



Cray Linux Environment (CLE) Software Release Overview Supplement

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Software Enhancements [1]

Cray Linux Environment (CLE) software update release packages provide bug fixes and a limited set of software enhancements or features. This chapter provides an overview of software enhancements that are introduced in each update release.

Software enhancements and features that were introduced with the initial or base CLE 5.2 release are described in *Cray Linux Environment (CLE) Software Release Overview*.

1.1 Software Enhancements in CLE 5.2.UP02

1.1.1 CLE Enhancements

The Realm-Specific Internet Protocol (RSIP) daemon (“rsipd”) now supports gateway address pools. The benefits of RSIP gateway address pools include relieving port exhaustion due to heavy traffic and potentially reducing hardware requirements.

CLE now supports Cray DataWarp SSD Technology, which provides local, high-bandwidth, low-latency storage for the buffering of data between the applications and the external parallel file system. The storage can be configured as either local/scratch storage or for compute node memory swapping. Installation of the SSD driver and configuration of the storage are described in *Cray DataWarp SSD Installation and Configuration Guide*.

1.1.2 Resource Utilization Reporting (RUR) Enhancements

This release of RUR includes the following enhancements.

- The ability to display Python exceptions if an error occurs during the post or staging scripts for both “energy” and “memory” plugins.
- The ability to pass JSON-formatted data to custom output plugins, which facilitates post-processing RUR data without reparsing text data.

For more information, see *Managing System Software for the Cray Linux Environment*.

1.1.3 Resource Utilization Reporting (RUR) User Interface Change

Although RUR is not a part of ALPS, it is initiated through the ALPS prologue and epilogue scripts by defining the `prologPath` and `epilogPath` parameters in the ALPS configuration file. Because ALPS supports only one prologue script and one epilogue script, a conflict occurs if a site-local prologue or epilogue script is already defined. In this case, it is necessary to create a wrapper script that will run both the ALPS script and the RUR script.

1.1.4 Network Congestion Management (Cray XC series systems only)

To assist system administrators, the `ntnlrd` daemon now logs a chronological history of congested components following system congestion. For information about network congestion management software, see *Network Resiliency for Cray XC Systems*.

1.1.5 Cray Advanced Power Monitoring and Control

The Cray Advanced Power Monitoring and Control (CAPMC) utility provides a set of command-line tools that workload management software can use to monitor and manage power from the login nodes. See the `capmc(8)` man page for more info.

1.2 Bugs Addressed Since the Last Release

The list of customer-filed bug reports that were closed with CLE 5.2 releases is included in the *CLE 5.2 Errata* specific to this release package.

1.3 Compatibilities and Differences

The *README* document that is included with the release package describes compatibility issues and functionality changes that you should be aware of before you install a CLE 5.2 update release on a Cray system that was running an earlier version of the CLE 5.2 release.

The *README* document also includes additional documentation or changes to the documentation identified after the documentation for this release was packaged.

Support Requirements [2]

2.1 Supported Cray System Hardware Platforms

The CLE 5.2.UP02 update release supports Cray XE6, Cray XK, and Cray XC series systems.

2.2 Supported Software Upgrade Path

The CLE 5.2.UP02 release supports initial system installations and upgrade installations from CLE 5.1 and CLE 5.2 release packages.

2.2.1 System Management Workstation (SMW) Requirements

You must be running the SMW 7.2.UP02 release or later before you install the CLE 5.2.UP02 update release package. For additional information, see the SMW *README* document included with the SMW release package.

2.3 Binary Compatibility

The language in the binary compatibility statement in *Cray Linux Environment (CLE) Software Release Overview* remains accurate.

2.4 Additional Software Requirements

2.4.1 Release Level Requirements for Other Cray Software Products

Note: Upgrading to the latest Cray XC30 Programming Environments Release is recommended. For release information, see the *Cray Programming Environments Installation Guide*, the *Cray Programming Environment User's Guide*, and the release notes.

Support for other Cray software products is provided in the form of updates to the latest released version only. Unless otherwise noted in the associated release documentation, Cray recommends that you continue to upgrade these releases as updates become available.

2.4.2 Third-party Software Requirements

The *Cray Linux Environment (CLE) Software Release Overview* includes a section that lists third-party software requirements for the CLE 5.2 release. This information applies to CLE 5.2 update packages, with the following exceptions:

- Updated information regarding supported and certified batch system software release levels is available on the CrayPort website at <http://crayport.cray.com>. Click on **3rd Party Batch SW** in the menu bar.

3.1 Cray-developed Books Provided with This Release

[Table 1](#) lists the books provided with the CLE 5.2.UP02 release and indicates which books are new or revised with this update release. The most recent version of each book is provided with the release package.

For information about additional documentation resources and accessing documentation, see *Cray Linux Environment (CLE) Software Release Overview* (S-2425-52), which is also provided with the release package.

Table 1. Books Provided with This Release

Book Title	Most Recent Document	Updated
<i>Cray Linux Environment (CLE) Software Release Overview Supplement</i> (this document)	S-2497-5202	Yes
<i>Cray Linux Environment (CLE) Software Release Overview</i>	S-2425-52	No
<i>Installing and Configuring Cray Linux Environment (CLE) Software</i>	S-2444-5202	Yes
<i>Managing System Software for the Cray Linux Environment</i>	S-2393-5202	Yes
<i>Managing Lustre for the Cray Linux Environment (CLE)</i>	S-0010-5202	No
<i>Introduction to Cray Data Virtualization Service</i>	S-0005-5201	Yes
<i>Writing a Node Health Checker (NHC) Plugin Test</i>	S-0023-5002	No
<i>Workload Management and Application Placement for the Cray Linux Environment</i>	S-2496-5202	No
<i>Using the GNI and DMAPP APIs</i>	S-2446-5202	No
<i>Using Compute Unit Affinity on Cray Systems</i>	S-0030-5002	No
<i>Using Balanced Injection in Cray Systems</i>	S-0040-A	No
<i>Installing CLE Support Package on a Cray Development and Login (CDL) Node</i>	S-2528-52	No
<i>Installing Native SLURM on Cray XC Systems</i>	S-2538-5202	Yes
<i>Cray DataWarp SSD Installation and Configuration Guide</i>	S-2547-5202	Yes

Book Title	Most Recent Document	Updated
<i>IMPS Guide for DAL Installation</i>	S-0049-52	Yes
<i>Network Resiliency for Cray XC30 Systems</i>	S-0041-C	Yes
<i>Modifying Your Application to Avoid Aries Network Congestion</i>	S-0048-A	No
