



ClusterStor™ System Update Bundle Installation Guide 3.x.x

(3.0.0.SU014)

S-2596

Contents

1 About the ClusterStor System Update Bundle Installation Guide 3.x.x	3
2 Introduction.....	4
3 Prepare to Install the RAS-Only Update Bundle.....	5
4 Install ClusterStor RAS-Only Update Bundle 3.0.0.SU014.....	7

1 About the ClusterStor System Update Bundle Installation Guide 3.x.x

The *ClusterStor™ System Update Bundle Installation Guide (3.0.0.SU014)* S-2596 provides installation instructions for the system update (SU) bundle 3.0.0.SU014 software release.

Scope and Audience

This publication is intended for use by Cray service technicians who are trained in ClusterStor system administration.

Typographic Conventions

Monospace	Indicates program code, reserved words, library functions, command-line prompts, screen output, file/path names, and other software constructs.
Monospaced Bold	Indicates commands that must be entered on a command line or in response to an interactive prompt.
<i>Oblique or Italics</i>	Indicates user-supplied values in commands or syntax definitions.
Proportional Bold	Indicates a GUI Window , GUI element , cascading menu (Ctrl → Alt → Delete), or key strokes (press Enter).
\ (backslash)	At the end of a command line, indicates the Linux® shell line continuation character (lines joined by a backslash are parsed as a single line).

Other Conventions

Sample commands and command output used throughout this publication are shown with a generic filesystem name of **cls12345**.

Trademarks

The following are trademarks of Cray Inc. and are registered in the United States and other countries: CRAY and design, SONEXION, Urika-GX, and YARCDATA. The following are trademarks of Cray Inc.: APPRENTICE2, CHAPEL, CLUSTER CONNECT, ClusterStor, CRAYDOC, CRAYPAT, CRAYPORT, DATAWARP, ECOPHLEX, LIBSCI, NODEKARE. The following system family marks, and associated model number marks, are trademarks of Cray Inc.: CS, CX, XC, XE, XK, XMT, and XT. The registered trademark LINUX is used pursuant to a sublicense from LMI, the exclusive licensee of Linus Torvalds, owner of the mark on a worldwide basis. Other trademarks used in this document are the property of their respective owners.

2 Introduction

This system update (SU) contains a self-extracting archive: `su_csl-3.0.0-014.85.zip`. It contains a package that fixes specific RAS issues. This bundle does not include firmware and Lustre fixes.

System Update Script

The archive includes the system update script: `ras-only-update_csl-3.0.0-014.85.sh`, which is used to install the RAS-only update.

Script Command Line Options

`prepare`: Prepare repositories and the system before running the update.

`install`: Apply update to management and appliance nodes and images.

`verify`: Verify that system updates were installed with no remaining repository actions.

`check`: do quick check for SU packages.

Command Line Conventions Used in this Document

The following conventions are used for command line prompts.

`[MDS]$` - command entered from MDS node as admin.

`[MDS]#` - command entered from MDS node as root.

`[MGMT0]$` - command entered from primary management node as admin.

`[MGMT1]$` - command entered from secondary management node as admin.

`[MGMT0]#` - command entered from primary management node as root.

`[MGMT1]#` - command entered from secondary management node as root.

3 Prepare to Install the RAS-Only Update Bundle

Prerequisites

The following prerequisites pertain to both the preparation and installation procedures for ClusterStor system update 3.0.0.SU014.

System Access Requirements

Parts of the installation procedure described in this document require the technician to have root (super user) access. Contact Cray Customer Service for root access, if necessary.

Service Interruption Level

Live: The RAS-only-update has a service interruption level of Live and does not require taking the Lustre filesystem offline.

Required Files

`su_csl-3.0.0-014.85.zip`

Estimated Time Required

The estimated time to complete the RAS-only update installation procedure is approximately 1 hour.

About this task

Perform these steps before installing 3.0.0.SU014.

Procedure

1. If the system has any non-standard tuning or other customization, note them prior to installing the system update.

Default settings are applied if a parent software package includes specific site customizations. These customizations must be manually re-applied after this update.

2. Log in to MGMT0 and sudo to root.

```
[MGMT0]$ sudo su -
```

3. From the primary (active) management node, verify the system is in daily mode.

```
[MGMT0#] cscli cluster_mode --status
```

If there is no output from the command, or if the cluster mode is not reported as 'Daily' mode, do not proceed with the installation. Open a support case via CrayPort (<https://crayport.cray.com>) or by calling the Cray 24x7 Global Customer Service hotline, as described in the Customer Support Guide (<http://www.cray.com/support>).

4. SSH to MGMT1.

5. Create the directory `~admin/300.SU014` on MGMT1:

```
[MGMT1]# mkdir ~admin/300.SU014
```

6. Change directory to `~admin/300.SU014`:

```
[MGMT1]# cd ~admin/300.SU014
```

7. Copy or download `su_csl-3.0.0-014.85.zip` and associated release notes into the `300.SU014` directory.

8. Extract the ZIP archive.

If errors occur during the extraction process, copy or download the ZIP file again.

```
[MGMT1]# unzip su_csl-3.0.0-014.85.zip
Archive: su_csl-3.0.0-014.85.zip
inflating: ras-only-update_csl-3.0.0-014.85.sh
inflating: SHA1SUM-bundles.txt
```

9. Use the `SHA1SUM-bundles.txt` file to validate that the contents of the ZIP extracted successfully and are not corrupt.

```
[MGMT1]# shasum -c SHA1SUM-bundles.txt
ras-only-update_csl-3.0.0-014.85.sh : OK
```

Perform the RAS-only update installation procedure.

4 Install ClusterStor RAS-Only Update Bundle 3.0.0.SU014

Prerequisites

System Access Requirements

Root privilege is required to perform this procedure. Contact Cray Customer Service for root privilege if necessary.

Service Interruption Level

Live: The RAS-only-update has a service interruption level of Live and does not require taking the Lustre filesystem offline.

Estimated Service Time

The estimated length of time to complete the RAS-only update procedure is approximately 1 hour.

Preparation

Complete [Prepare to Install the RAS-Only Update Bundle](#) on page 5 before starting this procedure.

About this task

Perform the following steps to install the RAS-only update bundle for version 3.0.0-SU014.

Procedure

1. If not already in an SSH session with the primary MGMT node, connect to the primary MGMT node via SSH and change to root user:

```
remote $ ssh -l admin MGMT0
[MGMT0]$ sudo su -
```

2. Identify the MGMT node hosting NFS services and check the location of the md67 resource group:

```
[MGMT0]# crm_mon -lr
```

3. If the md67 resource group is on MGMT0, fail back the resource to MGMT1:

```
[MGMT0]# cscli failback -n MGMT1
```

When `crm_mon -lr` shows all resources started, with md67 on MGMT1, continue.

4. From the primary (active) management node, verify the system is in daily mode.

```
[MGMT0#] cscli cluster_mode --status
```

If there is no output from the command, or if the cluster mode is not reported as 'Daily' mode, do not proceed with the installation. Open a support case via CrayPort (<https://crayport.cray.com>) or by calling the Cray 24x7 Global Customer Service hotline, as described in the Customer Support Guide (<http://www.cray.com/support>).

5. Log in to the MGMT NFS server node (MGMT1) via SSH:

```
[MGMT0]# ssh MGMT1
```

6. Change directory to 300.SU014:

```
[MGMT1]# cd ~admin/300.SU014
```

7. Start a screen session. A log will be kept in ~admin/300.SU014/screenlog.0:

```
[MGMT1]# screen -L -S update
```

If the SSH session is interrupted, the update script should continue to run in the screen session. To reconnect:

- a. Log into the NFS host node via SSH.
- b. Run `screen -ls` to confirm the screen session is still active.
- c. Run `screen -L -RDS update` to reconnect to the screen session.

8. Make the script executable:

```
[MGMT1]# chmod +x ras-only-update_csl-3.0.0-014.85.sh
```

9. Prepare the system to install the bundle:

```
[MGMT1]# ./ras-only-update_csl-3.0.0-014.85.sh prepare
Checking for disk space...
SUCCESS
Extracting packages from bundle.
All debug output will be saved to:
/var/log/ras-update_csl-prepare-20180507161815.log
prepare: SUCCESS
```

10. Install the bundle:

IMPORTANT: Any RPMs that were installed on the system prior to the update and that were not part of the ClusterStor software release—for example, System Snapshot Analyzer (SSA) software—may need to be re-installed following the update.

The time required for the installation step depends in part on the content, and the delta from the current version to the version being installed. This step can take at least 30 minutes and sometimes more than 1 or 2 hours.

```
[MGMT1]# ./ras-only-update_csl-3.0.0-014.85.sh install
Checking for integrity issues with packages
All packages seem to be intact, proceeding with installation
MGMT nodes will now be updated with ras-update_csl. All debug output will be saved to /var/log/ras-
update_csl-install-20180507162602.log
Cleaning metadata.....
Checking if all MGMT resources needed for SU installation are started
All required resources are up and running, installation can proceed
Waiting for HA to become stable....DONE
Finishing remaining transactions from previous installs.....
Installing updates. Please don't kill script as there may be significant delays in displaying
progress while calculating package
data.....
```



```
.....Installing packages on MGMT nodes
.....
Preparing for images update
Updating
appliance.x86_64.....Updating appliance_mgmt.x86_64..
.....install: SUCCESS
Mon May 7 16:31:15 CDT 2018: All debug output will be saved to /var/log/ras-service-upgrade-
post_install-20180507163115.log
Mon May 7 16:31:15 CDT 2018: Running 'post-install' on MGMT Node
Mon May 7 16:31:15 CDT 2018: Restart syslog-ng on primary management node
Mon May 7 16:31:16 CDT 2018: Installing the sonexion branding
Mon May 7 16:31:16 CDT 2018: Post-install Zabbix DB upgrade check: successfully completed
Mon May 7 16:31:16 CDT 2018: Reloading services on the primary management node
Mon May 7 16:31:16 CDT 2018: Reloading service: httpd
Mon May 7 16:31:16 CDT 2018: Successfully reloaded services on the primary management node
Mon May 7 16:31:16 CDT 2018: Restarting services on the primary management node
Mon May 7 16:31:16 CDT 2018: Restarting service: rabbitmq-server
Mon May 7 16:31:20 CDT 2018: Restarting service: plex
Mon May 7 16:31:21 CDT 2018: Restarting service: agent-listener
Mon May 7 16:31:26 CDT 2018: Successfully restarted services on the primary management node
Mon May 7 16:31:26 CDT 2018: Re-synchronizing services on all nodes
Mon May 7 16:31:26 CDT 2018: Synchronizing DCS service 'dcs-collector' to all diskless nodes
Mon May 7 16:31:26 CDT 2018: Synchronization of DCS service 'dcs-collector' to all diskless nodes
is complete
Mon May 7 16:31:26 CDT 2018: Synchronizing DCS service 'dcs-notification-sender' to all diskless
nodes
Mon May 7 16:31:26 CDT 2018: Synchronization of DCS service 'dcs-notification-sender' to all
diskless nodes is complete
Mon May 7 16:31:26 CDT 2018: Synchronizing DCS service 'zabbix-agent' to all diskless nodes
Mon May 7 16:31:27 CDT 2018: Synchronization of DCS service 'zabbix-agent' to all diskless nodes is
complete
Mon May 7 16:31:27 CDT 2018: Synchronizing DCS service 'zabbix-active-agent' to all diskless nodes
Mon May 7 16:31:27 CDT 2018: Synchronization of DCS service 'zabbix-active-agent' to all diskless
nodes is complete
Mon May 7 16:31:27 CDT 2018: Synchronizing DCS service 'dcs-bulk-data-sender' to all diskless nodes
Mon May 7 16:31:27 CDT 2018: Synchronization of DCS service 'dcs-bulk-data-sender' to all diskless
nodes is complete
Mon May 7 16:31:27 CDT 2018: Synchronizing the sudoers node file to all diskless nodes
Mon May 7 16:31:27 CDT 2018: Updating mgmt node configuration
Mon May 7 16:31:48 CDT 2018: Updating mgmt node configuration: successfully completed
Mon May 7 16:31:48 CDT 2018: Re-synchronizing configuration on primary management server
Mon May 7 16:32:46 CDT 2018: Re-synchronizing completed configuration on primary management server:
successfully completed
Mon May 7 16:32:46 CDT 2018: Re-synchronizing configuration on all nodes
Mon May 7 16:33:28 CDT 2018: Re-synchronizing configuration on all nodes: successfully completed
Mon May 7 16:33:28 CDT 2018: Removing outdated IEC log files
Mon May 7 16:33:28 CDT 2018: Completed running 'post-install' on MGMT Node
```

11. Verify that the RAS-only update has been installed:

```
[MGMT1]# ./ras-only-update_csl-3.0.0-014.85.sh verify
```

Sample Output:

```
[root@MGMT1 nfsdata1]# ./ras-only-update_csl-3.0.0-014.85.sh verify
Checking repository validity
Repository definition is present and list of packages in repo matches bundle
All available packages are at most recent versions
Checking for unfinished transactions
```

```
Following SU packages were installed on MGMT nodes:
cls12345n000: ras-update_csl-mgmt-3.0.0-014.85.noarch
cls12345n001: ras-update_csl-mgmt-3.0.0-014.85.noarch
```

Checking if SU was installed in images (lustre nodes are NOT checked directly as RPM info is synced only on boot)

```
Following SU packages were installed onto appliance_mgmt image:
ras-update_csl-mgmt-3.0.0-014.85.noarch
```

```
Following SU packages were installed onto appliance image:
ras-update_csl-node-3.0.0-014.85.noarch
```

```
check: SUCCESS
verify: SUCCESS
```

The installation was successful if no errors are reported, the output indicates that the repository definition matches the bundle, all available packages are the most recent, and the package versions are correct.

12. Exit the screen session.

```
[MGMT1]# exit
[screen is terminating]
```

13. Exit the SSH session to return to the primary management node.

```
[MGMT1]# exit
```

14. Run the `csinfo` command from the primary MGMT node, and check that the output correctly reports the new RAS-only System Update version:

```
[MGMT0]# csinfo
```

Sample Output:

```
System Serial Number:      CSSX1000J3
Possible previous SSN:     N/A
OEM System Serial Number:  oem
System Identifier:         N/A
Cluster Name:              snx11221n
Filesystem Name:           snx11221
Filesystem Type:           Lustre
Hardware Platform:         CS-L300
Data Network Type:         IB (FDR)
Software Release:          3.0.0
Full System Update:        012.83
RAS-only System Update:    014.85
Firmware-only System Update: N/A
FS-only System Update:     N/A
```

```
[root@snx11221n000 admin]#
```

15. See the *Sonexion™ Administration Guide (3.0 Rev A) S-2537* for details about the `cscli service_console configure` command. Use the command to configure SMTP settings and remote support and email for RAS notifications.

This completes the RAS-only update installation.