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Enhanced Support Facility Security System Building Guide for Oracle Solaris



FUJITSU



Preface

Purpose

This manual explains the security of Enhanced Support Facility for SPARC Enterprise Server and PRIMEPOWER series.

Intended Readers

This manual is intended for the following readers:

- System administrators who introduce and operate the Enhanced Support Facility.
- Technicians who maintain system hardware.

Organization

This manual is organized as follows:

Chapter1: Before reading this guide

The outline of this manual is explained.

Chapter2: How countermeasures are performed against security problems

Countermeasures against Enhanced Support Facility security problems are explained.

Chapter3: About packages

The structure of packages included in Enhanced Support Facility is explained.

Chapter4: The rc scripts and daemons

The rc scripts and daemons used in Enhanced Support Facility are explained.

Chapter5: About TCP/IP ports

TCP/IP port used in Enhanced Support Facility is explained.

Chapter6: About various log files

Log files created by Enhanced Support Facility are explained.

Chapter7: About system files

Files added or changed by Enhanced Support Facility are explained.

Chapter8: How to set the cron

How to set the cron used in Enhanced Support Facility is explained.

Chapter9: About /etc/dfs/dfstab

The setting of /etc/dfs/dfstab used in Enhanced Support Facility is explained.

Chapter10: Firewall/Gateway

Limitations and notes when using Enhanced Support Facility in network are explained.

Chapter11: Packages needed at installation

Solaris OS packages needed for the installation and operation of Enhanced Support Facility are explained.

Chapter12: About an installation specifying the component group and an individual installation

The component group of Enhanced Support Facility and notes on individual installation are explained.

Chapter13: How ActiveX is used

Enhanced Support Facility packages using ActiveX are explained.

Chapter14: About the use of Java

Enhanced Support Facility packages using Java are explained.

Chapter15: Diagnosis of the system setting file

Diagnosis of the system setting file of Enhanced Support Facility is explained.

Chapter16: About the setting of the kernel parameter "noexec_user_stack"

Influences on Enhanced Support Facility when the kernel parameter "noexec_user_stack" is effective are explained.

Chapter17: Configuration examples for the Internet or a DMZ environment

Examples of standard configuration for Enhanced Support Facility are explained.

Chapter18: Countermeasures against problems detected by the security check tool

Countermeasures against problems detected by System Scanner are explained.
Sales of System Scanner have been terminated.

Chapter19: About services registered in Service Management Facility of Solaris 10 OS

The service registered in Service Management Facility with Enhanced Support Facility is explained.

Chapter20: Oracle VM Server for SPARC/Logical Domains(LDoms)

Countermeasures against the security settings applied to Oracle VM Server for SPARC/Logical Domains(LDoms) are explained.

Notation

- 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.

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 Machine Administration," or "User's Guide for REMCS" is one of such examples.




Example: Enhanced Support Facility User's Guide for SCF Driver (PRIMEPOWER)
-> User's Guide for SCF Driver

Abbreviation

In this manual, abbreviated names are used for each model name supported by Enhanced Support Facility. Regarding the relation table between model name and uname(1), please refer to "Chapter 1: Before reading this guide".

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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| 13.0 | Sep 28, 2007 | Revised (FJ) Correction of error in writing concerning LE. |
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Revision History

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| 17.0 | Aug 07, 2008 | Addition of article concerning Enhanced Support Facility 3.1 Addition of article concerning unsupported packages Addition of a note telling that DVD media is available. Addition of descriptions on how to deal with Oracle VM Server for SPARC/Logical Domains(LDoms) (avoidance of cron check) |
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| 20.0 | Jun 13, 2011 | Addition of article concerning the termination of sales of the security check tools. |

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Chapter 1 Before reading this guide

Enhanced Support Facility provides the enough safety in respect to security at a usual installation. However, among those who are responsible for system security, there is a request that they want to have information about daemons started or INET ports used. They want to facilitate the management on security in the case of building a system environment like the ISP (Internet Service Providers) in which computers are directly connected to the Internet. With the same reason, they want to restrict the number of daemons or INET ports and also limit software packages to be installed as little as possible. This document describes the information about the SPARC-version Enhanced Support Facility required to establish a sophisticated security system to meet the above requests.

The verification is not done for the settings in all environments and combinations. We can not guarantee that you can change any setting. You can change the setting only when you have full knowledge on the security of the Solaris OS and enough skill in troubleshooting by yourself.

Information described here is based on the facts that are confirmed at the time of writing this document. Unless stated otherwise, the scope of this document is from the Basic Software Extension 1.0 through the Enhanced Support Facility 3.2. Information written in this document is subject to change due to an enhancement of the Enhanced Support Facility or release of patches in the future.

In this book, the following abbreviations are used for each model name supported by Enhanced Support Facility. The relation between the abbreviation name and uname(1) is as follows.

| Model name | | Abbreviation |
|---|----|--------------|
| SPARC T3-1/T3-2/T3-4 | *6 | LE |
| SPARC Enterprise T1000/T2000/T5120/T5220 | *3 | |
| SPARC Enterprise T5140/T5240/T5440 | *4 | |
| SPARC Enterprise T5440 | *5 | |
| SPARC Enterprise M3000 | *5 | CW |
| SPARC Enterprise M4000/M5000/M8000/M9000 | *3 | |
| PRIMEPOWER250/450 | *2 | PW-P |
| PRIMEPOWER650 (Model equipped with SPARC64 GP)/850 (Model equipped with SPARC64 GP) | *1 | PW-CM |
| PRIMEPOWER650 (Model equipped with SPARC64 V)/850 (Model equipped with SPARC64 V) | *2 | PW-CMZ |
| PRIMEPOWER1500 (Model equipped with SPARC64 GP) | *2 | PW-CL |
| PRIMEPOWER900/1500 (Model equipped with SPARC64 V)/2500 | *2 | PW-CLZ |
| PRIMEPOWER800/1000/2000 GP7000F Models 1000/2000 | | PW-K |
| PRIMEPOWER200/400/600 GP7000F Models 200/200R/400/400A/400R/600/600R | | PW-T |
| PRIMEPOWER1 | | PW-U |

- *1. PRIMEPOWER650 (Model equipped with SPARC64 GP)/850 (Model equipped with SPARC64 GP) are supported from Enhanced Support Facility 2.0.
 - *2. PRIMEPOWER250/450/650 (Model equipped with SPARC64 V)/850 (Model equipped with SPARC64 V)/900/1500/2500 are supported from Enhanced Support Facility 2.3.
 - *3. SPARC Enterprise T1000/T2000/T5120/T5220/M4000/M5000/M8000/M9000 are supported from Enhanced Support Facility 3.0.
 - *4. SPARC Enterprise T5140/T5240 are supported from Enhanced Support Facility 3.0.1.
 - *5. SPARC Enterprise T5440/M3000 are supported from Enhanced Support Facility 3.1.
 - *6. SPARC T3-1/T3-2/T3-4 are supported from Enhanced Support Facility 3.2.
- Enhanced Support Facility 3.0 or newer supports SPARC Enterprise and PRIMEPOWER250/450/650/850/900/1500/2500.
 - Enhanced Support Facility 2.6 is the latest version of Enhanced Support Facility that supports GP7000F models 200/200R/400/400A/400R/600/600R/1000/2000 and PRIMEPOWER1/200/400/600/800/1000/2000.
 - The name of Enhanced Support Facility has been used since version 1.3. It was called the Basic Software Extension before the version 1.3.
 - The version number of the Enhanced Support Facility installed in your system can be confirmed by getting that of FJSVbse package with the pkgparam(1M) command.
pkgparam FJSVbse VERSION
 - Enhanced Support Facility 3.1 or later is accompanied by a DVD-ROM in replacement of a CD-ROM.

Chapter 2 How countermeasures are performed against security problems

2.1 For Basic Software Extension 1.0 to Enhanced Support Facility 1.4

- A patch, "R00081," has been released for Enhanced Support Facility 1.4 or earlier versions in order to provide the same security level as Enhanced Support Facility 1.5.

2.2 For Enhanced Support Facility 1.7

- A patch (911131-03 or later, R01081 or later) was issued to fix the security problem of the access privilege of the semaphore which was made by FJSVsirms for Enhanced Support Facility 1.7/ Enhanced Support Facility 1.7.1.

2.3 For Enhanced Support Facility 2.1 / Enhanced Support Facility 2.2

- The security problem, where a process made from FJSVrrda remains as zombie process, is fixed by the patch (911993-01,R02081) correction.
- About the Enhanced Support Facility 2.2, the security problem is already fixed.

Chapter 3 About packages

Components and packages contained in the Enhanced Support Facility are shown in the table below. Packages which are actually installed vary depending upon the hardware platforms or the revision of Solaris OS. Please refer to Installation Guide of each version for more details.

In this document, System Control Facility driver is abbreviated to SCF driver hereinafter.
Enhanced Support Facility Package list.

| No. | Components | Abbreviation | Package name | Features |
|---|--|------------------------------------|---|---|
| 1 | Enhanced Support Facility information management | Common to all types | FJSVbse | Enhanced Support Facility Information Management |
| | | | | Effective from Basic Software Extension 1.0 |
| 2 | DR Command | PW-CL PW-CLZ PW-K | FJSVdremd | Dynamic Reconfiguration (Solaris 8 OS) |
| | | | | Enhanced Support Facility 1.7 through 3.1 |
| 3 | NGDR Command | PW-CL PW-CLZ PW-K | FJSVdr | Dynamic Reconfiguration (Solaris 9 OS or later) |
| | | | | Enhanced Support Facility 2.2 through 3.1 |
| 4 | IKPDR Command | CW | FJSVdropl | Dynamic Reconfiguration (Solaris 10 OS or later) |
| | | | | Effective from Enhanced Support Facility 3.0 or later |
| 5 | SCF Driver | PW-CM PW-CMZ PW-CL PW-CLZ | FJSViomp FJSVscd3 FJSVscr3 FJSVscu3 FJSVscuj3 | IOMP Common Framework Level 2 |
| | | | | SCF Driver (Solaris 8, 9, 10 OS) |
| | | | | System Control (root) |
| | | | | System Control (user) |
| | | PW-P | FJSViomp FJSVpscd FJSVpscr FJSVpscu FJSVpscuj | IOMP Common Framework Level 2 |
| | | | | SCF Driver (Solaris 8, 9, 10 OS) |
| | | | | System Control (root) |
| | | PW-K | FJSViomp FJSVscd2 FJSVscr2 FJSVscu2 FJSVscuj2 | IOMP Common Framework Level 2 |
| | | | | SCF Driver (Solaris 7, 8, 9, 10 OS) |
| System Control (root) | | | | |
| System Control (user) | | | | |
| FJSVscd1 FJSVscr1 FJSVscu1 FJSVscuj1 | SCF Driver (Solaris 2.6 OS) | | | |
| | System Control (root) | | | |
| | System Control (user) | | | |
| | System Control Japanese locale | | | |
| | Enhanced Support Facility 2.0 through 3.1 | | | |
| | Enhanced Support Facility 2.3 through 3.1 | | | |
| | Enhanced Support Facility 1.4 through 2.6 | | | |
| | Enhanced Support Facility 1.4 through 2.6 | | | |

| No. | Components | Abbreviation | Package name | Features | | |
|-----|--|--------------|-----------------------|---|---|--|
| | | PW-T | FJSVscdx.us | SCF Driver (64 bit) | | |
| | | | FJSVscd.us | SCF Driver (32 bit) | | |
| | | FJSVscr.us | System Control (root) | | | |
| | | FJSVscu.us | System Control (user) | | | |
| | | | FJSVscuja | System Control Japanese locale | | |
| | | | | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 | | |
| | | PW-U | FJSVlscdx | SCF Driver (Solaris 8, 9, 10 OS) | | |
| | | | FJSVlscd | SCF Driver (64 bit) | | |
| | | | FJSVlscr | SCF Driver (32 bit) | | |
| | | | FJSVlscu | System Control (root) | | |
| | | | FJSVlscuj | System Control (user) | | |
| | | | | System Control Japanese locale | | |
| | | | | Enhanced Support Facility 1.7 through 2.6 | | |
| 6 | SCF/SCSI fault LED support option | CW | FJSVscfsc | SCF/SCSI fault LED support option (Solaris 10 OS) | | |
| | | | | Effective from Enhanced Support Facility 3.0 or later | | |
| 7 | SunVTS, FJVTS | PW-P | SUNWvts | SunVTS | | |
| | | | SUNWvtsmn | SunVTS Man Pages | | |
| | | PW-CM | FJSVvts | FJVTS | | |
| | | PW-CMZ | | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.1 | | |
| | | PW-CL | SUNWvtsx | SunVTS (64 bit) | | |
| | | PW-CLZ | | Effective from Basic Software Extension 1.2, to Enhanced Support Facility 3.1 | | |
| | | PW-K | | | | |
| | | PW-T | | | | |
| | | PW-U | | | | |
| 8 | Web-Based Admin View/WWW Server for Admin View | PW-P | FJSVwvcnf | WWW Server for Admin View | | |
| | | | PW-CM | FJSVwvbs | Web-Based Admin View | |
| | | | PW-CMZ | | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 | |
| | | | PW-CL | | | |
| | | PW-CLZ | | | | |
| | | PW-K | | | | |
| | | PW-T | | | | |
| | | PW-U | | | | |
| 9 | Machine Administration | LE | FJSVmadm | Machine Administration common | | |
| | | | | Enhanced Support Facility 2.2 or later | | |
| | | | | PW-P | | |
| | | | | PW-CM | | |
| | | | | PW-CMZ | | |
| | | | | PW-CL | | |
| | | PW-CLZ | | | | |
| | | PW-K | | | | |
| | | PW-T | | | | |
| | | PW-U | | | | |
| | | PW-CM | FJSVcmnd | Machine Admin (node) | | |
| | | | PW-CMZ | Enhanced Support Facility 2.0 through 3.1 | | |
| | | | PW-CL | | | |
| | | PW-CLZ | | | | |
| | | PW-P | FJSVpmnd | Machine Administration (node) | | |
| | | | | Enhanced Support Facility 2.3 through 3.1 | | |

| No. | Components | Abbreviation | Package name | Features |
|-----|----------------|---|---|--|
| | | CW | FJSVamadm | Machine Admin (Solaris 10 OS) |
| | | | FJSVamcl | Enhanced Support Facility 3.0 or later |
| | | LE | FJSVamle | Machine Admin (Solaris 10 OS) |
| | | | | Enhanced Support Facility 3.0 or later |
| | | PW-P | FJSVmaom | Machine Admin Online Manual |
| | | PW-CM | | Enhanced Support Facility 1.5 through 3.1 |
| | | PW-CMZ | FJSVmasv | Machine Admin (server) |
| | | PW-CL | | Effective from Basic Software Extension 1.0, |
| | | PW-CLZ | | to Enhanced Support Facility 3.0.1 |
| | | PW-K | | |
| | | PW-T | | |
| | | PW-U | | |
| | | PW-K | FJSVkmsv | Machine Admin (server) |
| | | | FJSVkmnd | Machine Admin (node) |
| | FJSVkmom | Machine Admin Online Manual | | |
| | | Enhanced Support Facility 1.5 through 2.6 | | |
| | | Even Enhanced Support Facility 1.8 is effective to FJSVkmom. It was integrated to the FJSVmasv and FJSVmaom from Enhanced Support Facility 2.0. | | |
| | PW-T | FJSVmand | Machine Admin (node) | |
| | PW-U | | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 | |
| 10 | Remote Support | LE | FJSVrlib | REMCS Common Library |
| | | PW-P | FJSVragt | REMCS Auto Application Support |
| | | PW-CM | FJSVrmaos | REMCS System Monitor Agent |
| | | PW-CMZ | | Enhanced Support Facility 1.4 or later |
| | | PW-T | | |
| | | PW-U | | |
| | | LE | FJSVrrda | REMCS Resource Delivery Agent |
| | | PW-P | | Enhanced Support Facility 1.4 or later |
| | | PW-CM | FJSVracm | REMCS Advanced Agent Installer |
| | | PW-CMZ | | Enhanced Support Facility 2.1 or later |
| | | PW-CL | | |
| | | PW-CLZ | | |
| | | PW-K | | |
| | | PW-T | | |
| | | PW-U | | |
| | | Common to all types | FJSVsirms | Software REMCS |
| | | | | Enhanced Support Facility 1.5 or later |
| | | PW-CM | FJSVcmrm | Machine Admin REMCS I/F |
| | | PW-CMZ | | Enhanced Support Facility 2.0 through 3.1 |
| | | PW-CL | FJSVcmrm2 | Machine Admin REMCS I/F |
| | | PW-CLZ | | Enhanced Support Facility 2.3 through 3.1 |
| | | PW-P | FJSVpmm | Machine Administration REMCS I/F |
| | | | | Enhanced Support Facility 2.3 through 3.1 |
| | | CW | FJSVamm | REMCS (Solaris 10 OS) |
| | | | | Enhanced Support Facility 3.0 or later |
| | | LE | FJSVlmm | REMCS (Solaris 10 OS) |
| | | | | Enhanced Support Facility 3.0 or later |

| No. | Components | Abbreviation | Package name | Features |
|-----|------------------------------|--|---------------------------|---|
| | | PW-K | FJSVkmrm | Machine Admin REMCS I/F |
| | | | | Enhanced Support Facility 1.5 through 2.6 |
| | | PW-T | FJSVmarm | Machine Admin REMCS I/F |
| | | PW-U | | Enhanced Support Facility 1.5 through 2.6 |
| 11 | Automatic Power Control | CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVapcs | Auto Power Control System Effective from Basic Software Extension 1.0 or later |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVapcww | APCS Admin View Enhanced Support Facility 1.3 through 3.0.1 |
| 12 | Server Default Configuration | Common to all types | FJSVdef | Server Default Configuration Effective from Basic Software Extension 1.0 or later |
| | | LE CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVssf | Server Support Feature Effective from Basic Software Extension 1.0 or later |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVwarn.us | System Warning Daemon Enhanced Support Facility 1.4 through 3.1 |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K | FJSVpnlx.us FJSVpnl.us | Panel Driver (64 bit) Panel Driver (32 bit) Enhanced Support Facility 1.4 through 3.1 |
| 13 | System Data Output Tool | Common to all types | FJSVsnap | System Data Output Tool |
| | | | | Effective from Basic Software Extension 1.0 or later |

| No. | Components | Abbreviation | Package name | Features |
|---|------------------------------|--|--------------|--|
| 14 | License Manager | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FSUNlic | FLEXlm License Manager |
| | | | | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| 15 | Crash Dump Assistant | Common to all types | FJSVdmp | Crash Dump Assistant |
| | | | | Enhanced Support Facility 1.3 or later |
| 16 | Auto Dump Analyze Tool | Common to all types | FJSVana | Auto Dump Analyze Tool |
| | | | | Enhanced Support Facility 2.2 or later |
| 17 | Drivers for high-reliability | PW-CL PW-CLZ | FJSVsec | Serial Driver (Solaris 8 OS or later) |
| | | | | Enhanced Support Facility 2.3 through 3.1 |
| | | PW-K | FJSVsef | Serial (se) Driver (Solaris 2.6 OS) |
| | | | | Enhanced Support Facility 1.5 through 2.6 |
| | | | | FJSVse |
| Enhanced Support Facility 1.4 through 2.6 | | | | |
| 18 | CPU Performance Counter | PW-CM PW-K PW-T PW-U | FJSVcpc | CPU Performance Counter for SPARC64 GP(Solaris 8 6/00, 10/00, 1/01, 4/01, 7/01 OS) |
| | | | | Enhanced Support Facility 1.7 through 2.6 |
| 19 | CPU Patrol Diagnosis | PW-CM PW-CL PW-K PW-T | FJSVepupd | CPU Patrol Diagnosis |
| | | | | Enhanced Support Facility 1.8 through 2.6 Supports only the SPARC64 GP processor. |
| 20 | G-LAN error notification | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVgidad | GigabitEthernet interface error notification |
| | | | | Enhanced Support Facility 2.4 through 3.1 |
| 21 | G-LAN MTU setting | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVgidr | The script to set MTU changes when using JumboFrame for GigabitEthernet interface. |
| | | | | Enhanced Support Facility 2.4 through 3.1 |

| No. | Components | Abbreviation | Package name | Features |
|-----|-----------------------------------|--|--------------|--|
| 22 | HCP information management | PW-P | FJSVhcp | Hardware Control Program |
| | | | | Enhanced Support Facility 2.3 through 3.1 |
| 23 | System Parameter Diagnosis | LE CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVparam | System parameters of the Solaris OS are diagnosed. |
| | | | | Enhanced Support Facility 2.4 or later |
| 24 | Tape Driver Configuration Tool | Common to all types | FJSVdenf | Set the driver definition of the tape device automatically. |
| | | | | Enhanced Support Facility 2.5 or later |
| 25 | Patch Information collect command | Common to all types | FJSVpmgc | The tool allows users to review installed patches, browse and download applicable patches not installed, as well as create a collection of patches to be installed at the same time. |
| | | | | Enhanced Support Facility 2.6 or later |
| 26 | Console flow control canceller | LE CW | FJSVeflw | Monitors whether a console device has come under flow control. |
| | | | | Enhanced Support Facility 3.1 or later |

- FJSVtserv, FJSVobase and FJSVsimo have been deleted from Enhanced Support Facility 1.4.
- FSUNnet, FJSVhme and FJSVglm have been deleted from Enhanced Support Facility 1.7.
- FJSVmaom, FSUNlic, FJSVcpc and FJSVcpupd have been deleted from Enhanced Support Facility 3.0.
- FJSVwvcnf, FJSVwvbs, FJSVmasv, and FJSVapcwv have been deleted from Enhanced Support Facility 3.1.
- FJSVdremd, FJSVdr, FJSViom, FJSVscd3, FJSVscr3, FJSVscu3, FJSVscuj3, FJSVpscd, FJSVpscr, FJSVpsc, FJSVpscuj, SUNWvts, SUNWvtsmn, SUNWvtsx, FJSVvts, FJSVmaom, FJSVemnd, FJSVcmrm, FJSVcmrm2, FJSVpmnd, FJSVpmm, FJSVpnlx.us, FJSVpnl.us, FJSVwarn.us, FJSVsec, FJSVgidad, FJSVgidr, and FJSVhcp have been deleted from Enhanced Support Facility 3.2.

Note: The following are the names used for remote maintenance function.

| | | |
|-----------------------------|-------------|-------------------|
| Name of service: | SupportDesk | (name of product) |
| Tool that provides service: | REMCS | (name of tool) |

Chapter 4 The rc scripts and daemons

The rc scripts registered and the daemon processes started in the Enhanced Support Facility are explained here. Only start-up scripts are described.

In the following tables, "Suppressible" indicates whether the script can be disabled (for example, by removing the file). "Effect of suppression" explains the impacts by the script being disabled.

4.1 /etc/rcS.d

• S50FJSVmadmclr

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVmadm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 or later |
| Function | Delete temporary files that Machine Administration uses. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | The following are the same. One of them works depending on how to start. /etc/rcS.d/S50FJSVmadmclr /etc/rc1.d/S50FJSVmadmclr |

• S60fjsv,se_devlinks

| Component | Drivers for high-reliability |
|-----------------------------------|---|
| Package name | FJSVse (PW-K)/FJSVsef (PW-K)/FJSVsec (PW-CL,PW-CLZ) |
| Support Solaris OS | FJSVsef: Solaris 2.6 OS FJSVse: Solaris 7 OS or later FJSVsec: Solaris 8 OS or later |
| Support models | PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | FJSVse: Enhanced Support Facility 1.4 through 2.6 FJSVsef: Enhanced Support Facility 1.5 through 2.6 FJSVsec: Enhanced Support Facility 2.3 through 3.1 |
| Function | Create a special file for a serial port except that for the console connection. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes (Solaris 9 OS or later) |
| Effect of suppression | Serial ports other than a console serial port may not be able to be used. |
| Remarks | |

• S90FJSVscfdaemon

| Component | SCF driver |
|-----------------------------------|--|
| Package name | FJSVscr.us (PW-T)/FJSVscr1 (PW-K)/FJSVscr2 (PW-K)/FJSVlscr (PW-U)/FJSVscr3 (PW-CM,PW-CMZ, PW-CL,PW-CLZ)/FJSVpscr (PW-P) |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.1 |
| Function | Starts a daemon to manage the RAS-control-device (SCF) |
| Daemon started | pwrctrl (Refer to the User's Guide) |
| Port used | None |
| Suppressible | No |
| Effect of suppression | It causes a serious effect for hardware maintenance. Hardware failures caused by an electric power supply, an abnormal temperature or a fan, which are observed by the RAS-control device (SCF), are not monitored at all. |
| Remarks | |

4.2 /etc/rc1.d

- S50FJSVmadmclr

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVmadm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 or later |
| Function | Delete temporary files that Machine Administration uses. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | The following are the same. One of them works depending on how to start. /etc/rcS.d/S50FJSVmadmclr /etc/rc1.d/S50FJSVmadmclr |

4.3 /etc/rc2.d

• S19FJSVdmpsnap

| Component | Crash dump assistant |
|-----------------------------------|--|
| Package name | FJSVdmp |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | In terms of Solaris 2.6 OS, it has been released since the Enhanced Support Facility 1.5. In terms of Solaris 7 OS and Solaris 8 OS, it has been released since the Enhanced Support Facility 1.4. In terms of Solaris 9 OS, it has been released since the Enhanced Support Facility 2.2. |
| Function | In saving "crash dump" information after a system panic, the system information, which is output with the fjsnap command, is stored into "/var/crash". |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance. Immediately after a system panic, the system information in such a file as "/var/adm/message," which is required to analyze a panic cause, is not automatically output. |
| Remarks | Since this file has much to do with "/etc/rc3.d/S76FJSVdmpadm," you must delete both files to suppress the function. |

• S30FJSVmadmclr2

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVmadm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 or later |
| Function | Delete temporary files that Machine Administration uses. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes (Solaris 10 OS or later) |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | This script terminates without doing anything on Solaris 10 OS. |

• S39FJSVevsnd

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVkmrm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 2.2 through 2.6 |
| Function | Inform hardware failure to System Management Console. |
| Daemon started | evsndd: Reports hardware errors. |
| Port used | A port assigned by the operating system. |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | The number of resident processes evsndd : The number of processes: 1-2 (When daemon produces child process, the number of processes may increase by one momentarily.) |

• S39FJSVmarm

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVmarm, FJSVkmrm (Effective before Enhanced Support Facility 2.0) FJSVmarm(PW-U,PW-T),FJSVkmrm(PW-K),FJSVlmrm(LE) |
| Support Solaris OS | Solaris 2.6 OS or later(FJSVmarm, FJSVkmrm) Solaris 10 OS or later(FJSVlmrm) |
| Support models | LE,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 2.6(FJSVmarm, FJSVkmrm) Enhanced Support Facility 3.0 or later (FJSVlmrm) |
| Function | Notification and connection services are given for the SupportDesk service |
| Daemon started | remotereportd : REMCS report is performed rsched : REMCS-regular-connection is managed pipeopener : supports the remotereportd |
| Port used | None |
| Suppressible | Yes (only when no SupportDesk service agreement is executed.) |
| Effect of suppression | You are unable to make use of the SupportDesk service |
| Remarks | remotereportd, rsched, and pipeopener are not started by PW-K, PW-CM, or PW-CMZ. PW-K does not use this rc script since Enhanced Support Facility 2.1 or later. |

• S40FJSVcmrm

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVcmrm |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Function | Initialization are given for the SupportDesk service |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes (only when no SupportDesk service agreement is executed.) |
| Effect of suppression | You are unable to make use of the SupportDesk service. |
| Remarks | |

• S40FJSVevhand

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVmand, FSVkmnd, FJSVcmnd, FJSVpmnd |
| Support Solaris OS | Solaris 2.6 OS, Solaris 7 OS, Solaris 8 OS, Solaris 9 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.2, to Enhanced Support Facility 3.1 |
| Function | Alerts hardware errors through monitoring syslog Messages |
| Daemon started | evhandsd: Extracts messages to be monitored in syslog messages. (This daemon is started by SVC in the case of Solaris 10.) evmond: Alerts an abnormality based on the messages extracted. (This daemon is started by SVC in the case of Solaris 10.) scfdrvrcvd: Extracts messages to be monitored in SCF events (only for PW-CM, PW-CMZ, PW-CL or PW-CLZ). (Enhanced Support Facility 2.2 or later) (This daemon is started by SVC in the case of Solaris 10.) |
| Port used | None |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | The number of resident processes evhandsd: The number of processes: 2 evmond: The number of processes: 1 scfdrvrcvd: The number of processes: 1 (When each daemon produces child process,the number of processes may increase by one momentarily.) |

• S40FJSVpmm

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVpmm |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Function | Initialization are given for the SupportDesk service |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes (only when no SupportDesk service agreement is executed.) |
| Effect of suppression | You are unable to make use of the SupportDesk service. |
| Remarks | |

• S70FJSVinnet

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVssf |
| Support Solaris OS | Solaris 7 OS, Solaris 8 OS, Solaris 9 OS |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Function | Records errors occurred on TCP/IP |
| Daemon started | limstrerr (This daemon is started by SVC in the case of Solaris 10.) |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance. There is a possibility of affecting the troubleshooting concerning a problem occurred on a LAN due to the reason that a part of error information on TCP/IP is not automatically recorded. |
| Remarks | This component has been released from Solaris 7 OS. This component has not been released for Solaris 2.6 OS. |

• S72SystemWalkerSSInit

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVrmaos, FJSVragt |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.1 or later |
| Function | REMCS agent (reports a failure occurrence to Fujitsu support center) |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You are unable to make use of the SupportDesk service. |
| Remarks | This script runs only when a registration for the SupportDesk service is made. Nothing is done without a registration. |

• S73rmagt.syslog

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVragt |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 or later |
| Function | REMCS agent (software-monitoring) |
| Daemon started | f3crsyslog |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You are unable to take advantage of the SupportDesk service. |
| Remarks | This script works only when a registration for the SupportDesk is made and nothing is performed without a registration. Daemons are effective before Enhanced Support Facility 2.0. |

• S75FJSVsavecore

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 2.6 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Function | Since the "/etc/rc2.d/S20syssetup" in Solaris 2.6 OS has been released with it made invalid, it is made valid by this component. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance because in the Solaris 2.6 OS, "crash dump" information is not automatically saved after a system panic. You should make it valid by modifying "/etc/rc2.d/S20syssetup" in the Solaris 2.6 OS. |
| Remarks | Applicable only for Solaris 2.6 OS. It has been made valid since Solaris 7 OS or later release. |

• S80FJSVparam

| Component | System Parameter Diagnosis |
|-----------------------------------|---|
| Package name | FJSVparam |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | LE,CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.4 or later |
| Function | System parameters of the Solaris OS are diagnosed. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | System parameters are not diagnosed. |
| Remarks | |

• S80FJSVwvbs

| Component | Web-based Admin View |
|-----------------------------------|---|
| Package name | FJSVwvbs |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 |
| Function | A communication infrastructure for Web applications |
| Daemon started | <p>Java (java -mx32m com.fujitsu.webview.base*)</p> <p>A communication feature between a server and a client used when the Machine Administration and the like run in GUI mode using the Web-based Admin View.</p> <p>wvrespawn: It restarts the java daemon automatically when it terminates abnormally.</p> <p>wvCIEventd: It is a daemon for notifying the cluster event for SynfinityCluster and PRIMECLUSTER. It starts up when using cluster operation management of SynfinityCluster 1.0.4 or earlier or using PRIMECLUSTER.</p> <p>wvMaEventd: It reports machine administration events for the SynfinityCluster and PRIMECLUSTER. It is started when the Web-based Admin View for SynfinityCluster or PRIMECLUSTER are being used.</p> <p>wvCmdInvoker: Deamon for command execution. It executes the command instead of Web-Based Admin View.</p> |
| Port used | <p>fjwv_g 9396/udp # FJSVwvbs group RMI</p> <p>fjwv_n 9397/tcp # FJSVwvbs node RMI</p> <p>fjwv_s 9398/tcp # FJSVwvbs server RMI</p> <p>fjwv_c 9399/tcp # FJSVwvbs client RMI</p> |
| Suppressible | Yes |
| Effect of suppression | The way of suppressing the function and an effect by that are described in the Installation Guide. Please refer to "- Changes in the /etc/inet/services definition file" in Section 7.2, "Details of the Files Changed by Enhanced Support Facility," in this document together with the Installation Guide. |
| Remarks | |

• S88FSUNlicense

| Component | License Manager |
|-----------------------------------|---|
| Package name | FSUNlic |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| Function | FLEXlm License Manager (Refer to the User's Guide.) |
| Daemon started | The following daemons are started when license-file contains license information. 1) lmgrd 2) J-FUJITSU |
| Port used | 27000 (default). You may designate a port number to use when registering a license-server using the setup_license command attached to the FSUNlic package. A recommendable value for it is from 27000 through 27009. |
| Suppressible | Yes, if software which requires the License Manager is not used. Neither the Enhanced Support Facility nor the Solaris OS operating system use it. |
| Effect of suppression | You are unable to use the License Manager. The software which needs the License Manager is impossible to run. |
| Remarks | |

• S90FJSVconspath

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVkmnd, FJSVcmnd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Function | Controls redundant console path. |
| Daemon started | conspathd (for PW-K, PW-CL and PW-CLZ) (Solaris 8 OS or later) Sends the control code used for console multi-path. |
| Port used | None |
| Suppressible | Yes, if the console path is not redundant configuration. Effect of suppression Redundant console path configuration cannot be used. |
| Effect of suppression | When the FJSVse (PW-K) or FJSVsec (PW-CL, PW-CLZ) is removed on Solaris 9 OS or later, suppress this script. |
| Remarks | The number of resident processes conspathd: The number of processes: 2 (When daemon produces child process, the number of processes may increase by one momentarily.) |

• S90FJSVscf

| Component | SCF driver |
|-----------------------------------|---|
| Package name | FJSVscr.us (PW-T)/FJSVscr1 (PW-K)/FJSVscr2 (PW-K)/FJSVlscr (PW-U)/FJSVscr3 (PW-CM, PW-CMZ, PW-CL, PW-CLZ,)/FJSVpscr (PW-P) |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.1 |
| Function | Collects hardware error information logged by the RAS-control-device (SCF). In addition, the monitoring of the main processor is started to RAS control device (SCF). |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | You have a difficulty in hardware maintenance because you are unable to collect hardware error information logged by the RAS control device (SCF). In addition, the main processor is not monitored with RAS control device. |
| Remarks | |

• S90FJSVscfsc

| Component | SCF/SCSI fault LED support option |
|-----------------------------------|--|
| Package name | FJSVscfsc |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Function | Notify the status of your system. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | There is a possibility that a problem occurs in monitoring the status of your system by XSCF. Also RCI may stop notifying the status of your system and a switchover of a cluster system may be delayed. |
| Remarks | |

• S91FJSVcmd

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVcmd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Function | The removable disk such as CD-ROM and DVD is judged. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | Machine Administration cannot correctly make hardware configuration data. |
| Remarks | for PW-CL This component has been released since Enhanced Support Facility 2.2 or later. for PW-CMZ and PW-CLZ This component has been released since Enhanced Support Facility 2.3 or later. |

• S91FJSVconspath

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVcmd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 1.7 through 2.2 |
| Function | Controls redundant console path. |
| Daemon started | conspatd (for PW-K) (Solaris 8 OS or later) Sends the control code used for console multi-path. |
| Port used | None |
| Suppressible | Yes, if the console path is not redundant configuration. |
| Effect of suppression | Redundant console path configuration cannot be used. |
| Remarks | When the FJSVse (PW-K) is removed on Solaris 9 OS or later, suppress this script. The number of resident processes conspatd: The number of processes: 2 (When daemon produces child process, the number of processes may increase by one momentarily.) |

• S91FJSVmand

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVmand, FJSVamle |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 or later |
| Function | The removable disk such as CD-ROM and DVD is judged. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | Machine Administration cannot correctly make hardware configuration data. |
| Remarks | |

• S97FJSVmadm

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVpmnd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.4 through 3.1 |
| Function | Monitors hardware errors and reports them. |
| Daemon started | <p>hardmond: Monitors hardware errors based on information other than syslog messages. (ex. monitoring of cleaning tape devices)</p> <p>pmndinitd: Manages the function of Machine Administration.</p> <p>hcd: Manages the hardware configuration information.</p> <p>madm_logd: Manages the log information.</p> <p>scfeventd: Receives the error events from SCF.</p> |
| Port used | None |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | <p>The number of resident processes</p> <p>hardmond: The number of processes: 1</p> <p>pmndinitd: The number of processes: 1</p> <p>hcd: The number of processes: 1</p> <p>madm_logd: The number of processes: 1</p> <p>scfeventd: The number of processes: 1</p> <p>(When each daemon produces child process, the number of processes may increase by one momentarily.)</p> |

• S98FJSVmadm

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVmand, FSVkmnd, FJSVcmnd, FJSVamle, FJSVpmnd (only for Enhanced Support Facility 2.3) |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U Only Enhanced Support Facility 2.3 for PW-P. |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Function | Monitors hardware errors and reports them. |
| Daemon started | <p>hardmond: Monitors hardware errors based on information other than syslog messages. (ex. monitoring of cleaning tape devices)</p> <p>evsndd: Reports hardware errors. (only for PW-CL, PW-CLZ, and PW-K. Effective before Enhanced Support Facility 2.1 for PW-K)</p> <p>del_filed: Remove temporary files created by machine administration. (only for PW-CM, PW-CMZ, PW-CL and PW-CLZ).</p> <p>mc_evlog_updatecfr: Create hardware configuration data (only for PW-CM, PW-CMZ, PW-CL and PW-CLZ).</p> <p>pmndinitd: Manages the function of Machine Administration (only for PW-P).</p> <p>hcd: Manages the hardware configuration information (only for PW-P).</p> <p>madm_logd: Manages the log information (only for PW-P).</p> <p>scfeventd: Receives the error events from SCF (only for PW-P).</p> |
| Port used | A port assigned by the operating system (only for PW-CL, PW-CLZ, and PW-K). Effective before Enhanced Support Facility 2.1 for PW-K). |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | <p>The number of resident processes</p> <p>hardmond: The number of processes: 1</p> <p>evsndd The number of processes: 1-2</p> <p>del_filed The number of processes: 1</p> <p>mc_evlog_updatecfr: The number of processes: 1</p> <p>pmndinitd: The number of processes: 1</p> <p>hcd: The number of processes: 1</p> <p>madm_logd: The number of processes: 1</p> <p>scfeventd: The number of processes: 1</p> <p>(When each daemon produces child process,the number of processes may increase by one momentarily.)</p> |

• S99apcs

| Component | Automatic Power Control |
|-----------------------------------|--|
| Package name | FJSVapcs |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Function | Registers power-off jobs or schedule-updating jobs using the Automatic Power Control into the cron. |
| Daemon started | The following daemon is started when you select the way of not using the cron at the version of Enhanced Support Facility 1.6 or later. /opt/FJSVapcs/sbin/apcsat |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | Automatic Power Control is not used. |
| Remarks | In the Enhanced Support Facility 1.6 or later version, you may specify with the apcschmod command whether you use either the cron or the apcsat daemon. The cron is always used in the Enhanced Support Facility 1.5 or earlier version. |

• S99FJSVcmrm

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVcmrm |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Function | Notification and connection services are given for the SupportDesk service |
| Daemon started | rc_get_fifo : REMCS report is performed rc_schedule : REMCS-regular-connection is managed pipeopener : supports the rc_get_fifo |
| Port used | None |
| Suppressible | Yes (only when no SupportDesk service agreement is executed) |
| Effect of suppression | You are unable to make use of the SupportDesk service |
| Remarks | |

• S99FJSVcpupd

| Component | CPU Patrol Diagnosis |
|-----------------------------------|---|
| Package name | FJSVcpupd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-CM,PW-CL,PW-K,PW-T |
| Support Enhanced Support Facility | Enhanced Support Facility 1.8 through 2.6 |
| Function | Controls execution of CPU patrol diagnostic, and reports errors. |
| Daemon started | The following daemon is started when you enable the CPU patrol diagnostic. The CPU patrol diagnostic is disabled in the default setting. /opt/FJSVcpupd/lib/fjptld |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | The CPU diagnostic is not performed. |
| Remarks | |

• S99dcnf

| Component | Tape Driver Configuration Tool |
|-----------------------------------|---|
| Package name | FJSVdcnf |
| Support Solaris OS | Solaris 8 OS or earlier |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Function | To automatically recognize tape devices that have been reconfigured, this script automatically reboots the system again during system reboot processing following execution of fjcnsfset(1M). |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | Automatic recognition of reconfigured tape devices is no longer possible. |
| Remarks | This script runs only during system reboot processing after executing fjcnsfset(1M) to reconfigure tape devices. In all other cases, nothing is done. |

• S99FJSVlogadm

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 9 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 2.2 or later |
| Function | Prevents a system volume from being overloaded by log file expansion. |
| Daemon started | None . However, similar processes are periodically invoked by the crontabs of "root". root: 30 3 * * 0 if [! -f /var/adm/pacct]; then /usr/sbin/logadm ... |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | No monitoring for logfile-expansion is made. |
| Remarks | The conditions to rotate the log files are described in Section 3.2, "Server Default Configuration," in the User's Guide. The system that needs to save log files for a long term for security reasons, you need to build the similar feature instead. |

• S99FJSVlogclear

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 2.6 OS, Solaris 7 OS, Solaris 8 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.1 or later |
| Function | Prevents a system volume from being overloaded by log file expansion. |
| Daemon started | None . However, similar processes are periodically invoked by the crontabs of "root" or "adm". root: 33 3 * * 0 /opt/FJSVdef/sbin/chkslog VOLDLOG SULONG ... adm: 30 3 * * 0 /opt/FJSVdef/sbin/chkslog WTMP |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | No monitoring for logfile-expansion is made. |
| Remarks | The conditions to rotate the log files are described in Section 3.2, "Server Default Configuration," in the User's Guide. The system that needs to save log files for a long term for security reasons, you need to build the similar feature instead. |

• S99FJSVpmm

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVpmm |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Function | Notification and connection services are given for the SupportDesk service |
| Daemon started | rc_get_fifo : REMCS report is performed rc_schedule : REMCS-regular-connection is managed pipeopener : Supports the rc_get_fifo |
| Port used | None |
| Suppressible | Yes (only when no SupportDesk service agreement is executed) |
| Effect of suppression | You are unable to make use of the SupportDesk service. |
| Remarks | |

• S99FJSVwarn

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVwarn |
| Support Solaris OS | Solaris 2.6 OS, Solaris 7 OS, Solaris 8 OS, Solaris 9 OS |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 3.1 |
| Function | It monitors intermittent single-bit errors of CPU caches or memories and outputs messages into the syslog in the case of detecting a failure. |
| Daemon started | syswarnd (This daemon is started by SVC in the case of Solaris 10.) |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You have a difficulty in hardware maintenance. Because no message is output even if intermittent single-bit errors of CPU caches or memories frequently occur. |
| Remarks | |

• S99SystemWalkerSS

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVrmaos, FJSVragt |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 or later |
| Function | REMCS agent (reports a failure occurrence to Fujitsu support center) |
| Daemon started | f3crkrty, f3crkxsv |
| Port used | JMACT4 19369/tcp # FJSVrmaos REMCS SS-Agent JMACT5 19370/tcp # FJSVrmaos REMCS SS-Agent |
| Suppressible | Yes |
| Effect of suppression | You are unable to make use of the SupportDesk service. |
| Remarks | This script runs only when a registration for the SupportDesk service is made. Nothing is done without a registration. Daemons are effective before Enhanced Support Facility 2.0. |

4.4 /etc/rc3.d

• S76FJSVdmpadm

| Component | Crash Dump assistant |
|-----------------------------------|---|
| Package name | FJSVdmp |
| Support Solaris OS | Solaris2.6 or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | This file has been released since the Enhanced Support Facility 1.5 or later for Solaris 2.6 OS. In terms of Solaris 7 OS and Solaris 8 OS, it has been released since the Enhanced Support Facility 1.4 or later. In terms of Solaris 9 OS, it has been released since the Enhanced Support Facility 2.2 or later. |
| Function | The system information, which is output with the fjsnap command, is saved into "/var/crash" at the time of storing the crash-dump information after a panic. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance. Immediately after a system panic, the system information in such a file as "/var/adm/messages," which is required to analyze a panic cause, is not automatically output. |
| Remarks | If you suppress this file, you must also suppress /etc/rc2.d/S19FJSVdmpsnap. |

• S99FJSVmarm2

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVlrm |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | LE |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 + 914603-04 or later Enhanced Support Facility 3.0.1 + 914603-04 or later Enhanced Support Facility 3.1 + 914603-04 or later |
| Function | The power on/off event (PON/POFF event) is transmitted to REMCS Center when starting the system is stopped. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes (only when no SupportDesk service agreement is executed) |
| Effect of suppression | You are unable to make use of the SupportDesk service. |
| Remarks | |

- **S99FJSVwvcnf**

| Component | WWW Server for Admin View |
|-----------------------------------|--|
| Package name | FJSVwvcnf |
| Support Solaris OS | Solaris2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 |
| Function | The WWW server for the Web-Based Admin View only |
| Daemon started | wvcnfd: An http daemon by which the Machine Administration and the like run in GUI mode using the Web-based-Admin View. |
| Port used | fjwv-h 8081/tcp # FJSVwvcnf Web Port |
| Suppressible | Yes |
| Effect of suppression | The way of suppressing the function and an effect by that are described in the Installation Guide. Please refer to "- Changes in the /etc/inet/services definition file" in Section 7.2, "Details of the Files Changed by Enhanced Support Facility," in this document together with the Installation Guide. |
| Remarks | |

Chapter 5 About TCP/IP ports

5.1 Web-Based Admin View

It uses the following ports for communication with a client, administration server, and monitoring node and for display on a client.

| | | |
|--------|----------|-----------------------|
| fjwv-h | 8081/tcp | # FJSVwvcnf Web Port |
| fjwv-s | 9398/tcp | # FJSVwvbs server RMI |
| fjwv-n | 9397/tcp | # FJSVwvbs node RMI |
| fjwv-c | 9399/tcp | # FJSVwvbs client RMI |

As well as the ports listed above, the following TCP/UDP ports are used when SynfinityCluster and PRIMECLUSTER are used or when Web-Based Admin View and operation administration GUI are used in a redundant operation.

| | | |
|--------|----------|----------------------|
| fjwv-g | 9396/udp | # FJSVwvbs group RMI |
|--------|----------|----------------------|

Three TCP ports allocated dynamically by the operating system are used for inter-node communication.

Besides the ports shown above, JavaVM used by the Web-Based Admin View temporarily takes advantage of a port allotted dynamically by the operating system.

The way of suppressing the function and an effect by that are described in the section of "Environment setting after installation" in the Installation Guide for Enhanced Support Facility 3.0.1 and older.

Please refer to "- Changes in the /etc/inet/services definition file" in Section 7.2, "Details of the Files Changed by Enhanced Support Facility," in this document together with the Installation Guide.

5.2 Machine Administration (Only for PW-CL, PW-CLZ, PW-K)

It uses a port which is dynamically assigned by the operating system to communicate the system console.

5.3 Remote Support (REMCS) (Only for LE, PW-P, PW-CM, PW-CMZ, PW-CL, PW-CLZ, PW-K, PW-T and PW-U)

These are used to display the status of mails sent to Fujitsu support center.

| | | |
|--------|-----------|----------------------------|
| JMACT4 | 19369/tcp | # FJSVrmaos REMCS SS-Agent |
| JMACT5 | 19370/tcp | # FJSVrmaos REMCS SS-Agent |

The ports are used only when a registration for the SupportDesk service is made. You can change the port number to be used by adding them to "/etc/inet/services." The ports are not used since Enhanced Support Facility 2.1.

5.4 FLEXlm

You may specify a port to use when registering a license server with the setup license command attached to the FSUNlic package.

The recommendable value is from 27000 through 27009 and the default is 27000.

5.5 Crash Dump Assistant (FJSVdmp)

The package does not use the TCP/UDP port directly, however, it uses the port indirectly because of its use of NFS.

Chapter 6 About various log files

The log files generated by Enhanced Support Facility are listed below.

For more information such as information on disk space requirements, refer to the Installation Guide for the corresponding version of Enhanced Support Facility.

- **No.1: Enhanced Support Facility information management**

| Component | Enhanced Support Facility information management |
|-----------------------------------|---|
| Package name | FJSVbse |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Log file name | /opt/FJSVbse/etc/ esfinfo.data (Up to 2KB) install.log (Up to 2MB) |
| File capacity | 0byte to about 2MB (esfinfo.data 2KB/ install.log 2MB) |
| Allocation timing | During Enhanced Support Facility installation |
| Need for periodic deletion | No |
| Remarks | |

- **No.2: No log file is generated for the DR Command (component).**
- **No.3: No log file is generated for the NGDR Command (component).**
- **No.4: No log file is generated for the IKPDR Command (component).**

• No.5: SCF Driver

| Component | SCF Driver |
|-----------------------------------|---|
| Package name | FJSVscdx.us, FJSVscd.us, FJSVscr.us, FJSVscu.us, FJSVscuja |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-T |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| Log file name | /var/opt/FJSVhwr/scferrlog |
| File capacity | A multiple of 0 to 64bytes. The file needs to be deleted periodically. |
| Allocation timing | Occurrence of an SCF error |
| Need for periodic deletion | Yes |
| Remarks | |
| Log file name | /var/opt/FJSVhwr/scfpwrlog |
| File capacity | A multiple of 0 to 8bytes. The file needs to be deleted periodically. |
| Allocation timing | Start of the system |
| Need for periodic deletion | Yes |
| Remarks | Information on power-on and power-off recorded by SCF. A record is added to "/var/opt/FJSVhwr/scfpwrlog" every time the power is turned on or off. |
| Log file name | /var/opt/FJSVhwr/scf.dump |
| File capacity | 0byte to 384KB |
| Allocation timing | Detection of an error by SCF hardware |
| Need for periodic deletion | No |
| Remarks | When SCF hardware detects a local error and enters the halt or offline state, the SCF driver dumps the SCF memory data without modification. |
| Log file name | /var/opt/FJSVhwr/wdlog/wdlog.* 16KB x (number of CPUs) A number from 0 to 2 is assigned to * in order. Example: /var/opt/FJSVhwr/wdlog/wdlog.0 16KB x (number of CPUs) /var/opt/FJSVhwr/wdlog/wdlog.1 16KB x (number of CPUs) |
| File capacity | 16KB x number of CPUs for each file |
| Allocation timing | Entry of the CPU into the Watchdog Reset or RED mode state |
| Need for periodic deletion | No |
| Remarks | (Up to 500KB each) |
| Log file name | /var/opt/FJSVhwr/hltlog/hltlog.* (Up to 2MB) A number from 0 to 2 is assigned to * in order. Example: /var/opt/FJSVhwr/hltlog/hltlog.0 (Up to 2MB) /var/opt/FJSVhwr/hltlog/hltlog.1 (Up to 2MB) |
| File capacity | 0byte to 6MB (up to 2MB each) |
| Allocation timing | Start of the OS after a halt log event occurred |
| Need for periodic deletion | No |
| Remarks | |

- **No.6: No log file is generated for the SCF/SCSI fault LED support option (component).**

- **No.7: SunVTS, FJVTS**

SunVTS, FJVTS (SunVTS4.5 or later)

| Component | SunVTS, FJVTS | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|-------------------------------|--------------------|--------------------|--|---------------------------|--------------------|--|---------------------|--------------------|--|----------------------------|--------------------|--|-----------------|--------------------|--|------------------------|--------------------|
| Package name | SUNWvts, SUNWvtsmn, SUNWvtsx, FJSVvts | | | | | | | | | | | | | | | | | | |
| Support Solaris OS | Solaris 9 OS or later | | | | | | | | | | | | | | | | | | |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U | | | | | | | | | | | | | | | | | | |
| Support Enhanced Support Facility | Enhanced Support Facility 2.2 through 3.1 | | | | | | | | | | | | | | | | | | |
| Log file name | Default setting <table border="0"> <tr> <td><i>/var/opt/SUNWvts/logs/</i></td> <td>sunvts.info</td> <td>(Up to 1MB)</td> </tr> <tr> <td></td> <td>sunvts.info.backup</td> <td>(Up to 1MB)</td> </tr> <tr> <td></td> <td>sunvts.error</td> <td>(Up to 1MB)</td> </tr> <tr> <td></td> <td>sunvts.error.backup</td> <td>(Up to 1MB)</td> </tr> <tr> <td></td> <td>vtsk.err</td> <td>(Up to 1MB)</td> </tr> <tr> <td></td> <td>vtsk.err.backup</td> <td>(Up to 1MB)</td> </tr> </table> | <i>/var/opt/SUNWvts/logs/</i> | sunvts.info | (Up to 1MB) | | sunvts.info.backup | (Up to 1MB) | | sunvts.error | (Up to 1MB) | | sunvts.error.backup | (Up to 1MB) | | vtsk.err | (Up to 1MB) | | vtsk.err.backup | (Up to 1MB) |
| <i>/var/opt/SUNWvts/logs/</i> | sunvts.info | (Up to 1MB) | | | | | | | | | | | | | | | | | |
| | sunvts.info.backup | (Up to 1MB) | | | | | | | | | | | | | | | | | |
| | sunvts.error | (Up to 1MB) | | | | | | | | | | | | | | | | | |
| | sunvts.error.backup | (Up to 1MB) | | | | | | | | | | | | | | | | | |
| | vtsk.err | (Up to 1MB) | | | | | | | | | | | | | | | | | |
| | vtsk.err.backup | (Up to 1MB) | | | | | | | | | | | | | | | | | |
| File capacity | 0byte to 6MB (up to 1MB each) | | | | | | | | | | | | | | | | | | |
| Log file name | Option setting <table border="0"> <tr> <td><i>/var/opt/SUNWvts/logs/</i></td> <td>sunvts.info</td> <td>(Up to 5MB)</td> </tr> <tr> <td></td> <td>sunvts.info.backup</td> <td>(Up to 5MB)</td> </tr> <tr> <td></td> <td>sunvts.error</td> <td>(Up to 5MB)</td> </tr> <tr> <td></td> <td>sunvts.error.backup</td> <td>(Up to 5MB)</td> </tr> <tr> <td></td> <td>vtsk.err</td> <td>(Up to 5MB)</td> </tr> <tr> <td></td> <td>vtsk.err.backup</td> <td>(Up to 5MB)</td> </tr> </table> | <i>/var/opt/SUNWvts/logs/</i> | sunvts.info | (Up to 5MB) | | sunvts.info.backup | (Up to 5MB) | | sunvts.error | (Up to 5MB) | | sunvts.error.backup | (Up to 5MB) | | vtsk.err | (Up to 5MB) | | vtsk.err.backup | (Up to 5MB) |
| <i>/var/opt/SUNWvts/logs/</i> | sunvts.info | (Up to 5MB) | | | | | | | | | | | | | | | | | |
| | sunvts.info.backup | (Up to 5MB) | | | | | | | | | | | | | | | | | |
| | sunvts.error | (Up to 5MB) | | | | | | | | | | | | | | | | | |
| | sunvts.error.backup | (Up to 5MB) | | | | | | | | | | | | | | | | | |
| | vtsk.err | (Up to 5MB) | | | | | | | | | | | | | | | | | |
| | vtsk.err.backup | (Up to 5MB) | | | | | | | | | | | | | | | | | |
| File capacity | 0byte to 30MB (up to 5MB each) | | | | | | | | | | | | | | | | | | |
| Allocation timing | Detection of an error while FJVTS is running | | | | | | | | | | | | | | | | | | |
| Need for periodic deletion | No | | | | | | | | | | | | | | | | | | |
| Remarks | When the maximum log file capacity is exceeded, a backup file is allocated for cyclic operation. | | | | | | | | | | | | | | | | | | |

SunVTS, FJVTS (SunVTS4.0 or earlier)

| Component | SunVTS, FJVTS | | | | |
|-----------------------------------|--|--------------------|--------------------|-------------------|--------------------|
| Package name | SUNWvts, SUNWvtsmn, SUNWvtsx, FJSVvts | | | | |
| Support Solaris OS | Solaris 2.6 OS or later | | | | |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U | | | | |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.1 | | | | |
| Log file name | <i>/var/opt/SUNWvts/logs/</i> <table border="0"> <tr> <td>sunvts.info</td> <td>(Up to 2MB)</td> </tr> <tr> <td>sunvts.err</td> <td>(Up to 2MB)</td> </tr> </table> | sunvts.info | (Up to 2MB) | sunvts.err | (Up to 2MB) |
| sunvts.info | (Up to 2MB) | | | | |
| sunvts.err | (Up to 2MB) | | | | |
| File capacity | 0byte to 4MB (up to 2MB each) | | | | |
| Allocation timing | sunvts.info is allocated when SunVTS/FJVTS starts or ends. sunvts.err is allocated when an error is detected while SunVTS/FJVTS is running. | | | | |
| Need for periodic deletion | No | | | | |
| Remarks | | | | | |

• No.8: Web-Based Admin View/WWW Server for Admin View

| Component | Web-Based Admin View / WWW Server for Admin View | |
|-----------------------------------|--|------------------------|
| Package name | FJSVwvbs | |
| Support Solaris OS | Solaris2.6 OS or later | |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U | |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 | |
| Log file name | File name | Default setting |
| | (under /var/opt/FJSVwvbs/logs) | |
| | /node/ vmlog | (Size 200KB) |
| | /node/ vmlog.old | (Size 200KB) |
| | /node/ wvConnection*.log | (Size 200KB) x 5 files |
| | /node/ wvTrace*.log | (Size 200KB) x 5 files |
| | /server/ vmlog | (Size 200KB) |
| | /server/ vmlog.old | (Size 200KB) |
| | /server/ wvConnection*.log | (Size 200KB) x 5 files |
| | /server/ wvLogin*.log | (Size 100KB) x 2 files |
| | /server/ wvOperation*.log | (Size 100KB) x 2 files |
| | /server/ wvTrace*.log | (Size 200KB) x 5 files |
| | (The following files are allocated if SafeCLUSTER is installed.) | |
| | /node/ wvClEventd.log | (Size 100KB) |
| | /node/ wvClEventd.log.old | (Size 100KB) |
| | /node/ wvCladmin*.log | (Size 100KB) x 2 files |
| | /server/ wvCladminCl*.log | (Size 200KB) x 5 files |
| | /server/ wvCladminMsg*.log | (Size 100KB) x 2 files |
| | /server/ wvCladminNodeBind*.log | (Size 200KB) x 5 files |
| | /server/ wvMaadmin*.log | (Size 100KB) x 2 files |
| | A number from 0 to n is assigned to * in order. | |
| | Example: /server/wvTrace0.log | (Size 200KB) |
| | /server/wvTrace1.log | (Size 200KB) |
| File capacity | 8000KB in total (fixed) | |
| Allocation timing | After system start (/etc/rc2.d/K80FJSVwvbs) update at start time | |
| Need for periodic deletion | No | |
| Remarks | Changing the maximum number of data items to be logged: Select [Common] -> [Set Operating Environment] -> [System Environment] tab from the Web-Based Admin View window, and change the size and the number of data items to be logged. | |

| Log file name | File name | Maximum setting |
|----------------------------|--|--------------------------|
| | (under /var/opt/FJSVwvbs/logs) | |
| | /node/ vmlog | (Size 200KB) |
| | /node/ vmlog.old | (Size 200KB) |
| | /node/ wvConnection*.log | (Size 200KB) x 5 files |
| | /node/ wvTrace*.log | (Size 1000KB) x 10 files |
| | /server/ vmlog | (Size 200KB) |
| | /server/ vmlog.old | (Size 200KB) |
| | /server/ wvConnection*.log | (Size 200KB) x 5 files |
| | /server/ wvLogin*.log | (Size 500KB) x 10 files |
| | /server/ wvOperation*.log | (Size 500KB) x 10 files |
| | /server/ wvTrace*.log | (Size 1000KB) x 10 files |
| | (The following files are allocated if SafeCLUSTER is installed.) | |
| | /node/ wvClEventd.log | (Size 100KB) |
| | /node/ wvClEventd.log.old | (Size 100KB) |
| | /node/ wvCladmin*.log | (Size 500KB) x 10 files |
| | /server/ wvCladminCl*.log | (Size 1000KB) x 10 files |
| | /server/ wvCladminMsg*.log | (Size 500KB) x 10 files |
| | /server/ wvCladminNodeBind*.log | (Size 1000KB) x 10 files |
| | /server/ wvMaadmin*.log | (Size 500KB) x 10 files |
| | A number from 0 to n is assigned to * in order. | |
| | Example: /server/wvTrace0.log | (Size 200KB) |
| | /server/wvTrace1.log | (Size 200KB) |
| File capacity | 68000KB in total (fixed) | |
| Allocation timing | After system start (/etc/rc2.d/K80FJSVwvbs) update at start time | |
| Need for periodic deletion | No | |
| Remarks | Changing the maximum number of data items to be logged: Select [Common] -> [Set Operating Environment] -> [System Environment] tab from the Web-Based Admin View window, and change the size and the number of data items to be logged. | |

• No.9: Machine Administration

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVmadm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CL,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Log file name | /var/opt/FJSVmadm/evh/evh_log |
| File capacity | Obyte to 500KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmtrcbase |
| File capacity | Obyte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVmasv |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CL,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 |
| Log file name | /var/opt/FJSVmadm/log/"hostname" |
| File capacity | Obyte to 48KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|---------------------------------------|
| Package name | FJSVmand, FJSVamle |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-T,PW-U |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Log file name | /var/opt/FJSVmadm/log/evmonlog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmtrc |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmlog |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVkmnd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 2.6 |
| Log file name | /var/opt/FJSVmadm/log/evmonlog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmtrc |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmlog |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/cmdeslog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/evsndlog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVcmd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CL |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Log file name | /var/opt/FJSVmadm/log/evmonlog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmtrc |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/madmlog |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/trace/infotrace |
| File capacity | 0byte to 512KB x 5 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/PN00/* |
| File capacity | 200MByte or less |
| Allocation timing | Occurrence of an error |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/cmndeslog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/evsndlog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVpmnd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Log file name | <i>/var/opt/FJSVmadm/log/evmonlog</i> |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | <i>/var/opt/FJSVmadm/log/madmtrc</i> |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | <i>/var/opt/FJSVmadm/log/madmlog</i> |
| File capacity | 0byte to 64KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | <i>/var/opt/FJSVmadm/log/trace/cmdtrace</i> |
| File capacity | 0byte to 512KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | <i>/var/opt/FJSVmadm/log/trace/matrace</i> |
| File capacity | 0byte to 512KB x 3 files |
| Allocation timing | Start of the maintenance |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | <i>/var/opt/FJSVmadm/log/PN00/*</i> |
| File capacity | 200MByte or less |
| Allocation timing | Occurrence of an error |
| Need for periodic deletion | No |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVmadm |
| Support Solaris OS | Solaris 10 OS |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Log file name | /var/opt/FJSVmadm/evh/evh_log |
| File capacity | 0byte to 500KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/evmonlog |
| File capacity | 0byte to 512KB x 2 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/trace/cmdtrace |
| File capacity | 0byte to 512KB x 3 files |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |
| Log file name | /var/opt/FJSVmadm/log/trace/matrace |
| File capacity | 0byte to 512KB x 3 files |
| Allocation timing | Start of the maintenance |
| Need for periodic deletion | No |
| Remarks | |

• No.10: Remote Support

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVrmaos |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 or later |
| Log file name | <p>/var/opt/FJSVrmaos/tmp2/*.trc</p> <p>*.trc takes two forms:</p> <p>xxxxnnn-mm.trc</p> <p>xxxx: Character string consisting of 3 to 10 characters</p> <p>nnn: Numeral (0 to 4294967295)</p> <p>mm: Numeral (0 to 4294967295)</p> <p>xxxx.trc</p> <p>xxxx: Character string consisting of 3 to 19 alphanumeric characters</p> |
| File capacity | 0byte to 90KB (Remote maintenance is not used.) 0byte to 900KB (Remote maintenance is used.) |
| Allocation timing | Start of the system or communication for remote maintenance |
| Need for periodic deletion | No |
| Remarks | If remote maintenance is not used, data is logged in 0KB to 90KB. If remote maintenance is used, data is logged in 0KB to 900KB. |

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVsirms |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 1.5 or later |
| Log file name | <p>/var/opt/FJSVsirms/log / route.log (Up to 500KB)</p> <p>route.bak (Up to 500KB)</p> <p>sirms.log (Up to 500KB)</p> <p>sirms.bak (Up to 500KB)</p> <p>Err.log (Up to 500KB)</p> <p>Err.bak (Up to 500KB)</p> |
| File capacity | 0byte to 3000KB (up to 500KB each) |
| Allocation timing | Installation of Enhanced Support Facility Logging starts immediately after the system starts after Enhanced Support Facility (FJSVsirms package) is installed. |
| Need for periodic deletion | No |
| Remarks | When either log file exceeds 500KB, a .BAK file is created for cyclic operation. |

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVmarm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.5 through 2.6 |
| Log file name | /var/opt/FJSVmadm/log/madmtrc |
| File capacity | Obyte to 64KB |
| Allocation timing | Start of the system |
| Need for periodic deletion | No |
| Remarks | |

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVrlib |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support facility 1.5 or later |
| Log file name | /var/opt/FJSVrlib/log/ rmslog.dft (Up to 1MB) rmslog.bak (Up to 1MB) |
| File capacity | Obyte to 2MB (up to 1MB each) |
| Allocation timing | Use of REMCS Agent |
| Need for periodic deletion | No |
| Remarks | REMCS library trace data is collected for logging. When the file capacity is exceeded, a .bak file is created for cyclic operation. |
| Log file name | /var/opt/FJSVrlib/log/remcscom.log |
| File capacity | Obyte to 100KB |
| Allocation timing | Communication of REMCS Agent |
| Need for periodic deletion | No |
| Remarks | REMCS Agent communication records are collected for logging. |

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVrrda |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 or later |
| Log file name | /opt/FJSVrrda/lib/trace.log |
| File capacity | Obyte to 5MB |
| Allocation timing | Operation for firmware distribution |
| Need for periodic deletion | No |
| Remarks | |

• No.11: Automatic Power Control

| Component | Automatic Power Control |
|-----------------------------------|--|
| Package name | FJSVapcs |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Log file name | /var/opt/FJSVapcs/ apcstrc apcstrc.old apcstrc.err apcstrc.errold apcslog apcslog.old |
| File capacity | 0byte to 840KB |
| Allocation timing | Node activation, node power-off, operation of automatic power control, power-on, or power-off according to the automatic power control schedule |
| Need for periodic deletion | No |
| Remarks | |

• No.12: Server Default Configuration

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVssf |
| Support Solaris OS | Solaris 7 OS or later |
| Support models | LE,CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Log file name | /var/opt/FJSVssf/tcptrace/ lim-err (Up to 500KB) lim-err.old (Up to 500KB) |
| File capacity | 0byte to 1000KB (up to 500KB each) |
| Allocation timing | Detection of abnormal disconnection of TCP |
| Need for periodic deletion | No |
| Remarks | When the maximum file capacity is exceeded, an .old file is created for cyclic operation. |

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVwarn.us |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 3.1 |
| Log file name | The FJSVwarn.us package creates no specific log file. |
| File capacity | No |
| Allocation timing | Detection of CPU error |
| Need for periodic deletion | No |
| Remarks | When a CPU error is detected, error information is output to the console message log file "/var/adm/messages." |

- **No.13: No log file is generated for System Data Output Tool (component).**
- **No.14: License Manager**

| Component | License Manager |
|-----------------------------------|---|
| Package name | FSUNlic |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| Log file name | /var/opt/FSUNlicense/ log (Up to 512KB) log.old (Up to 512KB) |
| File capacity | Obyte to 1024KB (up to 512KB each) |
| Allocation timing | Start of license manager |
| Need for periodic deletion | No |
| Remarks | When the maximum file capacity is exceeded, an .old file is created for cyclic operation. |

- **No.15: No log file is generated for Crash Dump Assistant (component).**
- **No.16: No log file is generated for Auto Dump Analyze Tool (component).**
- **No.17: No log file is generated for Drivers for High Reliability (component).**
- **No.18: No log file is generated for CPU Performance Counter (component).**

- **No.19: CPU Patrol Diagnosis**

| Component | CPU Patrol Diagnosis |
|-----------------------------------|--|
| Package name | FJSVcpupd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-CM,PW-CL,PW-K,PW-T |
| Support Enhanced Support Facility | Enhanced Support Facility 1.8 through 2.6 |
| Log file name | /var/opt/FJSVcpupd/log/ fjptlerr.log (Up to 64KB) fjptlerr.log.old (Up to 64KB) CPU* (* is a CPU number) (Up to 22KB) * The maximum number of CPUs is 128, and up to 128 files are created. 128 files: 22KB in total |
| File capacity | 0byte to 150KB |
| Allocation timing | Start or stop of CPU patrol diagnosis (FJSVcpupd) or detection of a CPU error |
| Need for periodic deletion | No |
| Remarks | When the maximum file capacity is exceeded, an .old file is created for cyclic operation. |

- **No.20: No log file is generated for G-LAN Error Notification (component).**
- **No.21: No log file is generated for G-LAN MTU Setting (component).**
- **No.22: No log file is generated for HCP Information Management (component).**

• No.23: System Parameter Diagnosis

| Component | System Parameter Diagnosis |
|-----------------------------------|---|
| Package name | FJSVparam |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | LE,CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.4 or later |
| Log file name | /var/opt/FJSVparam/log/fjsvparam.0 (Up to about 512KB) fjsvparam.1 (Up to about 512KB) |
| File capacity | 0byte to about 1024KB |
| Allocation timing | Start or stop of system operation, or execution of the fjprmchk or fjprmset command |
| Need for periodic deletion | No |
| Remarks | If 512KB are exceeded when the command starts, a fjsvparam.1 file is created for cyclic operation. |
| Log file name | /var/opt/FJSVparam/log/boot_ok.[0-9] (Up to about 50KB each) |
| File capacity | 0byte to about 500KB |
| Allocation timing | Start or stop of system operation |
| Need for periodic deletion | No |
| Remarks | If the backup data in the /etc/system file differs from the previous backup, the data is backed up. |
| Log file name | /var/opt/FJSVparam/log/per_mod.[0-9] (Up to about 50KB each) |
| File capacity | 0byte to about 500KB |
| Allocation timing | Start or stop of system operation |
| Need for periodic deletion | No |
| Remarks | When the /etc/system file is modified with a backup requested, the file prior to modification is backed up. |

- **No.24: Tape Driver Configuration Tool**

| Component | Tape Driver Configuration Tool |
|-----------------------------------|--|
| Package name | FJSVdcnf |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Log file name | /var/opt/FJSVdcnf/log/st.log1 (Up to about 64KB) st.log2 (Up to about 64KB) pfca_conf_set.log1 (Up to about 64KB) pfca_conf_set.log2 (Up to about 64KB) |
| File capacity | 0byte to about 256KB |
| Allocation timing | When the Enhanced Support Facility is installed, when the fjenfset(1M) is executed, when the system (only Solaris 8 OS or earlier) is rebooted after executing the fjenfset(1M). |
| Need for periodic deletion | No |
| Remarks | |

- **No.25: No log file is generated for Patch Information collect command (component).**
- **No.26: No log file is generated for Console flow control canceller (component).**

Chapter 7 About system files

This section explains the files that may be changed, and the rc scripts that are added, by Enhanced Support Facility.

For more information about the system files that are changed, refer to the respective installation guide.

7.1 Files that are changed or added by Enhanced Support Facility

- 1) Files that may be changed

```
/etc/syslog.conf
/etc/services
/etc/system
/etc/default/sys-suspend
/etc/default/solregis
/etc/inet/inetd.conf
/etc/inet/services*
/etc/devlink.tab
/etc/group
/var/spool/cron/crontabs/adm
/var/spool/cron/crontabs/root
/etc/saf/zsmon/_pmtab (PRIMEPOWER800/1000/1500/2000/2500)
/etc/iu.ap (PRIMEPOWER800/1000/1500/2000/2500)
```

- 2) Files (rc scripts*) that are added

```
/etc/init.d/FJSVlogadm
/etc/init.d/FJSVdmpadm
/etc/init.d/FJSVdmpsnap
/etc/init.d/FJSVevhand
/etc/init.d/FJSVinetinit
/etc/init.d/FJSVlogclear
/etc/init.d/FJSVmadm
/etc/init.d/FJSVmand
/etc/init.d/FJSVmarm
/etc/init.d/FJSVparam
/etc/init.d/FJSVscf
/etc/init.d/FJSVscfdaemon.rcS
/etc/init.d/FJSVscfsc
/etc/init.d/FJSVsirmsctl
/etc/init.d/FJSVwarn
/etc/init.d/FSUNlicense
/etc/init.d/FJSVwvbs
/etc/init.d/FJSVwvcnf
/etc/init.d/FJSVcmrm
/etc/init.d/FJSVcmrm2
/etc/init.d/FJSVpmmr
/etc/init.d/FJSVpmmr2
rc script: Initialization at reboot, and processing for starting daemons
```


7.2 Details of the Files Changed by Enhanced Support Facility

- Changes in `/etc/syslog.conf` setting file

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVmand FJSVkmnd FJSVpmnd FJSVamle FJSVmadm |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | LE,CW,PW-P,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Reason for change | Settings are changed so that a message on the same level as the message output to <code>/var/adm/messages</code> is output to another file in order to enable monitoring of syslog messages. |
| Change | # FJSVmadm : This is setting of Machine Administration. # FJSVmadm : Don't delete the following lines. # FJSVmadm : Because the message cannot be observed. *.err;kern.debug;daemon.notice /var/opt/FJSVmadm/evh/evh_pipe |
| Remarks | The following line is added by esfadd and deleted by esfrm. |

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVcmd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Reason for change | Settings are changed so that a message on the same level as the message output to <code>/var/adm/messages</code> is output to another file in order to enable monitoring of syslog messages. |
| Change | *.err;kern.debug;daemon.notice /var/opt/FJSVmadm/evh/evh_pipe user.err /var/opt/FJSVmadm/log/trace/messages |
| Remarks | |

| Component | Remote Support (REMCS) |
|-----------------------------------|--|
| Package name | FJSVragt |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.1 or later |
| Reason for change | To monitor syslog messages when the management server is connected |
| Change | <code>/*.err;kern.debug;auth.notice /var/opt/FJSVragt/fifo/slg</code> (The added definition is handled as a comment.) |
| Remarks | The definition is added during FJSVragt package installation. |

• Changes in the /etc/services setting file

| Component | Remote Support (REMCS) |
|-----------------------------------|---|
| Package name | FJSVragt |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 or later |
| Reason for change | To define the number of the port to be used when the management server is connected |
| Change | <code>rmopagt 2924/tcp</code> <code>rmopagt 2924/udp</code> |
| Remarks | The relevant port number is used only when the management server is connected. |

• Changes in the /etc/system setting file

| Component | SCF Driver |
|-----------------------------------|---|
| Package name | FJSVscd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-T |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| Reason for change | To enable the SCF driver before opening it |
| Change | <code>forceload: drv/FJSVscf</code> |
| Remarks | |

| Component | SCF Driver |
|-----------------------------------|--|
| Package name | FJSVscd2, FJSVscd3, FJSVpscd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 through 3.1 |
| Reason for change | To enable the SCF driver before opening it |
| Change | <code>forceload: drv/FJSVscfX</code> |
| Remarks | |

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVssf |
| Support Solaris OS | Solaris 7 OS or later |
| Support models | LE,CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.3 or later |
| Reason for change | To enable the trace information collection function to improve system maintainability |
| Change | * Begin FJSVssf (do not edit) set ftrace_atboot = 1 set kmem_flags = 0x100 set kmem_lite_maxalign = 8192 * End FJSVssf (do not edit) |
| Remarks | |

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVpnl.us |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 3.1 |
| Reason for change | To enable the partition dump collection function |
| Change | * Begin _PKGINST_ (do not edit) forceload: drv/FJSVpanel * End _PKGINST_ (do not edit) |
| Remarks | |

| Component | Drivers for High Reliability |
|-----------------------------------|---|
| Package name | FJSVsef, FJSVse 1.x |
| Support Solaris OS | FJSVsef : Solaris 2.6 OS FJSVse 1.x: Solaris 7 OS |
| Support models | PW-K |
| Support Enhanced Support Facility | FJSVsef : Enhanced Support Facility 1.5 through 2.6 FJSVse 1.x : Enhanced Support Facility 1.4 through 2.6 |
| Reason for change | To load the driver of the serial port used for a console quickly after the system starts |
| Change | The following line is added during installation: Forceload: drv/se |
| Remarks | Processing at package deletion The above line is deleted during uninstallation. |

| Component | Drivers for High Reliability |
|-----------------------------------|--|
| Package name | FJSVse 2.0 or later (PW-K), FJSVsec (PW-CL, PW-CLZ) |
| Support Solaris OS | FJSVse 2.0 or later (PW-K): Solaris 8 OS or later FJSVsec: Solaris 8 OS or later |
| Support models | PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | FJSVse 2.0 or later: Enhanced Support Facility 1.4 through 2.6 FJSVsec: Enhanced Support Facility 2.3 through 3.1 |
| Reason for change | To load the driver quickly after the system starts, to duplicate the serial port used for a console |
| Change | The following two lines are added during installation: forceload: drv/se forceload: drv/fjmse |
| Remarks | The above two lines are deleted during uninstallation. |

| Component | System Parameter Diagnosis |
|-----------------------------------|---|
| Package name | FJSVparam |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | LE,CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 2.4 or later |
| Reason for change | The system parameters are diagnosed and "/etc/system" is changed if an inappropriate description is detected. |
| Change | - Parameter "RT:rt_maxpri" is changed to a comment. - If the value of "semsys:seminfo_semume" or "semsys:seminfo_semmnu" is not adequate, it is corrected. |
| Remarks | |

• Changes in the /etc/default/sys-suspend setting file

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Reason for change | To disable the power-off function implemented by pressing the power key on the keyboard, in the GUI environment |
| Change | PERMS=- # Add by FJSVdef "PERMS" is changed from "console-owner" to "-." |
| Remarks | |

• Changes in the `/etc/default/solregis` setting file

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Reason for change | To suppress the starting of the Solaris user registration program (solregs).(PRIMEPOWER, GP7000F only) |
| Change | DISABLE=1 |
| Remarks | |

• Changes in the `/etc/inet/inetd.conf` setting file

| Component | SunVTS, FJVTS |
|-----------------------------------|---|
| Package name | SUNWvts |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T,PW-U |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.1 |
| Reason for change | The setting for enabling the remote host to remotely execute SunVTS/FJVTS during installation of this package is added to the above file. |
| Change | <p>For Solaris 2.6 OS:</p> <pre>536870916/1 dgram rpc/udp wait root /opt/SUNWvts/bin/vtsk /opt/SUNWvts/bin/vtsk</pre> <p>For Solaris 7 OS / Solaris 8 OS:</p> <pre># SunVTS Daemon 536870916/1 dgram rpc/udp wait root /opt/SUNWvts/bin/sunvts /opt/SUNWvts/bin/sunvts -g</pre> <p>For Solaris 9 OS:</p> <pre># SunVTS Daemon 100153/1 dgram rpc/udp wait root /opt/SUNWvts/bin/sunvts /opt/SUNWvts/bin/sunvts -g</pre> |
| Remarks | <ul style="list-style-type: none"> - Each of the above statements is used to enable the remote host to remotely execute SunVTS, FJVTS. - The corresponding statements can be deleted from <code>inetd.conf</code> if the remote execution function is not used. - Password certification is required for remote execution |

- Changes in the `/etc/inet/services` definition file

| Component | Web-Based Admin View / WWW Server for Admin View |
|-----------------------------------|---|
| Package name | FJSVwvcnf |
| Support Solaris OS | Solaris2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 |
| Reason for change | Definition of a TCP port: The number of the port used by Web-Based Admin View / WWW Server for Admin View for communication is defined. |
| Change | fjwv-h 8081/tcp # FJSVwvcnf Web Port |
| Remarks | The following command can be used to change the port number: <code>/etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv-h=<port number></code> |

| Component | Web-Based Admin View / WWW Server for Admin View |
|-----------------------------------|---|
| Package name | FJSVwvbs |
| Support Solaris OS | Solaris2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 |
| Reason for change | Definition of a TCP/UDP port: The number of the port used by Web-Based Admin View for communication is defined. |
| Change | fjwv_g 9396/udp # FJSVwvbs group RMI fjwv_n 9397/tcp # FJSVwvbs node RMI fjwv_s 9398/tcp # FJSVwvbs server RMI fjwv_c 9399/tcp # FJSVwvbs client RMI |
| Remarks | The following command can be used to change the port number(s): <code>/etc/opt/FJSVwvbs/etc/bin/wvSetport { fjwv_c=<port number> fjwv_n=<port number> fjwv_s=<port number> fjwv_g=<port number> }</code> |

• Ports used by Web-Based Admin View / WWW Server for Admin View

If the use of the above ports needs to be suppressed for Enhanced Support Facility for security requirements, refer to the following action and notes provided in the Installation Guide for Enhanced Support Facility 3.0.1 and older.

----- Extracted from the Installation Guide -----

WWW Server for Admin View and Web-Based Admin View automatically use network ports (8081, 9397, 9398, and 9399 by default) when the system boots. To suppress this operation for enhancing security, enter the following command and then reboot the system.

```
# /etc/opt/FJSVwvbs/etc/bin/wvrscript uninstall
```

This action prevents WWW Server for Admin View and Web-Based Admin View from being started automatically.

It also prevents the following functions and products from being operated from the Web. Use the GUI functions for such operations.

- Machine Administration
- Multipath Disk Control
- SafeDISK and SafeDISK/Global
- SafeCLUSTER
- SafeFILE/Global and SafeFILE/Global POWER Edition
- PRIMECLUSTER

To enable automatic restart, enter the following command and then reboot the system.

```
# /etc/opt/FJSVwvbs/etc/bin/wvrscript install
```

• Changes in the /etc/devlink.tab definition file

| Component | SCF Driver |
|-----------------------------------|--|
| Package name | FJSVscd |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-T |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| Reason for change | To add SCF driver entries |
| Change | <pre>type=ddi_pseudo:name=PFU,scf:minor=pwrctl FJSVhwr/pwrctl type=ddi_pseudo:name=PFU,scf:minor=rasctl FJSVhwr/rasctl type=ddi_pseudo:name=PFU,scf:minor=rcictl FJSVhwr/rcictl type=ddi_pseudo:name=PFU,faultled;minor=fled FJSVhwr/fled type=ddi_pseudo:name=PFU,watchdog-log;minor=PFU,watchdog-log FJSVhwr/watchdoglog type=ddi_pseudo:name=FJSVsflcd;minor=0 FJSVhwr/sflcd\N0</pre> |
| Remarks | |

7.2 Details of the Files Changed by Enhanced Support Facility

| Component | SCF Driver |
|-----------------------------------|---|
| Package name | FJSVlscd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-U |
| Support Enhanced Support Facility | Enhanced Support Facility 1.7 through 2.6 |
| Reason for change | To add SCF driver entries |
| Change | type=ddi_pseudo:name=PFU,scf:minor=pwrctl FJSVhwr/pwrctl type=ddi_pseudo:name=PFU,scf:minor=rasc1 FJSVhwr/rasc1 type=ddi_pseudo:name=PFU,scf:minor=rcict1 FJSVhwr/rcict1 type=ddi_pseudo:name=PFU,faultled:minor=fled FJSVhwr/fled type=ddi_pseudo:name=PFU,watchdog-log:minor=PFU,watchdog-log FJSVhwr/watchdoglog type=ddi_pseudo:name=FJSVsflcd:minor=0 FJSVhwr/sflcd\N0 |
| Remarks | |

| Component | SCF Driver |
|-----------------------------------|--|
| Package name | FJSVscd1 |
| Support Solaris OS | Solaris 2.6 OS |
| Support models | PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 2.6 |
| Reason for change | To add SCF driver entries |
| Change | type=ddi_pseudo:name=FJSV,scfc FJSVhwr/\M0 type=ddi_pseudo:name=FJSVscf2:minor=mscf FJSVhwr/fiomp/\M0 type=ddi_pseudo:name=FJSVscf2:minor=mscf0 FJSVhwr/fiomp/\M0 type=ddi_pseudo:name=FJSVscf2:minor=pwrctl FJSVhwr/\M0 type=ddi_pseudo:name=FJSVscf2:minor=pwrctl2 FJSVhwr/\M0 type=ddi_pseudo:name=FJSVscf2:minor=rasc1 FJSVhwr/\M0 type=ddi_pseudo:name=FJSVscf2:minor=rasc12 FJSVhwr/\M0 type=ddi_pseudo:name=FJSVscf2:minor=rcict1 FJSVhwr/\M0 type=ddi_pseudo:name=FJSVscf2:minor=rcict12 FJSVhwr/\M0 type=ddi_pseudo:name=FJSVsflcd:minor=0 FJSVhwr/sflcd\N0 |
| Remarks | |

| Component | SCF Driver |
|-----------------------------------|---|
| Package name | FJSVscd2 |
| Support Solaris OS | Solaris 7 OS~Solaris 9 OS |
| Support models | PW-K |
| Support Enhanced Support Facility | Enhanced Support Facility 1.4 through 2.6 |
| Reason for change | To add SCF driver entries |
| Change | <pre> type=ddi_pseudo;name=FJSV,scfc FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf2;minor=mscf FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=FJSVscf2;minor=mscf0 FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=FJSVscf2;minor=pwrctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf2;minor=pwrctl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf2;minor=rasctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf2;minor=rasctl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf2;minor=rcictl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf2;minor=rcictl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVsfled;minor=0 FJSVhwr/sfled\N0 </pre> |
| Remarks | |

| Component | SCF Driver |
|-----------------------------------|---|
| Package name | FJSVscd3 |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Reason for change | To add SCF driver entries |
| Change | <pre> type=ddi_pseudo;name=FJSV,scfc FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=mscf FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=FJSVscf3;minor=mscf0 FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=FJSVscf3;minor=pwrctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=pwrctl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rasctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rasctl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rcictl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rcictl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=fled FJSVhwr/\M0 type=ddi_pseudo;name=FJSVsfled;minor=0 FJSVhwr/sfled\N0 </pre> |
| Remarks | |

7.2 Details of the Files Changed by Enhanced Support Facility

| Component | SCF Driver |
|-----------------------------------|---|
| Package name | FJSVpscd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Reason for change | To add SCF driver entries |
| Change | type=ddi_pseudo;name=FJSV,scfc FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=mscf FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=FJSVscf3;minor=mscf0 FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=FJSVscf3;minor=pwrctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=pwrctl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rasctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rasctl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rcictl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=rcictl2 FJSVhwr/\M0 type=ddi_pseudo;name=FJSVscf3;minor=fled FJSVhwr/\M0 type=ddi_pseudo;name=FJSVsflcd;minor=0 FJSVhwr/sflcd\N0 |
| Remarks | |

| Component | SCF/SCSI fault LED support option |
|-----------------------------------|---|
| Package name | FJSVscfsc |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Reason for change | To add SCF driver entries |
| Change | type=ddi_pseudo;name=scfd;minor=pwrctl FJSVhwr/\M0 type=ddi_pseudo;name=scfd;minor=rcictl FJSVhwr/\M0 type=ddi_pseudo;name=scfd;minor=rasctl FJSVhwr/\M0 type=ddi_pseudo;name=FJSVsflcd;minor=0 FJSVhwr/sflcd\N0 |
| Remarks | |

| Component | Drivers for High Reliability |
|-----------------------------------|---|
| Package name | FJSVse 2.0 or later (PW-K), FJSVsec (PW-CL, PW-CLZ) |
| Support Solaris OS | FJSVse 2.0 or later (PW-K): Solaris 8 OS or later FJSVsec: Solaris 8 OS or later |
| Support models | PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | FJSVse 2.0 or later: Enhanced Support Facility 1.4 through 2.6 FJSVsec: Enhanced Support Facility 2.3 through 3.1 |
| Reason for change | In order to add an entry of a driver for the redundant console path |
| Change | The following lines are added during installation: type=ddi_pseudo;name=fjmse;minor=a FJSVhwr/mse/\M0 type=ddi_pseudo;name=fjmse;minor=mse FJSVhwr/fiomp/\M0 type=ddi_pseudo;name=clone;minor=mse0 FJSVhwr/fiomp/\M0 |
| Remarks | |

• Changes in the /etc/group definition file

| Component | Web-Based Admin View / WWW Server for Admin View |
|-----------------------------------|---|
| Package name | FJSVwvbs |
| Support Solaris OS | Solaris2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.0.1 |
| Reason for change | Definition of user group: A user group that can operate every operation management product running on Web-Based Admin View is defined. |
| Change | wvroot::100: |
| Remarks | |

• Changes in the /var/spool/cron/crontabs/adm definition file

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Reason for change | To check for excessive log file length and periodically perform log rotation |
| Change | # Copyright (c) FUJITSU LIMITED 1999 # @(#)adm 1.1 99/02/10 30 3 * * 0 /opt/FJSVdef/sbin/chkslog WTMP |
| Remarks | |

• Changes in the /var/spool/cron/crontabs/root definition file

| Component | SCF Driver |
|-----------------------------------|--|
| Package name | FJSVscr |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-T |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 2.6 |
| Reason for change | To check for increase in log file size and periodically perform log rotation. To make RAS control device (SCF) settings or acquire the corresponding information. |
| Change | # Copyright Fujitsu/PFU Limited 1997 # @(#)root 1.1 97/06/25 21:09:11 # 0 1 * * * /opt/FJSVhwr/procedure/scfdaily # |
| Remarks | |

7.2 Details of the Files Changed by Enhanced Support Facility

| Component | SCF Driver |
|-----------------------------------|--|
| Package name | FJSVscr3 |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Reason for change | To make RAS control device (SCF) settings or acquire the corresponding information. |
| Change | # Copyright Fujitsu/PFU Limited 1997 # @(#)root 1.1 97/06/25 21:09:11 # 0 1 * * * /opt/FJSVhwr/procedure/scfdaily # |
| Remarks | |

| Component | SCF Driver |
|-----------------------------------|--|
| Package name | FJSVpscr |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Reason for change | To set the time zone in the RAS control device (SCF) |
| Change | # Copyright Fujitsu Limited 2002 # @(#)root 1.0 02/09/06 19:25:00 # 1 * * * * /opt/FJSVhwr/procedure/scftzone # |
| Remarks | |

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVcmnd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Reason for change | To prevent increases in the size of the log file from exhausting the free space on the system volume |
| Change | 13 2 * * 0 /opt/FJSVmadm/lib/csl.weekly #FJSVcmnd 17 2 * * * /opt/FJSVmadm/lib/csl.daily #FJSVcmnd |
| Remarks | |

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 2.6 OS to Solaris 8 OS |
| Support models | Common to all types (Solaris 2.6 OS to Solaris 8 OS) |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Reason for change | To check for excessive increases in the size of the log file and periodically perform log rotation. |
| Change | # Copyright (c) FUJITSU LIMITED 1999 # @(#)root 1.1 99/02/10 33 3 * * 0 /opt/FJSVdef/sbin/chkslog VOLDLOG SLOG SAFLOG ZSMONLOG SPELLHIST |
| Remarks | |

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 9 OS |
| Support models | Common to all types (Solaris 9 OS only) |
| Support Enhanced Support Facility | Enhanced Support Facility 2.2 or later |
| Reason for change | To check for excessive increase in the size of the log file and periodically perform log rotation |
| Change | # Copyright (c) FUJITSU LIMITED 2002 # @(#)root 2.0 2002/03/16 30 3 * * 0 if [! -f /var/adm/pacct]; then /usr/sbin/logadm -p now /var/adm/wtmpx; fi |
| Remarks | |

• Changes in the /etc/saf/zsmon/_pmtab definition file

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVemnd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Reason for change | To make the serial port usable for FST connections |
| Change | ttya:u:root:reserved:reserved:reserved:/dev/term/a:I::usr/bin/login::9600:ldterm,ttcompat:ttya login\ ::tvi925:y:# ttyb:u:root:reserved:reserved:reserved:/dev/term/b::usr/bin/login::9600:ldterm,ttcompat:login\ :FST port::y:# |
| Remarks | |

7.2 Details of the Files Changed by Enhanced Support Facility

| Component | Drivers for High Reliability |
|-----------------------------------|---|
| Package name | FJSVsef, FJSVse 1.x |
| Support Solaris OS | FJSVsef : Solaris 2.6 OS FJSVse 1.x: Solaris 7 OS |
| Support models | PW-K |
| Support Enhanced Support Facility | FJSVsef : Enhanced Support Facility 1.5 through 2.6 FJSVse 1.x : Enhanced Support Facility 1.4 through 2.6 |
| Reason for change | The port monitor (ttymon) need not be set because all standard serial ports are dedicated for consoles. |
| Change | The ttymon settings of ttya and ttyb are changed to Disable during installation. Specifically, "x" is added to the second fields of ttya and ttyb as shown below: Before change: ttya:u:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# ttyb:u:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# After change: ttya:ux:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# ttyb:ux:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# |
| Remarks | The ttymon settings are changed to Enable during uninstallation. |

| Component | Drivers for High Reliability |
|-----------------------------------|---|
| Package name | FJSVse 2.0 or later (PW-K), FJSVsec (PW-CL, PW-CLZ) |
| Support Solaris OS | FJSVse 2.0 or later (PW-K): Solaris 8 OS or later FJSVsec: Solaris 8 OS or later |
| Support models | PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | FJSVse 2.0 or later: Enhanced Support Facility 1.4 through 2.6 FJSVsec: Enhanced Support Facility 2.3 through 3.1 |
| Reason for change | The port monitor (ttymon) need not be set because all standard serial ports are dedicated for consoles. |
| Change | The ttymon settings of ttya and ttyb are changed to Disable during installation. Specifically, "x" is added to the second fields of ttya and ttyb as shown below. Before change: ttya:u:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# ttyb:u:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# After change: ttya:ux:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# ttyb:ux:root:reserved:reserved:reserved:/dev/term/a:I:: /usr/bin/login::9600:ldterm,ttcompat:login\ : ::tvi925:y:# |
| Remarks | The ttymon settings are changed to Enable during uninstallation. |

• Changes in the /etc/iu.ap definition file

| Component | Drivers for High Reliability |
|-----------------------------------|--|
| Package name | FJSVse 2.0 or later (PW-K), FJSVsec (PW-CL, PW-CLZ) |
| Support Solaris OS | FJSVse 2.0 or later (PW-K): Solaris 8 OS or later FJSVsec: Solaris 8 OS or later |
| Support models | PW-CL,PW-CLZ,PW-K |
| Support Enhanced Support Facility | FJSVse 2.0 or later: Enhanced Support Facility 1.4 through 2.6 FJSVsec: Enhanced Support Facility 2.3 through 3.1 |
| Reason for change | To change the auto push settings of ldterm(7M) and ttcompat(7M) when configuring a duplicate console |
| Change | The following changes are made during installation: - For FJSVse 2.0 or later fjmse 0 0 ldterm ttcompat <- Add se 0 255 ldterm ttcompat -> Delete se 131072 131327 ldterm ttcompat Changed to the following: se 131076 131327 ldterm ttcompat - For FJSVsec fjmse 0 0 ldterm ttcompat <- Add se 8192 8394 ldterm ttcompat <- Add se 139264 139464 ldterm ttcompat <- Add |
| Remarks | The above changes are canceled during uninstallation. |

Chapter 8 How to set the cron

This section explains how Enhanced Support Facility uses the `crontab(1)` and the `at(1)` in default configuration. In addition, impact by halt of function is also explained.

8.1 crontab (1)

a) Additional setting to the crontab(1) for "root"

- **scfdaily**

```
0 1 * * * /opt/FJSVhwr/procedure/scfdaily
```

| Component | SCF driver |
|-----------------------------------|---|
| Package name | FJSVscu.us, FJSVscu3 |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-T |
| Support Enhanced Support Facility | Effective from Basic Software Extension 1.0, to Enhanced Support Facility 3.1 |
| Function | <p>Sets information and synchronize time to the RAS-control device (SCF). And, gets error-log information from it. For details of synchronize time, refer to Section 1.3.2.2, "System time," in the User's Guide for System Control Facility (SCF) Driver. In addition, synchronize time processes as follows by each model. For PW-T:</p> <ul style="list-style-type: none"> • If the system time is set to "System standard clock," the OS time is synchronized with RAS control device(SCF) at 1:00 am of every day. • If the setting of the system time is "SCF high-resolution clock," the SCF time synchronizes to OS at 1:00 am of every day. <p>For PW-CM, PW-CMZ: The OS time is synchronized with RAS control device(SCF) at 1:00 am of every day. For PW-CL, PW-CLZ: Synchronize time is not processed.</p> |
| Suppressible | No |
| Effect of suppression | <p>It affects hardware maintenance due to the reason that you are unable to acquire error-log information included in the SCF-control device (SCF). In addition, hardware maintenance becomes difficult due to inconsistent logged time between OS and RAS control device (SCF).</p> |
| Remarks | |

- **scftzone**

```
1 * * * * /opt/FJSVhwr/procedure/scftzone
```

| Component | SCF driver |
|-----------------------------------|---|
| Package name | FJSVpscu |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-P |
| Support Enhanced Support Facility | Enhanced Support Facility 2.3 through 3.1 |
| Function | Sets timezone to the RAS-control device (SCF). |
| Suppressible | No |
| Effect of suppression | Hardware maintenance becomes difficult due to inconsistent logged time between OS and RAS control device (SCF). |
| Remarks | |

- **csl.weekly**

```
13 2 * * 0 /opt/FJSVmadm/lib/csl.weekly
```

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVemnd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Function | Prevents a system volume from being overloaded by log file expansion. |
| Suppressible | No |
| Effect of suppression | The system stops monitoring increasing logfiles. In a system that requires a sophisticated security, it is needed to build a similar feature uniquely without relying on this component. |
| Remarks | |

- **csl.daily**

```
17 2 * * 0 /opt/FJSMadm/lib/csl.daily
```

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSMcmd |
| Support Solaris OS | Solaris 8 OS or later |
| Support models | PW-CM,PW-CMZ,PW-CL,PW-CLZ |
| Support Enhanced Support Facility | Enhanced Support Facility 2.0 through 3.1 |
| Function | Prevents a system volume from being overloaded by log file expansion. |
| Suppressible | No |
| Effect of suppression | The system stops monitoring increasing logfiles. In a system that requires a sophisticated security, it is needed to build a similar feature uniquely without relying on this component. |
| Remarks | |

- **chkslog**

```
33 3 * * 0 /opt/FJSDdef/sbin/chkslog VOLDLOG SULOG ...
```

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSDdef |
| Support Solaris OS | Solaris 2.6 OS, Solaris 7 OS, Solaris 8 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Basic Software Extension 1.1 or later |
| Function | Prevents a system volume from being overloaded by log file expansion. |
| Suppressible | Yes |
| Effect of suppression | The system stops monitoring increasing logfiles. In a system that requires a sophisticated security, it is needed to build a similar feature uniquely without relying on this component. |
| Remarks | |

• logadm

```
30 3 * * 0 if [ ! -f /var/adm/pacct ]; then /usr/sbin/logadm ...
```

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVdef |
| Support Solaris OS | Solaris 9 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 2.2 or later |
| Function | Prevents a system volume from being overloaded by log file expansion. |
| Suppressible | Yes |
| Effect of suppression | The system stops monitoring increasing logfiles. In a system that requires a sophisticated security, it is needed to build a similar feature uniquely without relying on this component. |
| Remarks | |

b) Additional setting to the crontab(1) for "adm"

• chkslog

```
30 3 * * 0 /opt/FJSVdef/sbin/chkslog WTMP
```

The same as the chkslog for "root" described above.

8.2 at (1)

a) Additional setting to the at(1) for "root"

• Automatic Power Control (APCS) (FJSVapcs)

```
cd /opt/FJSVapcs/sbin
umask 22
/opt/FJSVapcs/sbin/schedset .....
```

| Component | Automatic Power Control (APCS) |
|-----------------------------------|--|
| Package name | FJSVapcs |
| Support Solaris OS | Solaris 2.6 OS or later |
| Support models | CW,PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T |
| Support Enhanced Support Facility | Basic Software Extension 1.0 or later |
| Function | An electric power is turned on or off automatically. The scripts shown above are registered when a schedule for the Automatic Power Control starts. |
| Suppressible | No, if the APCS is used |
| Effect of suppression | You are unable to use the APCS. |
| Remarks | The way of realizing the Automatic-Power-Control function without the cron has been released since Enhanced Support Facility 1.6. The daemon particular to the APCS is started at booting. It is set with the apcschmod command whether the cron is used or not. |

Chapter 9 About /etc/dfs/dfstab

For PW-K, PW-CL and PW-CLZ, the following definition is added to "/etc/dfs/dfstab" during installation:

```
share -F nfs -o ro=<system-console-host-name>,root=<system-console-hostname>
/var/opt/FJSDmp/dashare
```

```
/usr/sbin/share -F nfs -o ro=< system-console-host-name >,anon=0 -d 'FJSMadm'
/var/opt/FJSMadm/export #FJSMadm
```

To set the security mode to NFS according to security requirements, arrange the name service so that the domain name can be obtained from the operating system on the system console or the partition. Then, change the "/etc/dfs/dfstab" file as follows:

```
share -F nfs -o secure,ro=<system-console-host-name>,root=<systemconsole-host-na
me>,anon=0 /var/opt/FJSDmp/dashare
```

```
/usr/sbin/share -F nfs -o secure,ro=< system-console-host-name >,anon=0 -d
'FJSMadm' /var/opt/FJSMadm/export #FJSMadm
```

Note that the above FJSDmp-related definition must be changed again if fjdmpadm of the crash dump assistant (FJSDmp) is executed or the system console name is changed.

Chapter 10 Firewall/Gateway

The Enhanced Support Facility is designed on the premise that it is used in such environments as an intranet, the Internet, or a DMZ. There are, however, some notes and restrictions for the following components.

10.1 Restrictions

- **Web-Based Admin View**

- (a) The component is made on the premise that it has access to hosts in an intranet environment.
- (b) It is not able to access hosts going over a firewall when it is used within an intranet. Clients connected to the Internet are unable to access to servers placed in an intranet and vice versa.
- (c) When it is used in either the Internet or a DMZ, you should not start the Web-Based AdminView except in the case that security is maintained by other means. The way of stopping it and an effect are described in the Installation Guide for Enhanced Support Facility 3.0.1 and older. Please refer to "- Changes in the /etc/inet/services definition file" in Section 7.2, "Details of the Files Changed by Enhanced Support Facility," in this document together with the Installation Guide.

- **FLEXlm**

- (a) Having accesses to hosts crossing a firewall is not allowed.
- (b) You should use it within the range of each area when it is used in the Internet or a DMZ. You should operate the FLEXlm daemon in the same host in which a client application runs.

10.2 Attentions

- **Machine Administration (Only for PW-CL, PW-CLZ and PW-K)**

In accordance with the specifications of PW-K, PW-CL, and PW-CLZ, a system console can be connected only by using the LAN in the same segment.

- **Remote Support (REMCS) (Only for LE, PW-P, PW-CM, PW-CMZ, PW-CL, PW-CLZ, PW-K, PW-T and PW-U)**

To communicate with the Fujitsu support center, both the http and the SMTP protocols must be used for transmissions via the Internet from a server on which Enhanced Support Facility is installed.

| Protocol | SMTP |
|------------------------|---|
| Function | Reports trouble messages to Fujitsu support center |
| Transmission direction | From a server in which the Enhanced Support Facility is installed to Fujitsu support center |
| Encryption | Used |
| IP address translation | No problems (because of the SMTP protocol) |
| Gateway server | An existing SMTP server is allowed to use |
| Firewall policy | Conforms to a policy of E-Mail (SMTP) |
| Remarks | |

| Protocol | http |
|------------------------|---|
| Function | Downloads firmware from Fujitsu support center. |
| Transmission direction | From a server in which the Enhanced Support Facility is installed to Fujitsu support center |
| Encryption | None |
| IP address translation | No problems (because of the http protocol) |
| Gateway server | An existing http server is allowed to use |
| Firewall policy | Conforms to a policy of WWW. |
| Remarks | |

Chapter 11 Packages needed at installation

Solaris OS enables you to select the following software groups for installation. However, the Enhanced Support Facility should be installed on Solaris OS by Entire Distribution or Entire Distribution plus OEM Support in order to avoid problems during installation of the applications.

Various functions are limited when using it in the environments other than those recommended. You can perform troubleshooting only when you have full knowledge on the security of the Solaris Operating System and enough skill in troubleshooting by yourself.

- Core System Support
This software group includes the minimum software required for starting and executing Solaris OS operations on the system.
- End User System Support
In addition to the software in Core System Support, this software group includes software recommended for the end user.
- Developer System Support
In addition to the software in End User System Support, this group includes the software development library, include file, manual page, and programming tool.
- Entire Distribution
This software group includes all released Solaris OS software.
- Entire Distribution plus OEM Support
In addition to the software in Entire Distribution, this software group includes software for supporting extended hardware.

For Solaris 9 OS and earlier, the 64-bit support packages are not included in Core System Support as standard software. They are included as standard software in End User System Support and the associated larger software groups.

To perform 64-bit operations with Core System Support, you must add the 64-bit packages included in End User System Support from the customize screen during installation.

For use of the Enhanced Support Facility, this chapter describes the Solaris OS packages that must be additionally installed when Core System Support or End User System Support is installed. This chapter only mentions the 64-bit support packages.

Notes:

- Enhanced Support Facility with Core System Support is not certified on all kinds of environment and all kind of combination of packages. Due to applied patches or specific operating environment you may face trivial problems, even if it's not fatal problems such as a system failure or damage to user files.
If you face problem, please install appropriate packages.
- Solaris 10 OS supports a new software group called Reduced Networking Software group. When this group is used, only CORE component group of Enhanced Support Facility can be installed. Solaris packages additionally required by each package in the CORE component group are the same as the packages required when Core System Support is used (see the below chart). In addition, the installer (esfadd) of Enhanced Support Facility requires the SUNWlibC package.

Remote Support and the notification function of Machine Administration cannot be used with the Reduced Networking Software group.

- If Core System Support is selected, the SUNWhmd package is not selected as the standard one, and no network can be used. To use a network, add SUNWhmd from the customize screen during installation, or install SUNWhmd later.

If SUNWhmd is installed during installation, it is included in the SunFastEthernet / FastWideSCSI-2 Adapter Drivers cluster. (This is not a note for the Enhanced Support Facility.)

- The PW-K, PW-CL, and PW-CLZ require xntpd for operation. Therefore, the SUNWntpr and SUNWntpu packages must be installed. These packages are selected as the standard packages not for Core System Support but for End User System Support and the associated larger software groups. (This is not a note for the Enhanced Support Facility.)

Additional Solaris OS packages required for the 64-bit package included in Core System Support and End User System Support.

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|--|------------------------------------|---|--|
| 1 | Enhanced Support Facility information management | Common to all types | FJSVbse | None |
| 2 | DR Command | PW-CL PW-CLZ PW-K | FJSVdrcmd | None |
| 3 | NGDR Command | PW-CL PW-CLZ PW-K | FJSVdr | None |
| 4 | IKPDR Command | CW | FJSVdropl | None |
| 5 | SCF driver | PW-CM PW-CMZ PW-CL PW-CLZ | FJSViomp FJSVscd3 FJSVscr3 FJSVscu3 FJSVscuj3 | None |
| | | PW-P | FJSViomp FJSVpscd FJSVpscr FJSVpscu FJSVpscuj | None |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|------------|--------------|--|---|
| | | PW-K | FJSViomp FJSVscd2 FJSVscr2 FJSVscu2 FJSVscuj2 | For all version of Solaris OS <ul style="list-style-type: none"> • SUNWdtbas (End User) • SUNWtltk (End User) • SUNWxwice (End User) • SUNWxwfnt (End User) |
| | | PW-T | FJSVscd1 FJSVscr1 FJSVscu1 FJSVscuj1 | <ul style="list-style-type: none"> • SUNWmfrun (End User) • SUNWxwplt (End User) • SUNWxwcft (End User) • SUNWxwopt (End User) • SUNWxi18n (End User) • SUNWxwrtl (End User) |
| | | | FJSVscdx.us FJSVscd.us FJSVscr.us FJSVscu.us FJSVscuja | <p>For Solaris 7 OS, Solaris 8 OS, Solaris 9 OS</p> <ul style="list-style-type: none"> • SUNWxilrl (End User) • SUNWxildh (End User) • SUNWxilow (End User) <p>For Solaris 7 OS, Solaris 8 OS, Solaris 9 OS, Solaris 10 OS</p> <ul style="list-style-type: none"> • SUNWctpls (End User) <p>For Solaris 2.6 OS, Solaris 7 OS, Solaris 9 OS, Solaris 10 OS</p> <ul style="list-style-type: none"> • SUNWjxplt (End User) • SUNWjxcft (End User) <p>For Solaris 8 OS only SUNWjexpl (End User)</p> <p>For Solaris 9 OS, Solaris 10 OS</p> <ul style="list-style-type: none"> • SUNWlccom (End User) • SUNWeurf (End User) • SUNWxwacx (End User) • SUNWi2rf (End User) • SUNWi4rf (End User) • SUNWi5rf (End User) • SUNWi7rf (End User) • SUNWi8rf (End User) • SUNWi9rf (End User) • SUNWi15rf (End User) • SUNWarrf (End User) • SUNWkxmft (End User) • SUNWcxmft (End User) • SUNW5xmft (End User) • SUNWtxfnt (End User) • SUNWeuodf (End User) • SUNWjxmft (End User) • SUNWcpp (End User) <p>For Solaris 10 OS only</p> <ul style="list-style-type: none"> • SUNWdtdmr (End User) • SUNWjmfrn (End User) • SUNWi13rf (End User) • SUNWjos (End User) <p>SUNWxim (End User)</p> |
| | | PW-U | FJSVlscdx FJSVlscd FJSVlscr FJSVlscu FJSVlscuj | None |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|---|--|---|---|
| 6 | SCF/SCSI Fault LED support option | CW | FJSVscfsc | None |
| 7 | SunVTS, FJVTS | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | SUNWvts SUNWvtsmn SUNWvtsx FJSVvts | <p>For all version of Solaris OS</p> <ul style="list-style-type: none"> • SUNWxwplt (End User) • SUNWxwfnt (End User) • SUNWxwice (End User) • SUNWipc (End User) • SUNWxwcft (End User) <p>For Solaris 2.6 OS, Solaris 7 OS, Solaris 8 OS</p> <ul style="list-style-type: none"> • SUNWbtool (Developer) • SUNWdoc (End User) • SUNWolrte (End User) • SUNWoldst (End User) • SUNWtltk (End User) • SUNWtoo (End User) • SUNWxilrl (End User) • SUNWxilow (End User) • SUNWxwopt (End User) • SUNWdtbas (End User) • SUNWmfrun (End User) • SUNWaudio (End User) • SUNWdtdmn (End User) • SUNWdtdte (End User) <p>For Solaris 7 OS, Solaris 8 OS</p> <ul style="list-style-type: none"> • SUNWctpls (End User) • SUNWxildh (End User) <p>For Solaris 8 OS, Solaris 9 OS</p> <ul style="list-style-type: none"> • SUNWlibCx (End User) <p>For Solaris 9 OS, Solaris 10 OS</p> <ul style="list-style-type: none"> • SUNWdoc (End User) <p>For Solaris 8 OS only</p> <ul style="list-style-type: none"> • SUNWocf (End User) • SUNWj2rt (End User) • SUNWocfr (End User) • SUNWmp (End User) • SUNWlpmsg (End User) • SUNWpcr (End User) • SUNWpcu (End User) • SUNWppm (End User) • SUNWpsf (End User) • SUNWpsr (End User) • SUNWpsu (End User) • SUNWipc (End User) |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|--|--|-----------------------|---|
| | | | | <p>For Solaris 9 OS only</p> <ul style="list-style-type: none"> • SUNWcpp (End User) • SUNWzlib (End User) • SUNWlxml (End User) • SUNWlxmlx (End User) • SUNWzlibx (End User) • SUNWgss (End User) • SUNWgssc (End User) • SUNWgssx (End User) • SUNWfns (End User) • SUNWfnsx (End User) • SUNWcpc (Developer) • SUNWcpcu (Developer) • FJSVcpc (Developer) • SUNWxwplx (End User) • SUNWxwicx (End User) <p>For Solaris 10 OS only</p> <ul style="list-style-type: none"> • SUNWxwplr (End User) • SUNWxwrtd (End User) • SUNWcpc (End User) • SUNWcpcu (End User) • FJSVcpcu (End User) |
| 8 | Web-Based Admin View / WWW Server for Admin View | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVwvcnf FJSVwvbs | <p>For all version of Solaris OS</p> <ul style="list-style-type: none"> • SUNWdtbas (End User) • SUNWmfrun (End User) • SUNWtltk (End User) • SUNWxwice (End User) • SUNWxwplt (End User) • SUNWxwcft (End User) • SUNWxwopt (End User) • SUNWxwfnt (End User) • SUNWxilrl (End User) • SUNWxilow (End User) • SUNWxildh (End User) • SUNWxwrtd (End User) • SUNWscpu (End User) • SUNWtoo (End User) <p>For Solaris 7 OS, Solaris 8 OS, Solaris 9 OS, Solaris 10 OS</p> <ul style="list-style-type: none"> • SUNWctpls (End User) <p>For Solaris 2.6 OS, Solaris 7 OS, Solaris 8 OS</p> <ul style="list-style-type: none"> • SUNWjvjit (End User) • SUNWjvrt (End User) |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|------------------------|--|----------------------------------|--|
| | | | | For Solaris 9 OS, Solaris 10 OS <ul style="list-style-type: none"> • SUNWscpr (End User) • SUNWcpp (End User) • SUNWzlib (End User) • SUNWj3irt (End User) • SUNWj3rt (End User) Please see note 1. |
| 9 | Machine Administration | LE PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVmadm | FJSVmasv, FJSVmadm, FJSVmand, FJSVkmnd, and FJSVcmnd require the following packages (for each Solaris OS version). <ul style="list-style-type: none"> • SUNWadmc (End User) • SUNWadmfw (End User) Please see note 2. |
| | | PW-CM PW-CMZ PW-CL PW-CLZ | FJSVcmnd | |
| | | PW-P | FJSVpmnd | |
| | | CW | FJSVamadm FJSVamcl | None |
| | | LE | FJSVamle | None |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVmasv FJSVmaom | FJSVmasv, FJSVmadm, FJSVmand, FJSVkmnd, and FJSVcmnd require the following packages (for each Solaris OS version). <ul style="list-style-type: none"> • SUNWadmc (End User) • SUNWadmfw (End User) Please see note 2. |
| | | PW-K | FJSVkmnd FJSVkmsv FJSVkmom | |
| | | PW-T PW-U | FJSVmand | |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|--|----------------|--|-----------------------------------|--|
| 10 | Remote Support | LE PW-P PW-CM PW-CMZ PW-T PW-U | FJSVrlib FJSVragt FJSVrmaos | None |
| | | LE PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVrrda FJSVracm | None |
| | | Common to all types | FJSVsirms | None |
| | | PW-CM PW-CMZ | FJSVemrm | None |
| | | PW-CL PW-CLZ | FJSVemrm2 | None |
| | | PW-P | FJSVpmm | None |
| | | CW | FJSVamm | None |
| | | LE | FJSVlmm | None |
| | | PW-K | FJSVkmrm | None |
| | | PW-T | FJSVmarm | None |
| | | PW-U | | |
| | | | | |
| | | 11 | Automatic Power Control | CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T |
| PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVapcwv | | | None |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|------------------------------|--|---------------------------|---|
| 12 | Server Default Configuration | Common to all types | FJSVdef | <p>For Enhanced Support Facility 2.0 and later:</p> <p>The following are necessary in Solaris 2.6 OS, Solaris 7 OS, and Solaris 8 OS.</p> <ul style="list-style-type: none"> • SUNWpmowr (Developer) <p>Please see note 3.</p> <p>For Enhanced Support Facility 2.2 and later:</p> <p>The following are necessary in Solaris 9 OS, and Solaris 10 OS.</p> <ul style="list-style-type: none"> • SUNWpmowr (Developer) • SUNWvolu (End User) <p>Please see note 4.</p> |
| | | LE CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVssf | None |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVwarn.us | None |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K | FJSVpnlx.us FJSVpnl.us | None |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|------------------------------|--|--|--|
| 13 | System Data Output Tool | Common to all types | FJSVsnap | For Enhanced Support Facility 1.6 and earlier: <ul style="list-style-type: none"> • SUNWxcu4 (End User) • SUNWscpu (End User) Please see note 5. For Enhanced Support Facility 1.7 and later: None |
| 14 | License Manager | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FSUNlic | None |
| 15 | Crash Dump Assistant | Common to all types | FJSVdmp | None |
| 16 | Auto Dump Analyze Tool | Common to all types | FJSVana | <ul style="list-style-type: none"> • SUNWtoo (End User) Please see note 6. |
| 17 | Drivers for high-reliability | PW-K | FJSVse (Solaris 7 OS or later) FJSVsef (Solaris 2.6 OS) | None |
| | | PW-CL PW-CLZ | FJSVsec (Solaris 8 OS or later) | |
| 18 | CPU Performance Counter | PW-CM PW-CMZ PW-K PW-T | FJSVpc | None |
| 19 | CPU Patrol Diagnosis | PW-CM PW-CL PW-K PW-T | FJSVcpupd | None |
| 20 | G-LAN error notification | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVgidad | None |

| No. | Components | Abbreviation | Package name | Additional Solaris OS packages required when Core System Support or End User System Support is installed |
|-----|-----------------------------------|--|--------------|--|
| 21 | G-LAN MTU setting | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVgidr | None |
| 22 | HCP information management | PW-P | FJSVhcp | None |
| 23 | System Parameter Diagnosis | LE CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVparam | None |
| 24 | Tape Driver Configuration Tool | Common to all types | FJSVdcnf | None |
| 25 | Patch Information Collect Command | Common to all types | FJSVpmgc | None |
| 26 | Console flow control canceller | LE CW | FJSVeflw | None |

Notes:

1. If you don't add a necessary package and no Java operating environment is installed, you are unable to use Web-Based Admin View.
2. If you don't add a necessary package, an error occurs when displaying the package version information (patch information).
3. If you don't add a necessary package, the following message is displayed when you reboot the system after executing the `esfadd` command. But you can safely ignore this message.
`Can't open /etc/default/sys-suspend`
4. If you don't add a necessary package, the following message is displayed at system booting, but it does not influence the system.
`logadm: Warning:/var/adm/vold.log: No such file or directory`
If you don't want to display the above message, please comment out or delete the following entry from the `/etc/logadm.conf` file.
`/var/adm/vold.log -s 256k -t /var/adm/vold.log.old # FJSVdef`
5. If you don't add a necessary package, execution error messages are output, and you are unable to collect data.
6. If you don't add a necessary package, the `cocore` script does not operate normally.

**Chapter 12 About an installation
specifying the component group and
an individual installation**

The Enhanced Support Facility is designed on the premise that all of its packages prepared for an object system are installed.

A minimum level of security is kept in the Enhanced Support Facility 1.5. However, there are those who want to install only the minimum number of packages to establish a high-level security system. Two or more installation patterns of the package defined in the component group are offered in Enhanced Support Facility 2.3 or newer to meet such a demand. The package installed by specifying the component group which matches it to the requirement for the system when installing it can be limited.

This section explains about how to install Enhanced Support Facility by specifying the component group and how to install each package of it individually. Also some notes on the latter installation is given here.

Accordingly, there are neither restrictions nor notices in particular when packages of Enhanced Support Facility are individually installed.

Notes:

- When the installation which specifies the component group is done, a part of component offered as a function of this software is not installed. Therefore, a part of user command and an online manual cannot be used.
- The perfect verification of individual installation is not done. Some combinations in arbitrary environments and combinations are not tested. Due to applied patches or specific operating environments, you may face trivial problems even if it's not fatal problems such as a system failure or damage to user files.
If you face problem, please install appropriate packages.
- Fujitsu cannot assure that you can install partial package of Enhanced Support Facility. Fujitsu strongly recommends that only an engineer, who has a full range of knowledge on security matters with regard to Solaris OS and is able to troubleshoot on his/her own, must do this installation.

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none"> Installation Effects without an installation |
|-----|--|--|--|--|
| 1 | Enhanced Support Facility information management | Common to all types | FJSVbse | <ul style="list-style-type: none"> Mandatory Fail to install or delete the Enhanced Support Facility |
| 2 | DR Command | PW-CL PW-CLZ PW-K | FJSVdrcmd | <ul style="list-style-type: none"> Not required You are unable to use Dynamic Reconfiguration |
| 3 | NGDR Command | PW-CL PW-CLZ PW-K | FJSVdr | <ul style="list-style-type: none"> Not required You are unable to use Dynamic Reconfiguration |
| 4 | IKPDR Command | CW | FJSVdropl | <ul style="list-style-type: none"> Not required You are unable to use Dynamic Reconfiguration |
| 5 | SCF driver | PW-CM PW-CMZ PW-CL PW-CLZ PW-P PW-K PW-T PW-U | FJSViomp FJSVscd3 FJSVscr3 FJSVscu3 FJSVscuj3 FJSViomp FJSVpscd FJSVpscr FJSVpscu FJSVpscuj FJSViomp FJSVscd2 FJSVscr2 FJSVscu2 FJSVscuj2 FJSVscd1 FJSVscr1 FJSVscu1 FJSVscuj1 FJSVscdx.us FJSVscd.us FJSVscr.us FJSVscu.us FJSVscuja FJSVlscdx FJSVlscd FJSVlscr FJSVlscu FJSVlscuj | <ul style="list-style-type: none"> Mandatory You have a serious effect so that you are unable to use the features which are offered by RAS-Control-Device (SCF). |

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none"> • Installation • Effects without an installation |
|-----|---|--|---|---|
| 6 | SCF/SCSI Fault LED support option | CW | FJSVscfsc | <ul style="list-style-type: none"> • Mandatory • Cannot access the eXtended System Control Facility (XCF) and RCI (Remote Cabinet Interface) which are provided in high-end models and midrange models of SPARC Enterprise Server. In addition, SCSI disk drive hot swapping function of Machine Administration doesn't work. |
| 7 | SunVTS, FJVTS | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | SUNWvts SUNWvtsmn SUNWvtsx FJSVvts | <ul style="list-style-type: none"> • Recommended • You are unable to perform installation adjustments and periodic maintenance. |
| 8 | Web-Based Admin View / WWW Server for Admin View | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVwvcnf FJSVwvbs (GUI) | <ul style="list-style-type: none"> • Not required • You are unable to operate Machine Administration, SynfinityDISK, SynfinityCluster and so on in GUI mode. (operable in CUI-mode) <p>You are not allowed to install FJSVmasv (FJSVkmsv), FJSVapcwv unless you install the packages shown in the left column.</p> |
| 9 | Machine Administration | Common to all types | FJSVmadm | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |
| | | PW-CM PW-CMZ PW-CL PW-CLZ | FJSVemnd | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |
| | | PW-P | FJSVpmnd | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |
| | | CW | FJSVamadm FJSVamcl | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |
| | | LE | FJSVamle | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none"> • Installation • Effects without an installation |
|---------------------|-----------------------------------|---------------------|----------------|--|
| | | Common to all types | FJSVmaom | <ul style="list-style-type: none"> • Not required • You are unable to refer to the online manual through a GUI-based-menu. <p>It is included in the Enhanced Support Facility CD-ROM.</p> |
| | | | FJSVmasv (GUI) | <ul style="list-style-type: none"> • Not required • Menu operation is unavailable in GUI-mode. (but operable in CUI-mode) FSVwvcnf, FJSVwvbs, and FJSVapcwv must not be installed when the packages shown in the left column are not installed. FSVwvcnf, FJSVwvbs, and FJSVapcwv must not be installed when the packages shown in the left column is not installed. |
| | | PW-K | FJSVkmnd | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |
| | | | FJSVkmsv (GUI) | <ul style="list-style-type: none"> • Not required • Menu operation is unavailable in GUI-mode. (but operable in CUI-mode) FSVwvcnf, FJSVwvbs, and FJSVapcwv must not be installed when the packages shown in the left column are not installed. when the packages shown in the left column is not installed. |
| | | | FJSVkmom | <ul style="list-style-type: none"> • Not required • You are unable to refer to the online manual through a GUI-based-menu. <p>It is included in the Enhanced Support Facility CD-ROM.</p> |
| | | PW-T PW-U | FJSVmand | <ul style="list-style-type: none"> • Mandatory • You are unable to perform hardware maintenance. |
| | | 10 | Remote Support | PW-P PW-CM PW-CMZ PW-T PW-U |
| Common to all types | FJSVrrda FJSVracm FJSVsirms | | | |
| PW-CM PW-CMZ | FJSVemrm | | | |

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none"> • Installation • Effects without an installation |
|-----|------------------------------|--|-----------------|--|
| | | PW-CL PW-CLZ | FJSVcmrm2 | |
| | | PW-P | FJSVpmm | |
| | | CW | FJSVamrm | |
| | | LE | FJSVlmm | |
| | | PW-K | FJSVkmrm | |
| | | PW-T | FJSVmarm | |
| | PW-U | | | |
| 11 | Automatic Power Control | CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVapcs | <ul style="list-style-type: none"> • Not required • You are unable to use the Automatic Power Control features. |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVapcwv (GUI) | <ul style="list-style-type: none"> • Not required • You are unable to use the Automatic Power Control features through the Web-Based Admin View (GUI). (Operable with a command) |
| 12 | Server Default Configuration | Common to all types | FJSVdef | <ul style="list-style-type: none"> • Not required • The log-clear, etc. does not function. |
| | | LE CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVssf | <ul style="list-style-type: none"> • Recommended • You may find a difficulty in software troubleshooting due to because the function of acquiring the information necessary for troubleshooting does not work. |
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVwarn.us | <ul style="list-style-type: none"> • Recommended • You may find a difficulty in hardware maintenance due to because the function of monitoring the hardware failures such as an intermittent ECC-biterror on memories or caches does not work. |

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none"> • Installation • Effects without an installation |
|-----|------------------------------|--|------------------------------------|---|
| | | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K | FJSVpnlx.us FJSVpnl.us | <ul style="list-style-type: none"> • Mandatory (only for PW-K PW-CM, PW-CMZ, PW-CL, PW-CLZ, PW-P) • You may find a difficulty in software troubleshooting due to because you are unable to get the "crash-dump" information when a system gets hung. |
| 13 | System Data Output Tool | Common to all types | FJSVsnap | <ul style="list-style-type: none"> • Recommended • You may find a difficulty in software troubleshooting because you are unable to collect the system information required for troubleshooting at a time. |
| 14 | License Manager | Common to all types | FSUNlic | <ul style="list-style-type: none"> • Not required • You are unable to make use of license manager. |
| 15 | Crash Dump Assistant | Common to all types | FJSVdmp | <ul style="list-style-type: none"> • Recommended • You may find a difficulty in software troubleshooting since the system information is not automatically collected with the fjsnap command after a system panic. |
| 16 | Auto Dump Analyze Tool | Common to all types | FJSVana | <ul style="list-style-type: none"> • Recommended • You cannot automatically analyze crash dump file at system reboot after a system crash. |
| 17 | Drivers for high-reliability | PW-K | FJSVsef (Solaris 2.6 OS) | <ul style="list-style-type: none"> • Mandatory (Solaris 8 OS or earlier) • Normal and accurate system operation is not assured. • Not required(Solaris 9 OS or later) • Redundant console path configuration cannot be used. And the DR of the SB connected to the console is disabled. When this package is removed, suppress the following script. <ul style="list-style-type: none"> - /etc/rc2.d/S91FJSVconspath (From Enhanced Support Facility 1.7 to 2.2) - /etc/rc2.d/S90FJSVconspath (Enhanced Support Facility 2.3 or later) |
| | | | FJSVse (Solaris 7 OS or later) | |
| | | PW-CL PW-CLZ | FJSVsec (Solaris 8 OS or later) | |

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none"> • Installation • Effects without an installation |
|-----|-----------------------------------|--|--------------|--|
| 18 | CPU Performance Counter | PW-CM PW-CMZ PW-K PW-T | FJSVepc | <ul style="list-style-type: none"> • Not required • You are unable to make use of CPU performance Counter. (Solaris 8 OS 7/01 or earlier version) |
| 19 | CPU Patrol Diagnosis | PW-CM PW-CL PW-K PW-T | FJSVcpupd | <ul style="list-style-type: none"> • Recommended • You are unable to make use of CPU patrol diagnosis function. |
| 20 | G-LAN error notification | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVgidad | <ul style="list-style-type: none"> • Mandatory • You cannot enable the G-LAN error notification. |
| 21 | G-LAN MTU setting | PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T | FJSVgidr | <ul style="list-style-type: none"> • Mandatory • When using G-LAN on JumboFrame, you cannot change the MTU (Maximum Transmission Unit) value. |
| 22 | HCP information management | PW-P | FJSVhcp | <ul style="list-style-type: none"> • Mandatory • You cannot perform the firmware update by using Enhanced Support Facility. |
| 23 | System Parameter Diagnosis | LE CW PW-P PW-CM PW-CMZ PW-CL PW-CLZ PW-K PW-T PW-U | FJSVparam | <ul style="list-style-type: none"> • Recommended • You cannot diagnose system parameters |
| 24 | Tape Driver Configuration Tool | Common to all type | FJSVdenf | <ul style="list-style-type: none"> • Recommended • The driver's definition of a tape device is not given automatically, so you need to give it manually. |
| 25 | Patch Information Collect Command | Common to all type | FJSVpmgc | <ul style="list-style-type: none"> • Recommended • You cannot collect the Patch Information needed for patch analysis by the Patch Management Tool. |

| No. | Components | Abbreviation | Package name | <ul style="list-style-type: none">• Installation• Effects without an installation |
|-----|--------------------------------|--------------|--------------|--|
| 26 | Console flow control canceller | LE CW | FJSVcflw | <ul style="list-style-type: none">• Recommended• Monitoring whether a console device has come under flow cotrol becomes disabled. |

12.1 Installation by Component group

12.1.1 component group

The installed component is decided by specifying the component group. The following two component groups are offered in this software.

- BASIC** : Indispensable package and recommended package of the above-mentioned list
Neither GUI system command nor an online manual is installed.
All functions of Web-Based Admin View/WWW Server for Admin View cannot be used.
- CORE** : Only an indispensable package of the above-mentioned list.
Only a at least necessary for work the main body device component is installed.

Refer to Section 6.4, "Specifying a Component Group for Installation" in the Installation Guide for the package applied in each main body device and Solaris OS, the installation method, and notes.

12.2 About an individual installation

12.2.1 Packages required

- a. The following component packages are indispensable to install for hardware maintenance.
 - SCF driver
 - Machine Administration
- b. The following is a mandatory component package for software maintenance.
 - FJSVpnl/FJSVpnlx (for PW-K, PW-CM, PW-CMZ, PW-CL, PW-CLZ, and PW-P)
- c. The Solaris OS and the Enhanced Support Facility do not necessarily require the following package. The following component package accompanies the products if it is required.
 - License Manager (FSUNlic)
- d. Both FJSVapcwv and FJSVmasv, which use the Web-Based Admin View (FJSVwvcnf,FJSVwvbs), have noticeable relations in the order of their installation.
 - You should install neither FJSVmasv nor FJSVapcwv when you use the Web-Based Admin view.
 - You should install the packages in the following order when you use the Machine Administration in GUI and the Automatic Power-Control in GUI.
 - (1) FJSVwvcnf first
 - (2) FJSVwvbs
 - (3) FJSVmasv(FJSVkmsv)
 - (4) FJSVapcwv last
- e. The following packages are for Enhanced Support Facility 1.6 and earlier versions, but they are not required:
 - FSUNnet, FJSVhme, FJSVglm

12.2.2 How to install specific packages

- (a) Install the software by following the procedure given in Refer to Chapter 5, "Installation" in the Installation Guide.
- (b) Out of the packages mentioned in Chapter 1, "Program Components" in the Installation Guide, select the packages to be deleted.
- (c) Move to a directory which contains packages of Enhanced Support Facility arranged for your platform and Solaris OS release. The directory exists within Enhanced Support Facility CD-ROM.

The directory name is different depending on the revision of Enhanced Support Facility, type of platform and revision of Solaris OS. Refer to the table in Appendix A, "Command Reference," in the Installation Guide to find an appropriate directory name.

Example 1) For Enhanced Support Facility 2.2, PW-CM and Solaris 8 OS

```
# cd <mount_point>/Platform/C_M/8
```

Example 2) For Enhanced Support Facility 2.0, PW-T and Solaris 2.6 OS

```
# cd <mount_point>/Platform/T/2.6
```

- (d) Refer to the ".eorder" file in the current directory defined in step (c). Delete the packages selected in step (b) in reverse order of the sequence defined in the ".eorder" file.

Example 3) For Enhanced Support Facility 2.2, PW-CM and Solaris 8 OS

If you delete the FJSVapcs, FJSVapcwv, FJSVdef, and FSUNlic packages, delete them in the following sequence:

1st. FSUNlic

2nd. FJSVdef

3rd. FJSVapcwv

4th. FJSVapcs

Specify them as follows:

```
# pkgrm FSUNlic
```

```
# pkgrm FJSVdef
```

```
# pkgrm FJSVapcwv
```

```
# pkgrm FJSVapcs
```

Notes:

- Parts of packages have a correlation to one another. Thus, you cannot always delete the packages that you want to delete. See Chapter 11, "Packages needed at installation " for information on the correlation.
- Do not delete the FJSVbse package.
- Refer to the ".border" file if you cannot find the ".eorder" file. Either the ".eorder" or the ".border" file always exists in the directory of the Enhanced Support Facility packages.
- Do not create any program that expects ".eorder" as a file name or some specific its contents because they are subject to change in the future releases of the Enhanced Support Facility.

12.2.3 Notices after an installation

- (a) At the time of deleting the Enhanced Support Facility

You can use the esfrm command to delete the Enhanced Support Facility even when part of Enhanced Support Facility packages are installed in above-mentioned way.

- (b) At the time of upgrading Enhanced Support Facility

Upgrading means the case such as upgrading the Enhanced Support Facility from a release number 1.7 to 1.8 with the esfadd command.

The Enhanced Support Facility can be updated with the esfadd command even after some packages are deleted.

Deleted packages are installed during this update. Therefore, you may have to delete them again depending on your need.

- (c) At the time of applying patches

You can apply patches in the same way as you perform the regular installation.

Chapter 13 How ActiveX is used

The following packages in Enhanced Support Facility use ActiveX.

- **Machine Administration**

- FJSVmasv , FJSVmaom , FJSVkmsv , FJSVkmom

- **Web-Based Admin View / WWW Server for Admin View**

- FJSVwvbs , FJSVwvcnf

- **Auto Power Control System**

- FJSVapcwv

These packages do not contain any documents or instructions which require the security level of browser to be lowered.

Chapter 14 About the use of Java

The following components in Enhanced Support Facility use Java. Refer to the following for the system requirements.

- **Web-Based Admin View / WWW Server for Admin View**

- Java platform bundled in Solaris 2.6 OS
- Java platform bundled in Solaris 7 OS
- Java platform bundled in Solaris 8 OS
- Java platform bundled in Solaris 9 OS
- Java platform obtained from the web site of Oracle.
 - 1) Enhanced Support Facility 2.1 and earlier support the latest revision of Java Development Kit 1.1.8.
 - 2) Enhanced Support Facility 2.2 and later support the latest revision of Java Development Kit 1.1.8, the latest revision of Java 2 SDK, Standard Edition 1.2.2, and the latest revision of Java 2 Runtime Environment, Standard Edition, Version 1.2.2.

Chapter 15 Diagnosis of the system setting file

Enhanced Support Facility detects and reports system settings that have a high possibility of being changed by the system administrator and that disturb normal operation of the Solaris OS.

In addition, if improper settings are detected, Enhanced Support Facility outputs the messages, and some tunable parameters may be modified.

- Change the following parameter depending on its value
 - semsys:seminfo_semume
 - semsys:seminfo_semmnu
- Delete the following parameter if it is set
 - rt_maxpri

Furthermore, when you boot or shut down the Solaris OS, Enhanced Support Facility checks the parameters automatically.

If the `/etc/system` file has been changed, Enhanced Support Facility backs up the `/etc/system` file.

For more information about this function, see the System Parameter Diagnosis User's Guide.

Chapter 16 About the setting of the
kernel parameter
"noexec_user_stack"

There are no packages in Enhanced Support Facility that are affected by the setting of the kernel parameter "noexec_user_stack."

Chapter 17 Configuration examples for the Internet or a DMZ environment

Here describes the example of an ordinary setting needed to install the Enhanced Support Facility in a system which is either connected to the Internet or placed in a DMZ.

- a) In order to use the Enhanced Support Facility, you should install the Solaris OS, with at least, SUNWbtool in addition to selecting "End User System Support."
- b) You should remove packages as few as possible after installation of Enhanced Support Facility with using `esfadd`.
In addition, Enhanced Support Facility 1.5 or later release should be installed. If you cannot install it due to any reason, you should apply a patch "R00081" or later.
- c) The use of "Web-Based Admin View" is not recommended on this environment. For more detail, please refer to the Installation Guide for Enhanced Support Facility 3.0.1 and older and Chapter 7, "System Files Changed by Enhanced Support Facility" in this document.
- d) Delete the definition for remote execution added into `/etc/inet/inetd.conf` for SunVTS and FJVTS. For more information, see Chapter 7, "System Files Changed by Enhanced Support Facility" in this document.
- e) You should suppress the log-clear feature included in the Server Default Configuration. You should delete the `/etc/rc2.d/S99FJSVlogclear` file and a definition for the `chklog` added to the crontabs for "root" and "adm".
You should refer to both Chapter 4, "rc scripts and daemon used in Enhanced Support Facility" and Chapter 8, "How to set the cron used in Enhanced Support Facility" in this document.

Chapter 18 Countermeasures against problems detected by the security check tool

This chapter explains countermeasures against problems by using the System Scanner tool, the security check tool released from IBM Internet Security Systems.

Sales of System Scanner have been terminated.

18.1 For Basic Software Extension 1.0 to Enhanced Support Facility 1.4

A problem detected by the System Scanner tool indicates that the owner must not be "bin" but "root." This issue assumes a case in which "bin" authority is taken away because of another hole in security. Solaris OS also has the same issues. Therefore, no patch is provided for this issue.

The system administrator should change the owner from "bin" to "root" by executing the `chown` command if necessary.

The target files are listed below. No malfunction occurs even if the owner is changed manually. The owner has been changed to "root" from "bin" for the Enhanced Support Facility 1.5 and later versions.

| File name | Component |
|---------------------------------|------------------------------|
| /opt/FJSVdef/sbin/chkslog | Server Default Configuration |
| /opt/FJSVhwr/procedure/scfdaily | SCF driver |
| /sbin/FJSVhwr/daemon/pwrctrl | SCF driver |
| /etc/init.d/FJSVscfdaemon.rcS | SCF driver |
| /etc/init.d/FJSVscf | SCF driver |

(Change method: `chown root:sys file-name`)

A problem detected by the System Scanner tool indicates that the group write permissions of the directories `/usr/bin`, `/usr/sbin` and `/sbin`, which are described in `PATH` variables used in `rc` procedure, are set. However, this is an issue for Solaris OS and not for the Enhanced Support Facility because Solaris owns these directories. Therefore, no patches are provided for the Enhanced Support Facility.

The indicated files are listed below. Delete the group write permission of the directories `/usr/bin`, `/usr/sbin`, and `/sbin` by executing the `chmod` command if needed. But, as described above, owner of these directories is Solaris OS.

Impact for Solaris OS by changing directory permission is beyond the scope of this document. Enhanced Support Facility 1.5 and later versions are improved so that the `PATH` variable is not used.

| File name | Component |
|---------------------------|------------------------|
| /etc/rc2.d/S88FSUNlicense | FLEXlm License Manager |
| /etc/rc1.d/K57FSUNlicense | FLEXlm License Manager |
| /etc/rc0.d/K57FSUNlicense | FLEXlm License Manager |

18.2 For Enhanced Support Facility 1.5

The set user ID (SUID) attribute is assigned for the following commands because of requirements for command operations. These commands are designed so that no security problems occur.

You can remove the SUID manually by executing the `chmod -s` command.

If this is done, only the administrator (root) can use the provided functions.

Note that the permission setting may be returned to the original value by applying patches or upgrade installation of Enhanced Support Facility.

| File name | Component |
|---------------------------------------|------------------------|
| /opt/FJSVmadm/sbin/getmodelcode | Machine Administration |
| /opt/FJSVmadm/sbin/excmd | Machine Administration |
| /usr/platform/FJSV,GPUS/sbin/prtdiag | SCF driver |
| /usr/platform/FJSV,GPUSK/sbin/prtdiag | SCF driver |
| /opt/SUNWvts/bin/vtsk | SunVTS |

(Change method: `chmod -s file-name`)

18.3 For Enhanced Support Facility 1.6 / Enhanced Support Facility 1.7

Enhanced Support Facility 1.6 and Enhanced Support Facility 1.7 has been tested with using a security check tool, System Scanner ver. 4.0 released from IBM Internet Security Systems.

In addition to the items described on section 18.2, there are notes as follows:

- System Scanner 4.0 issues an alarm for a daemon whose owner is "bin". Owner of such daemon is SunVTS. No action is taken against this issue because 1) real problem may occur only after an intruder intercepts the "bin" privilege with using any other security hole, and 2) owners of daemons in Solaris OS are also "bin." If you want to change the owner, please refer to Chapter 7, "About system files."
- System Scanner 4.0 issues an alarm to all files with the write permission for group even if the group is "sys" group. No action is taken against this issue because 1) real problem may occur only after an intruder intercepts the "sys" privilege with using any other security hole, and 2) files owned by Solaris OS have same permission.
- For PW-K, NFS is used for communication with a system console. System Scanner 4.0 issues an alarm to the NFS system because the "secure" option is not specified. But, system requires the LAN between PW-K and a system console is a dedicated LAN. Therefore, there must be no security problems. If you want to add "secure" option, please refer to Chapter 9, "About /etc/dfs/dfstab."
- System Scanner 4.0 issues an alarm for file name starting with \$. But, in the Java specifications, name of Java file starts with \$. Therefore, further countermeasures for this issue would be excessive. So no countermeasures are provided for the Enhanced Support Facility.

18.4 For Enhanced Support Facility 2.0

In Enhanced Support Facility 2.0, the set user ID (SUID) attribute is assigned for the following commands because of requirements for command operations. These commands are designed so that no security problems occur.

You can remove the SUID manually by executing the `chmod -s` command.

If this is done, only the administrator (root) can use the provided functions.

Note that the permission setting may be returned to the original value by applying patches or upgrade installation of Enhanced Support Facility.

| File name | Component |
|---|------------------------|
| /opt/FJSVmadm/sbin/getmodelcode_col | Machine Administration |
| /usr/platform/FJSV,GPUSC-M/sbin/prtdiag | SCF driver |

(Change method: `chmod -s file-name`)

18.5 For Enhanced Support Facility 2.2

In Enhanced Support Facility 2.2 , The set user ID (SUID) attribute is assigned for the following commands because of requirements for command operations. These commands are designed so that no security problems occur.

You can remove the SUID manually by executing the `chmod -s` command.

If this is done, only the administrator (root) can use the provided functions.

Note that the permission setting may be returned to the original value by applying patches or upgrade installation of Enhanced Support Facility.

| File name | Component |
|-----------------------------|------------|
| /opt/FJSVhwr/sbin/fjprtdiag | SCF driver |

(Change method: `chmod -s file-name`)

**Chapter 19 About services registered in
Service Management Facility of
Solaris 10 OS**

This chapter explains the services in Service Management Facility of Solaris 10 OS registered by Enhanced Support Facility.

[Suppressible] explained here means whether or not the service can be disabled by deleting it.

Besides [Effect of suppression] explains about the influence caused by disabling the service by deleting it.

• `svc:/system/fjsvmadm-main:default`

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVamadm |
| Support Solaris OS | Solaris 10 OS |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Function | Information of the Machine Administration is initialized. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | The Machine Administration is not started. |
| Remarks | |

• `svc:/system/fjsvmadm-evhandsd:default`

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVamadm, FJSVmadm |
| Support Solaris OS | Solaris 10 OS |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 or later |
| Function | Alerts hardware errors through monitoring syslog messages |
| Daemon started | evhandsd: Extracts messages to be monitored in syslog messages. evmond: Alerts an abnormality based on the messages extracted. scfdrvrcvd: Extracts messages to be monitored in SCF events. (only for PW-CM, PW-CMZ, PW-CL or PW-CLZ). |
| Port used | None |
| Suppressible | No |
| Effect of suppression | You may be unable to recognize hardware failures. |
| Remarks | |

- **svc:/system/fjsvmadm-hardmond:default**

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVamadm |
| Support Solaris OS | Solaris 10 OS |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Function | The daemon which monitors hardware error is started. |
| Daemon started | hardmond : Monitors hardware errors based on any other information than syslog messages. (ex. monitoring of disk devices) |
| Port used | None |
| Suppressible | No |
| Effect of suppression | Monitoring the failure of disk or extension file unit is not done. Also an alarm message may not be sent normally. |
| Remarks | |

- **svc:/system/fjsvmadm-hrdconf:default**

| Component | Machine Administration |
|-----------------------------------|---|
| Package name | FJSVamadm |
| Support Solaris OS | Solaris 10 OS |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Function | Hardware configuration information is made. |
| Daemon started | None |
| Port used | None |
| Suppressible | No |
| Effect of suppression | Hardware configuration information is not correctly made. |
| Remarks | |

- **svc:/system/fjsvmadm-scfeventd:default**

| Component | Machine Administration |
|-----------------------------------|--|
| Package name | FJSVamadm |
| Support Solaris OS | Solaris 10 OS |
| Support models | CW |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later |
| Function | The daemon which extracts message in SCF event is started. |
| Daemon started | scfeventd : Extracts messages to be monitored in SCF events. |
| Port used | None |
| Suppressible | No |
| Effect of suppression | When DR/PHP is executed, configuration information is not automatically updated. |
| Remarks | |

- **svc:/system/fjvssf-limstrerr:default**

| Component | Server Default Configuration |
|-----------------------------------|---|
| Package name | FJSVssf |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 or later |
| Function | Records errors occurred on TCP/IP |
| Daemon started | limstrerr |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance. There is a possibility of affecting the troubleshooting concerning a problem occurred on a LAN due to the reason that a part of error information on TCP/IP is not automatically recorded. |
| Remarks | |

- **svc:/system/fjvswarn:default**

| Component | Server Default Configuration |
|-----------------------------------|--|
| Package name | FJSVwarn |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | PW-P,PW-CM,PW-CMZ,PW-CL,PW-CLZ,PW-K,PW-T |
| Support Enhanced Support Facility | Enhanced Support Facility 2.5 through 3.1 |
| Function | It monitors intermittent single-bit errors of CPU caches or memories and outputs messages into the syslog in the case of detecting a failure. |
| Daemon started | Syswarnd |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You have a difficulty in hardware maintenance. Because no message is output even if intermittent single bit errors of cpu-caches or memories frequently occur. |
| Remarks | |

- **svc:/system/fjsvdmpsnap:default**

| Component | Crash Dump Assistant |
|-----------------------------------|--|
| Package name | FJSVdmp |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later. |
| Function | In saving "crash dump" information after a system panic, the system information, which is output with the fjsnap command, is stored into "/var/crash". |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance. Immediately after a system panic, the system information in such a file as "/var/adm/message," which is required to analyze a panic cause, is not automatically output. |
| Remarks | If you suppress this service, you must also suppress "svc:/system/fjsvdmpadm:default". |

- **svc:/system/fjsvdmpadm:default**

| Component | Crash Dump Assistant |
|-----------------------------------|---|
| Package name | FJSVdmp |
| Support Solaris OS | Solaris 10 OS or later |
| Support models | Common to all types |
| Support Enhanced Support Facility | Enhanced Support Facility 3.0 or later. |
| Function | The system information, which is output with the fjsnap command, is saved into "/var/crash" at the time of storing the crash-dump information after a panic. |
| Daemon started | None |
| Port used | None |
| Suppressible | Yes |
| Effect of suppression | You may have a difficulty in software maintenance. Immediately after a system panic, the system information in such a file as "/var/adm/messages," which is required to analyze a panic cause, is not automatically output. |
| Remarks | If you suppress this service, you must also suppress "svc:/system/fjsvdmpsnap:default". |

Chapter 20 Oracle VM Server for SPARC/Logical Domains (LDoms)

- Overview of Oracle VM Server for SPARC/Logical Domains(LDoms)

Virtual technology provided by Oracle: The function enables you to run two or more different operating systems on one computer. For more information, please refer to "SPARC Enterprise Oracle VM Server for SPARC Guide".

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

Affected by Oracle VM Server for SPARC/Logical Domains(LDoms). About the support for Enhanced Support Facility, please refer to "4.2 Notes on Oracle VM Server for SPARC/Logical Domains(LDoms)" in "Enhanced Support Facility User's Guide".