration Guide" by visiting the following URL.

http://www.fujitsu.com/sparcenterprise/manual/

1) Create the mount destination directory of a DVD/CD.
   However, if the directory already exists, you don't have to create it.

   ```
   # /usr/bin/mkdir -p /cdrom/cdrom0 <Return>
   ```

2) Mount the DVD/CD. Specify a DVD/CD drive for <DEVICE>.

   ```
   # /usr/sbin/mount -F hsfs /dev/dsk/<DEVICE> /cdrom/cdrom0 <Return>
   ```

3) Move to the directory of the DVD/CD.

   ```
   # cd /cdrom/cdrom0 <Return>
   ```

The DVD/CD becomes visible after completing the above steps.

F.2 Mounting a DVD/CD of an installation server

Please follow these steps to mount the DVD/CD inserted into a DVD/CD drive of the installation server.

1) Setting of an installation server
Add the following line to the /etc/rmmount.conf file in the install server.

```
/usr/sbin/share cdrom* -o ro,anon=0
```

2) Setting of a target machine of the installation
2-1) Activate the network.

```
# /usr/sbin/svcadm enable /network/initial <Return>
```

2-2) Mount a DVD/CD.

```
# /usr/bin/mkdir -p /cdrom <Return>

# /usr/sbin/mount -F nfs -o ro,vers=2 host:/cdrom/cdrom0 /cdrom <Return>
```

The "*host*" represents the host name of an installation server.

2-3) Move to the directory of the DVD/CD.

```
# cd /cdrom <Return>
```