FUJITSU Software
PRIMECLUSTER GDS
4.3A40

Installation Guide

Oracle Solaris

Preface

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Contents

Chapter 1 Program components

A system consists of programs, and each program is referred to as a package.
This chapter explains about the packages of which this software is composed.

1.1 Oracle Solaris 10

No.	Component	Package	Version	Function
1	Web-Based Admin View	FJSVwvcnf	4.3.4	GUI common framework, cluster management GUI
		FJSVwvbs	4.3.4	
		FJSVwvmpc	4.3.4	
		SMAWcj2re	1.7.0	
2	System Information Output Tool	FJSVsnap	2.8	Tool for collecting troubleshooting information
3	Global Disk Services (GDS)	FJSVsdx	4.3.4	High-availability volume manager
		FJSVsdxl	4.3.4	
		FJSVsdxwv	4.3.40	
		FJSVsdxga	4.3.4	

1.2 Oracle Solaris 11

No.	Component	Package	Version	Function
1	Web-Based Admin View	FJSVwvcnf	4.3.4	GUI common framework, cluster management GUI
		FJSVwvbs	4.3.4	
		FJSVwvmpc	4.3.4	
		SMAWcj2re	1.7.0	
2	System Information Output Tool	FJSVsnap	2.8	Tool for collecting troubleshooting information
3	Global Disk Services (GDS)	FJSVsdx	4.3.4	High-availability volume manager
		FJSVsdxl	4.3.4	
		FJSVsdxwv	4.3.40	
		FJSVsdxga	4.3.4	

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	Oracle Solaris 10 (8/11 or later)	
2	Oracle Solaris 11	

   ### Note

   ....

   If you use GDS for system disk mirroring in a ZFS boot environment, refer to "System Disk Mirroring in a ZFS Boot Environment" of "A.2 Important Points" in "PRIMECLUSTER Global Disk Services Configuration and Administration Guide" for notes on OS installation.

   ....

2. Required software

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

No.	Software	Package	Version and/or level	Remark
1	PRIMECLUSTER Clustering Base	Cluster Foundation, CF Add-On	4.3A40	Cluster foundation software. Required for managing a storage device shared between cluster nodes as a shared disk device through GDS.
2	Windows(R) Vista, Windows(R) 7, Windows(R) 8, Windows(R) 8.1			To use as a client of Web-Based Admin View, one of them is required.
3	J2SE(TM) Runtime Environment		7	Required to use as a client of Web-Based Admin View. The use of the latest version is recommended.
4	Microsoft Internet Explorer		7 8 9 10 11	To use Microsoft(R) Windows as a client of Web-Based Admin View, one of them is required.

3. Exclusive software

   None.

4. Required patches

   To use this software, the following patch is required.

No.	Software	ID/PTF	Remark
1	Enhanced Support Facility	915163-01 or later	For Oracle Solaris10, the necessary patch for the FJSVsnap package.
2		T007654SP-04	For Oracle Solaris11.2, the necessary patch for the FJSVsnap package.
3	Oracle Solaris 11.2	SRU14111 or later	

📝 **Note**

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We recommend that the basic software patch "Program Temporary Fixes (PTFs)" , "FUJITSU Recommended & Security Patch Clusters (FJ RSPC)" and "Support Repository Update (SRU)" be applied..

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2.2 Hardware environment

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

1. Memory

   128MB or more of memory is required.

2. Required hardware

   None.

3. Related hardware

   It is hardware that relates to this software.

No.	Machine	Model	Remark
1	Personal Computer	FM-V, etc	

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.

- Solaris 11

No.	Directory	Disk space (in MB)	Remark
1	/	8.6	
2	/usr	4.0	
3	/var	2.2	
4	/home	0	
5	/opt	194.7	

- Solaris 10

No.	Directory	Disk space (in MB)	Remark
1	/	4.3	
2	/usr	4.0	
3	/var	3.0	
4	/home	0	
5	/opt	195.4	

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	50.0	While mirroring the system disk.

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	190.0	While mirroring the system disk.

Chapter 3 Installation

This chapter explains the installation of this software.

3.1 Preparations

1. Time required

   It takes approximately 3 minutes to install this software.

2. Checking the system environment

   1. Check the available disk space for installing this software. For information on the disk space requirements, see "2.3 Static disk resources". If the disk space is not enough, reconfigure the disk partition.

   2. If you want to use GDS with PRIMECLUSTER Clustering Base (Clustering Base), install Clustering Base first. If this software has already been installed and GDS is configured in the system environment, delete the configuration before installing Clustering Base.
      For information about installing Clustering Base, see "PRIMECLUSTER Clustering Base Installation Guide".

   3. If you use Oracle Solaris 11, to install this software, it is necessary to modify the IP address of the admin LAN for Web-Based Admin View and its corresponding host name, and the host name corresponding to "127.0.0.1,"::1".

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

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

      2. Delete the host name allocated to "127.0.0.1" and "::1" using vi(1) and allocate it to the IP address of the admin LAN.

         Before change)

         ```
         #
         # Copyright 2009 Sun Microsystems, Inc.  All rights reserved.
         # Use is subject to license terms.
         #
         # Internet host table
         #
         ::1 host-name localhost
         127.0.0.1 host-name localhost loghost
         ```

         After change)

         ```
         #
         # Copyright 2009 Sun Microsystems, Inc.  All rights reserved.
         # Use is subject to license terms.
         #
         # Internet host table
         #
         ::1 localhost
         127.0.0.1 localhost loghost
         IP-Address host-name
         ```

   3. Installation of Oracle Solaris 11 packages

      If you use Oracle Solaris 11, install the following package from Oracle Solaris 11 Package Repository. For information about installing package from Oracle Solaris 11 Package Repository, see OS manual.

      - text/locale

   4. Saving the Configuration files

      None.

> 📔 **Note**
> ....
> If you use Oracle Solaris 11, make sure that NWAM (Network Auto-Magic) is disabled.
> When NWAM is enabled, PRIMECLUSTER cannot work normally.
> For details of changing NWAM setting, see the Solaris documentation.
> ....

3.2 Installation

1. Insert DVD of this software into the DVD drive.

2. Login to the system and become a root user.

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

3. The system is changed to the OpenBoot environment.

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

4. Start the system in single user mode.

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

5. Mount necessary file systems.

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

When installing in the UFS file system directory, please execute the following command.

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

6. Mount the DVD.

```
# mkdir -p /cdrom/cdrom0 <Return> (*1)
# /usr/sbin/mount -F hsfs -o ro /dev/dsk/c0t4d0s2 /cdrom/cdrom0 <Return> (*2)
```

(*1) Checks if "/cdrom/cdrom0" directory exists and creates accordingly.
(*2) Since the underlined device name is different according to the machine environment, please confirm it.

7. Check if the FJSVsnap package is installed.
Please check that a newer version than "1.1 Oracle Solaris 10" or "1.2 Oracle Solaris 11" is installed.

```
# pkginfo -l FJSVsnap.\* <Return>
```

If the command indicates that the FJSVsnap version is old, uninstall all the FJSVsnap packages from the system.

```
# pkgrm FJSVsnap <Return>
```

If the older FJSVsnap versions are removed, or no FJSVsnap versions are installed, install the FJSVsnap package by executing the pkgadd(1M) command.

```
# pkgadd -d /cdrom/cdrom0/Tool/Pkgs FJSVsnap <Return>
```

8. Execute the installation script then install GDS components.

```
# cd /cdrom/cdrom0/Tool <Return>
# ./cluster_install -e PCL-GDS <Return>

        :
        :
```

```
The installation was finished successfully.
#
```

Check if "The installation was finished successfully" is displayed.

9. Unmount the DVD, and eject DVD.

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

10. Execute the shutdown(1M) command to reboot the system.

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

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

Chapter 4 Uninstallation

This chapter explains the uninstallation of this software.

4.1 Preparations

Before uninstalling, if you are applying patch for PRIMECLUSTER by UpdateSite format, remove them by UpdateAdvisor (middleware). For details, see help information on UpdateAdvisor(middleware) and the update information file of the patch.

4.2 Uninstallation

If GDS is used, it is necessary to delete the GDS configuration settings and then delete this software. For more information, refer to the "PRIMECLUSTER Global Disk Services Configuration and Administration Guide".

1. Insert DVD of this software into the DVD drive.

2. Login to the system and become a root user.

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

3. The system is changed to the OpenBoot environment.

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

4. Start the system in single user mode.

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

5. Mount necessary file systems.

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

When uninstalling in the UFS file system directory, please execute the following command.

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

6. Uninstall PRIMECLUSTER GDS Snapshot if it has been installed. For information on how to uninstall, refer to the "PRIMECLUSTER GDS Snapshot Installation Guide".

7. Mount the DVD.

```
# mkdir -p /cdrom/cdrom0 <Return> (*1)
# /usr/sbin/mount -F hsfs -o ro /dev/dsk/c0t4d0s2 /cdrom/cdrom0 <Return> (*2)
```

(*1) Checks if "/cdrom/cdrom0" directory exists and creates accordingly.
(*2) Since the underlined device name is different according to the machine environment, please confirm it.

8. Execute the uninstallation script to delete the GDS components.

```
# cd /cdrom/cdrom0/Tool <Return>
# ./cluster_uninstall -e PCL-GDS <Return>
Are you sure to remove PRIMECLUSTER software packages from the global zone?(y,n) y <Return>

Removal of <FJSVsdxga> was successful.
Removal of <FJSVsdxwv> was successful.
         :
         :
```

```
Uninstallation was successful.
#
```

Check if "Uninstallation was successful" is displayed.

![Note icon] Note

. . . .

When PRIMECLUSTER GDS 4.X is updated to PRIMECLUSTER GDS 4.3A20. After uninstalling PRIMECLUSTER GDS 4.3A20, delete the PRIMECLUSTER GDS 4.X packages. See PRIMECLUSTER GDS 4.X Installation Guide.
You can check the package instance of the FJSVsdx packages by using the following command.

```
# pkginfo -x FJSVsdx.* <Return>

FJSVsdx           SDX/G Basic Software
                     (sparc) 4.3.1
FJSVsdx.2         SDX/G Basic Software
                     (sparc) 4.3.2
```

. . . .

9. Uninstall FJSVsnap package. This package is also shared with the other product. If the following product is installed, you cannot uninstall this package.

   - Enhanced Support Facility (ESF)

   Execute the pkgrm(1M) command to remove it.

```
# pkgrm FJSVsnap <Return>
```

10. Execute the uninstallation script to delete the Web-Based Admin View components. Note that Web-Based Admin View components are shared with the other product. If the following product has been installed, skip this step.

    - PRIMECLUSTER Clustering Base

```
# ./cluster_uninstall -p WebView <Return>
Are you sure to remove PRIMECLUSTER software packages from the global zone?(y,n) y <Return>

Removal of <FJSVwvmpc> was successful.
Removal of <FJSVwvbs> was successful.
        :
        :

Uninstallation was successful.
#
```

Check if "Uninstallation was successful" is displayed.

11. Unmount the DVD, and eject DVD.

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

12. Execute the shutdown(1M) command to reboot the system.

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

Appendix A Messages

This chapter explains the messages displayed by installer.

A.1 Error Messages

ERROR: This installation is running now.

Description

The "cluster_install" command is running for another process.

Workaround

Wait until the command is done, and execute it again.

ERROR: This software needs *<sparc>* architecture.

Description

The CPU type of the machine is not sparc.

Workaround

The "cluster_install" command can only be used on sparc machines.

ERROR: This software needs Oracle Solaris 10 or later.

Description

The OS version of the machine is earlier than Oracle Solaris 10.

Workaround

The "cluster_install" command can only be used on machines with Oracle Solaris 10 or higher.

ERROR: To use this installer you must be the root user.

Description

The user authority is not root.

Workaround

Execute the "cluster_install" command using a root user access privilege.

ERROR: Installation was failed.

Description

The product installation failed.

Workaround

Refer to the following log files to investigate the cause of the installation failure:
/var/sadm/install/logs/cluster_install
After that, remove all the packages referring to "Chapter 4 Uninstallation", and execute the "cluster_install" command again.

Warning: The package <FJSVsnap> has not been installed.

Description

The FJSVsnap package has not been installed.

Workaround

After the installation with the "cluster_install" command is complete, install the FJSVsnap package using the pkgadd(1M) command.

Warning: The package <FJSViomp> has not been installed.

Description

The FJSViomp package has not been installed.

Workaround

After the installation with the "cluster_install" command is complete, install the FJSViomp package using the pkgadd(1M) command.

Please see the following log file.
/var/sadm/install/logs/cluster_install

Description

See the /var/sadm/install/logs/cluster_install log file.

Workaround

Remove the cause of the error referring to the log file then execute the command again.

ERROR: Failed to create file /etc/PCL-release/*XX*.

Description

Creation of a file in /etc/PCL-release/*XX* failed. *XX* shows the abbreviation of the product name.

Workaround

Remove the cause of the problem then execute cluster_install again.

ERROR: network service is disabled.

Description

Network service is disabled.
This message is output only in Oracle Solaris 11 operating environment.

Workaround

Enable network service then execute cluster_install again.

ERROR: NWAM(Network Auto-Magic) is enabled.

Description

NWAM is enabled.
This message is output only in Oracle Solaris 11 operating environment.

Workaround

Disable NWAM then execute cluster_install again.

Uninstallation was failed.

Description

Uninstallation was failed.

Workaround

Remove the cause of the error referring to the log file or error message then execute cluster_uninstall again.

PRIMECLUSTER software packages were not installed in this system.

Description

PRIMECLUSTER software packages were not installed in this system.

Workaround

None.

ERROR: Run-level must be the single-user-state.

Description

Run-level is not the single-user-state.

Workaround

Change the run level to the single-user state then execute cluster_uninstall again.

ERROR: The PRIMECLUSTER software packages cannot be removed because GDS class(es) exist. Please remove the GDS class(es) and execute cluster_uninstall again.

Description

GDS class(es) exist.

Workaround

1. Check whether there are GDS classes using the sdxinfo command. If any, delete the classes. For the class deletion method, see the "PRIMECLUSTER Global Disk Services Configuration and Administration Guide".

2. Check the file in the /etc/opt/FJSVsdx/sysdb.d directory using the ls(1) command. If there are other files than class.db, delete the files by executing the rm(1) command.

3. Check the file in the /dev/sfdsk directory using the ls(1) command. If there are other files or directories than _adm, _diag, _sysadm, and _sysdiag, delete the files and the directories.

4. Execute cluster_uninstall again.

ERROR: Failed to remove file /etc/PCL-release/*XX*

Description

Removal of a file /etc/PCL-release/*XX* failed. *XX* shows the abbreviation of the product name.

Workaround

Remove the cause of the problem then execute cluster_uninstall again.

ERROR: Failed to remove directory /etc/PCL-release

Description

Removal of a directory /etc/PCL-release failed.

Workaround

Remove the cause of the problem then execute cluster_uninstall again.

Please see the following log file. /var/sadm/install/logs/cluster_uninstall

Description

See the /var/sadm/install/logs/cluster_uninstall log file.

Workaround

Remove the cause of the error referring to the log file then execute cluster_uninstall again.

ERROR: *option* is not supported on non-global zone.

Description

option is not supported on non-global zone.

Workaround

Correct the option then execute cluster_install again.

___

ERROR: Failed to execute "*command*".

Description

Failed to execute "*command*".

Workaround

Remove the cause of the problem then execute cluster_install again.

___

ERROR: Failed to create *XX*.

Description

Creation of *XX* failed. *XX* shows file name or directory name.

Workaround

Remove the cause of the problem then execute cluster_install again.

___

ERROR: Failed to remove *XX*.

Description

Removal of *XX* failed. *XX* shows file name or directory name.

Workaround

Remove the cause of the problem then execute cluster_install again.

___

ERROR: Failed to copy *XX* to *YY*.

Description

Failed to copy *XX* to *YY*.

Workaround

Remove the cause of the problem then execute cluster_install again.

___

ERROR: cluster_install can only be run from global zone.

Description

cluster_install can only be run from global zone.

Workaround

Execute cluster_install on global zone.

___

ERROR: Result of "/usr/bin/svcs -l svc:/network/physical:*XX*" does not include "enabled" field.

Description

Result of "/usr/bin/svcs -l svc:/network/physical:*XX*" does not include "enabled" field. *XX* shows "default" or "nwam".

Workaround

Put down the message then contact your field engineers.

___

ERROR: shell/ksh88 is not installed.

Description

shell/ksh88 is not installed.
This message is output only in Oracle Solaris 11 operating environment.

Workaround

Install shell/ksh88 then execute cluster_install again.

Refer to OS manual.

ERROR: <pathname>: no such file

Description

The file <pathname> doesn't exist in the current working directory.

Workaround

Set the correct working directory then execute cluster_install again.

ERROR: This software does not support the current Oracle Solaris OS version.

Description

The Oracle Solaris OS version of the machine isn't supported.

Workaround

The "cluster_install" command can only be used on machines with Oracle Solaris 10 or 11.

ERROR: system/xopen/xcu4 is not installed.

Description

system/xopen/xcu4 is not installed.

This message is output only in Oracle Solaris 11 operating environment.

Workaround

Install system/xopen/xcu4 then execute cluster_install again.

Refer to OS manual.

Failed to install FJQSS<Information Collection Tool>

Description

Installation of FJQSS failed.

Workaround

Collect the following information then contact your Fujitsu system engineers.

/var/tmp/fjqssinstaller.log