FUJITSU Software
PRIMECLUSTER GD I/O Monitor Option 4.5A00

Installation Guide

Linux

Preface

Note

The latest manuals are available at

· ·

Date of publication and edition

Copyright notice

Revision History

First edition

Contents

Chapter 1 Program components

The unit of the program that composes the system is called a package.

This chapter explains about the packages of which this software is composed.

No.	Component	Package	Version	Function
1	Global Disk Services(GDS) I/O Monitor Option	FJSVsdx-iom	4.5.0	I/O response time assurance function

Chapter 2 Operation environment

This chapter explains the operation environment of this software.

2.1 Software environment

1. Required basic software

   To use this software, install either of the following basic softwares.

No.	Basic Software	Remark
1	Red Hat Enterprise Linux 6.5 (for Intel64) or later	For details, see the installation guide of the below required PRIMECLUSTER software.
2	Red Hat Enterprise Linux 7.2 (for Intel64) or later	For details, see the installation guide of the below required PRIMECLUSTER software.

2. Required software

   To use this software, the following software product is required.

No.	Software	Package	Version and/or level	Remark
1	PRIMECLUSTER GD, PRIMECLUSTER Enterprise Edition, or PRIMECLUSTER HA Server	FJSVsdx-bas	4.5.0	
		kmod-FJSVsdx-drvcore	4.5.0	

3. Exclusive software

   None.

4. Required patches

   None.

2.2 Hardware environment

The following hardware requirements must be satisfied to operate this software.

1. Memory

   128MB or more memory is required.

2. Required hardware

   PRIMEQUEST 3000/2000 Series

2.3 Static disk resources

This section explains static disk space requirements for this software.

2.3.1 Required disk space

The following table lists the disk space requirements for installing this software. If necessary, expand the size of the relevant file systems.

No.	Directory	Disk space (in MB)	Remark
1	/usr	0.1	Only when Red Hat Enterprise Linux 7 (for Intel64) is used.
2	/etc	0.1	Only when Red Hat Enterprise Linux 6 (for Intel64) is used.
3	/etc/opt	0.1	

2.3.2 Required work area

None.

2.4 Dynamic disk resources

This section explains dynamic disk space requirements for this software.

2.4.1 Required disk space

When this software is operated in the following environment, the additional disk space shown below is required for each directory as well as the disk space required for installing this software as described in "2.3 Static disk resources". If free space is insufficient, expand the size of the relevant file system.

No.	Directory	Disk space (in MB)	Operation
1	/var/opt	4.3	If this software is installed.

2.5 Required memory

The following table shows the memory required when this software is operated in the following environment.

No.	Memory (in MB)	Operation
1	15.1MB + (0.003MB x Number of disks) + (390MB x Number of volumes)	If using the I/O Response Time Assurance Function. The number of disks and number of volumes in the formula in the left are the number of disks and number of volumes of the shared class and the local class used to set the I/O Response Time Assurance Function.
2	220.9MB + (0.003MB x Number of disks) + (390MB x Number of volumes)	If using the I/O Response Time Assurance Function. The number of disks and number of volumes in the formula in the left are the number of disks and number of volumes of the root class used to set the I/O Response Time Assurance Function.

Chapter 3 Installation

This chapter explains the installation of this software.

If the PRIMECLSUTER GD basic packages, FJSVsdx-bas and kmod-FJSVsdx-drvcore are not installed, the product cannot be installed. All packages are included in No.1 of "2) Required software" of "2.1 Software environment".

To use this product on a cluster system, install it on all the cluster node.

3.1 Preparations

1. Prerequisites

   Make sure that the disk has enough free space to install this software. For the disk size that this software uses, see "2.3 Static disk resources". If free space is insufficient, re-configure the disk partitions.

2. Saving the configuration file

   None.

3. Time required

   It takes approximately 3 minutes to install this software.

3.2 Installation

1. Login to the system and become the root user.

   ```
   $ su <Return>
   Password:password <Return>
   ```

2. Boot the system in single-user mode.

   [Red Hat Enterprise Linux 6]

   ```
   # shutdown now <Return>
   ```

   [Red Hat Enterprise Linux 7]

   1. Check the default target.

      Note

      - The default target ([multi-user.target] in the following example) varies depending on the system.

      - Put down the default target before installation as you can restore the system to the state prior to installation later.

      ```
      # systemctl get-default <Return>
      multi-user.target
      ```

   2. The default target changes in single-user mode.

      ```
      # systemctl set-default rescue.target <Return>
      ```

   3. Restart the system.

      ```
      # shutdown -r now <Return>
      ```

3. Insert the CD and mount the CD-ROM device.

```
# mount /media/cdrom <Return>
```

4. Install the packages by executing the rpm(8) command.

[Red Hat Enterprise Linux 6 (for Intel64)]

```
# cd <CDROM_DIR>/Linux/products/GDS_IOMonitor <Return>
# rpm -ihv FJSVsdx-iom-4.5.0-X.rhel6_x86_64.rpm <Return>
```

[Red Hat Enterprise Linux 7 (for Intel64)]

```
# cd <CDROM_DIR>/Linux/products/GDS_IOMonitor <Return>
# rpm -ihv FJSVsdx-iom-4.5.0-X.rhel7_x86_64.rpm <Return>
```

 Note
....

The number entered for '*X*' corresponds to that of the package.

Replace it with the release number of rpm stored on the CD.
....

5. Eject the CD.

```
# cd / <Return>
# umount /media/cdrom <Return>
# eject <Return>
```

6. Restart the system by executing the "shutdown(8)" command.

[Red Hat Enterprise Linux 6]

```
# shutdown -r now <Return>
```

[Red Hat Enterprise Linux 7]

The default target changes in multi-user mode.

```
# systemctl set-default multi-user.target <Return>
```

Restart the system.

```
# shutdown -r now <Return>
```

7. Download patch(es)

Download the latest patch(es) for this software and update information file from UpdateSite.

8. Apply the patch(es) for this software.

For installation instructions and pints of concern, etc., refer to the update information file of each patch.

3.3 Environment configuration

Refer to "PRIMECLUSTER Global Disk Services Configuration and Administration Guide."

Chapter 4 Uninstallation

This chapter explains the uninstallation of this software.

Uninstall this product from all of the cluster nodes when using this software in a cluster system.

4.1 Uninstallation

The following explains the procedure on how to uninstall the software.

1. Execute sdxinfo -I command and check whether a class with the I/O Response Time Assurance Function activated exists.
   "on" is shown in the MODE field of the class if the I/O Response Time Assurance Function is activated for the class.

```
# sdxinfo -I <Return>
CLASS    MODE TIME PANIC
------- ---- ---- -----
<class>   off  *     *
<class>   on   77   on
```

2. If a class with the I/O Response Time Assurance Function activated exists, use the sdxattr -C command to deactivate the function.

```
# sdxattr -C -c <class> -a iotimeout=off <Return>
```

3. Login to the system as the root user.

```
$ su <Return>
Password:password <Return>
```

4. Change the system to single-user mode.

   [Red Hat Enterprise Linux 6]

   ```
   # shutdown now <Return>
   ```

   [Red Hat Enterprise Linux 7]

   1. Check the default target.

      📒 Note
      ....
      - The default target ([multi-user.target] in the following example) varies depending on the system.

      - Put down the default target before installation as you can restore the system to the state prior to installation later.
      ....

      ```
      # systemctl get-default <Return>
      multi-user.target
      ```

   2. The default target changes in single-user mode.

      ```
      # systemctl set-default rescue.target <Return>
      ```

   3. Restart the system.

      ```
      # shutdown -r now <Return>
      ```

5. Remove the package using the rpm(8) command.

```
# rpm -e FJSVsdx-iom <Return>
```

6. Reboot the system by executing the shutdown(8) command.

[Red Hat Enterprise Linux 6]

```
# shutdown -r now <Return>
```

[Red Hat Enterprise Linux 7]

The default target changes in single-user mode.

```
# systemctl set-default rescue.target <Return>
```

Restart the system.

```
# shutdown -r now <Return>
```

Appendix A Troubleshooting

This chapter explains how to address problems that occur.

A.1 When segmentation violation causes an installation failure

If segmentation violation is due to the rpm(8) command, take the following corrective steps. If the problem still remains unresolved, contact Fujitsu customer support engineers.

1. Reboot the system by executing the shutdown(8) command.

```
# shutdown -r now <Return>
```

2. Delete PRIMECLUSTER GD I/O Monitor Option from the system according to "4.1 Uninstallation".

3. Execute the following command.

```
# rpm --rebuilddb <Return>
```

4. Install PRIMECLUSTER GD I/O Monitor Option again.