



CLE Release Overview Supplement (S-2497-5204)

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About the CLE Release Overview Supplement

Cray Linux Environment (CLE) software update release packages provide bug fixes and a limited set of software enhancements or features. The software enhancements and features that were introduced in the initial or base release of CLE 5.2 are described in the *Cray Linux Environment (CLE) Software Release Overview* (S-2425-52).

This supplement to the CLE Software Release Overview provides a high-level look at the new software enhancements introduced in CLE 5.2, release update UP04.

CLE Enhancements

Cray's Realm Specific Internet Protocol (RSIP) implementation now supports configuring the RSIP client to use Realm Specific Address IP (RSA-IP) mode. RSA-IP mode differs from the default RSAP-IP mode in that clients operating in RSA-IP mode are allocated an entire IP by the gateway instead of a port range on an IP. No other client will be assigned the same IP or ports from the same IP. On Cray systems, the RSIP gateway daemon is usually configured using the `xtrsipcfg` utility. Unfortunately, `xtrsipcfg` does not support configuring the RSIP client to use RSA-IP mode, therefore, `xtrsipcfg_v2` is introduced for sites wanting to take advantage of RSA-IP mode.

(Cray XC series systems only) A new Node Health Checker test, DataWarp, has been added to check that any reservation-affiliated DataWarp mount points have been removed after a job finishes. For further information, see CLE XC™ System Administration Guide (S-2393).

(Cray XC series system only) A new command `xtbiosconf` has been added for modifying BIOS parameters. For further information, see CLE XC™ System Administration Guide (S-2393).

CLE Deprecated Features

The `aprun -sl` and `-sn` options are deprecated and will be removed in a future release. The other `aprun` NUMA node related options, `-S` and `-ss`, continue to be supported.

The ALPS `apres` daemon on the boot node has been deprecated and will be removed in a future release. When ALPS on the boot node is notified that the SDB database should be re-read, that action will no longer require the `apres` daemon and will be handled instead by `apwatch` and `apbridge`, without restarting ALPS on the boot node.

DataWarp Enhancements

This release of DataWarp (hereinafter referred to as *DataWarp with DWS* for installation purposes) marks a significant change from the original statically configured release (hereinafter referred to as *Static DataWarp*). DataWarp with DWS introduces the following features:

- DataWarp Service (DWS): dynamically allocates DataWarp capacity and bandwidth to jobs on request
- Administrator command line interface - `dwcli`: a DataWarp resource management tool
- DataWarp status command - `dwstat`: provides information about the various DataWarp resources
- User API - `libdatawarp`: provides compute applications with functions to control and query the staging of data

As a result of these major improvements and additional upcoming features, static DataWarp is deprecated and will be removed in the next major release of the Cray Linux Environment (CLE). Cray encourages sites to switch from Static DataWarp to DataWarp with DWS to take advantage of the features mentioned above.

Resource Utilization Reporting Enhancements

The `energy` data plugin includes the following enhancements in reporting node throttling.

- `nodes_throttled` now reports the number of nodes experiencing any of the following types of throttling: CPU power/thermal throttling, or Memory power/thermal throttling
- Added `nodes_cpu_throttled` - Number of nodes experiencing CPU power/thermal throttling
- Added `nodes_memory_throttled` - Number of nodes experiencing memory power/thermal throttling

For further information, see *Manage System Software for the Cray Linux Environment*.

Support Requirements

Supported Cray System Hardware Platforms

The CLE 5.2.UP04 update release supports Cray XC series systems.

Supported Software Upgrade Path

The CLE 5.2.UP04 release supports initial system installations and upgrade installations from CLE 5.1 and CLE 5.2 release packages

System Management Workstation (SMW) Requirements

You must be running the SMW 7.2.UP04 release or later before you install the CLE 5.2.UP04 update release package. For additional information, see the SMW README document included with the SMW release package.

Binary Compatibility

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

Additional Software Requirements

Release Level Requirements for Other Cray Software Products

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.

Upgrading to the latest Cray Programming Environments release is recommended.

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

Documentation Provided

Cray-developed Books Provided with this Release

The following books are provided with this 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	Version	Updated?
<i>CLE Release Overview Supplement</i> (this document)	S-2497-5204	Yes
<i>Cray Linux Environment (CLE) Software Release Overview</i>	S-2425-52	No
<i>CLE Installation and Configuration Guide</i>	S-2444-5204	Yes
<i>CLE System Administration Guide</i>	S-2393-5204	Yes
<i>Manage Lustre for the Cray Linux Environment (CLE)</i>	S-0010-5203	No
<i>DVS Administration Guide</i>	S-0005-5204	Yes
<i>Writing a Node Health Checker (NHC) Plugin Test</i>	S-0023-5002	No
<i>CLE User Application Placement Guide</i>	S-2496-5204	Yes
<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>Installing CLE Support Package on a Cray Development and Login (CDL) Node</i>	S-2528-52	No
<i>Cray XC Native SLURM Installation Guide</i>	S-2538-5204	Yes
<i>DataWarp Installation and Configuration Guide</i>	S-2547-5204	Yes
<i>DataWarp Administration Guide</i>	S-2557-5204	NEW
<i>DataWarp User Guide</i>	S-2558-5204	NEW
<i>Using Balanced Injection in Cray Systems</i>	S-0040-A	No
<i>CLE XC Network Resiliency Guide</i>	S-0041-E	Yes
<i>Modify An Application to Avoid Aries Network Congestion</i>	S-0048-B	No*

* No content changes: the version number change reflects a formatting change only.