Hitachi Content Platform S Series Node

3.0

HCP S11 and S31 Node 3.0 Release Notes

HCP S Series Software Version 3.0.0.10
HCP S Series Operating System Version 3.0.0.1218

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Contents

About this document

This document contains release notes for release 3.0 of the **Hitachi Content Platform (HCP) S Series Node**. The document describes new features, product documentation, and resolved and known issues and provides other useful information about this release of the product.

Release highlights

Release 3.0 of the HCP S Series Node introduces two new product models, includes new features and enhancements, and resolves several issues found in previous releases of the product.

HCP S11 and S31 Nodes
As of release 3.0, the HCP S Series Node comes in two new models, the HCP S11 Node and the HCP S31 Node. The S31 Node has more processing power and memory than the S11 Node and also allows for greater storage capacity.

S11 and S31 Nodes use completely different hardware from the hardware used in the older S Series Node models, the S10 Node and the S30 Node. S11 and S31 Node enclosures can hold more drives than the S10 and S30 Node enclosures can hold. S11 and S31 Nodes also support higher-capacity drives than S10 and S30 Nodes support.

The S11 and S31 Node enclosures are not interchangeable with the S10 and S30 Node enclosures.

Four access network ports
Each server module in an HCP S11 or S31 Node has four ports for the access network. You can choose to connect any number of these ports to your networking infrastructure. The S11 or S31 Node uses all the connected ports with the bonding mode selected for the network, either IEEE 802.3ad or active-backup.

You can use the HCP S Series Management Console or management API to set a connection expectation for each access network port. If a port that should be connected is not connected or if a port that should not be connected is connected, the S11 or S31 Node issues an alert.

Minimum Transport Layer Security (TLS) version
HCP S Series Nodes support TLS versions 1.0, 1.1, and 1.2. With release 3.0 of the S Series Node, you can use the HCP S Series Management Console or management API to set the minimum TLS version that the S Series Node can use. For example, if you set the minimum TLS version to 1.1, the S Series Node accepts requests that use version 1.1 or 1.2 but rejects requests that use version 1.0.

Note: For a release 7.*x* HCP system to use an S Series Node, the S Series Node must have a minimum TLS version of 1.0.

Revamped storage statistics
In release 3.0 of the HCP S Series Node, the HCP S Series Management Console **Dashboard** page has been updated. The page now shows this information:

- The total amount of storage that can be used for storing, protecting, and repairing object data and metadata.
- The amount of storage currently allocated for storing, protecting, and repairing object data and metadata, along with a ten-day history of this amount.
- The amount of storage that is currently available to be allocated for storing, protecting, and repairing object data and metadata.
- The amount of storage currently in need of repair, along with a ten-day history of this amount.
- The current storage efficiency. This value is a percent representing the ratio between the amount of data ingested for the objects currently stored on the S Series Node and the current amount of used storage on the S Series Node.
- The current percent of used storage out of total storage and the percent of storage that will be used after any outstanding repairs are complete.

The HCP S Series management API /metrics/system resource has been updated to return the new and revised current statistics and also to return a value representing the ideal storage efficiency for the S Series Node.

New bucket statistics
Release 3.0 of the HCP S Series Node includes this new information on the the Management Console **Buckets** page:

- The total amount of data written to the S Series Node for all objects currently in the existing buckets, along with a ten-day history of this amount

- The total number of objects currently in the existing buckets, along with a ten-day history of this amount

Notice

The deployment, management, and usage of an HCP S11 or S31 Node that has an expansion enclosure in addition to the base enclosure must follow these critical best practices to ensure the supportability of the S11 or S31 Node and to minimize the risk of data unavailability:

- Always mount the base enclosure and the expansion enclosure in the same rack.

- Always connect the base enclosure and the expansion enclosure to the same pair of power distribution units (PDUs) within the rack. If possible, the two PDUs should be connected to separate power sources.

- Never power off the expansion enclosure unless the base enclosure is powered off first or at the same time. Disconnecting both power cables from the expansion enclosure while the base enclosure is powered on can result in data unavailability and the possibility of data loss.

Additionally, if possible, all data stored on the S11 or S31 Node should be replicated to another HCP system so that the data exists in two physically separate locations.

HCP S Series Node document set

The following documents contain information about HCP S Series Nodes:

- *HCP S Series Node Help* (MK-HCPS022) — This Help system contains information about configuring and managing an HCP S11 or S31 Node. The Help includes information you need to effectively use the HCP S Series Management Console. The Help also contains a complete reference for using the HCP S Series management API.
- *HCP S11 and S31 Node API Reference* (MK-HCPS023) — This book contains all the information you need to use the HCP S Series management API with an HCP S11 or S31 Node. This RESTful API enables you to configure, monitor, and manage an S11 or S31 Node programmatically.
- *HCP S11 and S31 Node Third-Party Copyrights and Licenses* (MK-HCPS024) — This book contains the copyright and license information for third-party software that's incorporated into the HCP S Series operating system and software.

Supported browsers

The table below lists the web browsers that are qualified for use with the HCP S Series Management Console. Other browsers or versions may work but have not been formally tested.

Browser	Client operating system
Microsoft® Internet Explorer® 11	Microsoft Windows®
Mozilla® Firefox®	Microsoft Windows Linux® Apple® macOS®
Google® Chrome™	Microsoft Windows Linux Apple macOS Chrome OS™

Note: To correctly display the HCP S Series Management Console, the browser window must be at least 1,024 pixels wide by 768 pixels high.

Supported firmware versions

The table below lists the supported firmware versions for hardware components of HCP S11 and S31 Nodes.

Component	Firmware version
Base enclosure	5250
Expansion enclosure	524A
Personality module controller	07.00.00.00
Personality module SAS expander	5.2.0.76
Server module BIOS	0.01.0032
Server module BMC	0.00.002f
OS SSD	M16225t
Intel I210 chip for the management and server interconnect networks	3.25
Four-port SAS PCIe card	16.00.01.00
Four-port 10GBase-T Ethernet PCIe card	6.128 (6.80 NVMupdate)
10TB data drive (Seagate ST10000NM0528)	E002
10TB data drive (Seagate ST10000NM0096)	E005
14TB data drive (Seagate ST14000NM0048)	E002
400GB database drive (Seagate XS400LE10003)	0003
400GB database drive (Seagate ST400FM0303)	0007

Issues resolved in this release

The table below lists previously identified HCP S Series Node issues that have been resolved in the current release. The issues are listed in order by reference number.

Ref. number	Description
RNO-4102	**Extra messages about beaconing on and off while beaconing is on** While beaconing is on for an S Series Node component, messages about beaconing being turned on and turned off for that component are written to the event log every ten minutes. The messages stop when beaconing is turned off for the component. **Fix:** The extra beaconing messages were due to a timer issue that is now fixed.
RNO-4704	**Add drives error reported with reused native drives** When you add native drives back to an S Series Node, you can choose to reuse the drives as is. Occasionally, with this choice, one of the server modules doesn't immediately recognize that the drives have been added. As a result, the S Series Node reports that the add drives operation finished with errors. However, within one or two seconds after the operation finishes, the server module in question automatically recognizes the added drives. No additional action is required. **Fix:** Before an add drives operation finishes, if any native drives have been reused, both server modules now recognize that the reused drives have been added.
RNO-4938	**Cannot disable allow when used in both lists for Management Console** On the **Configuration ► Console** page in the HCP S Series Management Console, after you enable the **Allow requests when same IP is used in both lists** option, you cannot disable that option. **Fix:** The allow list now includes 0.0.0.0/0 by default. As long as this CIDR value, your client IP address, or a different CIDR value that encompasses your client IP address is in the allow list, you can disable the **Allow requests when same IP is used in both lists** option.
RNO-5003	**CVEs: Java SE, Linux kernel, and glibc vulnerabilities** Java SE has these vulnerabilities: • CVE-2017-10053 — Allows unauthenticated remote attackers to cause a partial denial of service of Java SE. • CVE-2017-10067 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10074 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE.

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Ref. number	Description
	• CVE-2017-10078 — Allows low-privileged remote attackers to perform unauthorized create, modify, or delete operations on critical data or have complete access to all Java SE accessible data. • CVE-2017-10081 — Allows unauthenticated remote attackers, with interaction from another person, to perform unauthorized update, insert, or delete operations on some Java SE accessible data. • CVE-2017-10086 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10087 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10089 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10090 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10096 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10101 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10102 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10104 — Allows low-privileged remote attackers to perform unauthorized update, insert, or delete operations on some Java Advanced Management Console accessible data, to have unauthorized read access to a subset of Java Advanced Management Console accessible data, and and to have the unauthorized ability to cause a partial denial of service of Java Advanced Management Console. • CVE-2017-10105 — Allows unauthenticated remote attackers, with interaction from another person, to perform unauthorized update, insert, or delete operations on some Java SE accessible data. • CVE-2017-10107 — Allows unauthenticated remote attackers, with interaction from another person, to interact with Java SE. • CVE-2017-10108 — Allows unauthenticated remote attackers to cause a partial denial of service of Java SE.

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Ref. number	Description
	• CVE-2017-10109 — Allows unauthenticated remote attackers to cause a partial denial of service of Java SE. • CVE-2017-10110 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10111 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10114 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10115 — Allows unauthenticated remote attackers to have unauthorized access to critical data or complete access to all Java SE accessible data. • CVE-2017-10116 — Allows unauthenticated remote attackers, with interaction from another person, to take over Java SE. • CVE-2017-10117 — Allows unauthenticated remote attackers with HTTP access to have unauthorized read access to a subset of Java Advanced Management Console accessible data. • CVE-2017-10118 — Allows unauthenticated remote attackers to unauthorized access to critical data or complete access to all Java SE data. • CVE-2017-10121 — Allows unauthenticated remote attackers, with interaction from another person, to perform unauthorized update, insert or delete operations on some Java Advanced Management Console accessible data and to have unauthorized read access to a subset of Java Advanced Management Console accessible data. • CVE-2017-10125 — Allows attackers with physical access to take over Java SE. • CVE-2017-10135 — Allows unauthenticated remote attackers to have unauthorized access to critical data or complete access to all Java SE accessible data. • CVE-2017-10145 — Allows low-privileged remote attackers to perform unauthorized update, insert or delete operations on some Java Advanced Management Console accessible data, to have unauthorized read access to a subset of Java Advanced Management Console accessible data, and to cause a partial denial of service of Java Advanced Management Console.

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Ref. number	Description
	• CVE-2017-10176 — Allows unauthenticated remote attackers to have unauthorized access to critical data or complete access to all Java SE accessible data. • CVE-2017-10193 — Allows unauthenticated remote attackers, with interaction from another person, to have unauthorized read access to a subset of Java SE accessible data. • CVE-2017-10198 — Allows unauthenticated remote attackers to have unauthorized access to critical data or complete access to all Java SE accessible data. • CVE-2017-10243 — Allows unauthenticated remote attackers to have unauthorized read access to a subset of Java SE accessible data and the unauthorized ability to cause a partial denial of service of Java SE. The Linux kernel has this CVE: • CVE-2017-1000364 — Allows bypass of a stack guard page that is too small. glibc has this CVE: • CVE-2017-1000366 — Allows specially crafted LD_LIBRARY_PATH values to manipulate the heap/stack, causing them to alias, potentially resulting in arbitrary code execution. **Fix:** HCP S Series Nodes are no longer affected by these vulnerabilities. For more information on these CVEs, see: • https://nvd.nist.gov/vuln/detail/CVE-2017-10053 • https://nvd.nist.gov/vuln/detail/CVE-2017-10067 • https://nvd.nist.gov/vuln/detail/CVE-2017-10074 • https://nvd.nist.gov/vuln/detail/CVE-2017-10078 • https://nvd.nist.gov/vuln/detail/CVE-2017-10081 • https://nvd.nist.gov/vuln/detail/CVE-2017-10086 • https://nvd.nist.gov/vuln/detail/CVE-2017-10087 • https://nvd.nist.gov/vuln/detail/CVE-2017-10089 • https://nvd.nist.gov/vuln/detail/CVE-2017-10090

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Ref. number	Description
	• https://nvd.nist.gov/vuln/detail/CVE-2017-10096 • https://nvd.nist.gov/vuln/detail/CVE-2017-10101 • https://nvd.nist.gov/vuln/detail/CVE-2017-10102 • https://nvd.nist.gov/vuln/detail/CVE-2017-10104 • https://nvd.nist.gov/vuln/detail/CVE-2017-10105 • https://nvd.nist.gov/vuln/detail/CVE-2017-10107 • https://nvd.nist.gov/vuln/detail/CVE-2017-10108 • https://nvd.nist.gov/vuln/detail/CVE-2017-10109 • https://nvd.nist.gov/vuln/detail/CVE-2017-10110 • https://nvd.nist.gov/vuln/detail/CVE-2017-10111 • https://nvd.nist.gov/vuln/detail/CVE-2017-10114 • https://nvd.nist.gov/vuln/detail/CVE-2017-10115 • https://nvd.nist.gov/vuln/detail/CVE-2017-10116 • https://nvd.nist.gov/vuln/detail/CVE-2017-10117 • https://nvd.nist.gov/vuln/detail/CVE-2017-10118 • https://nvd.nist.gov/vuln/detail/CVE-2017-10121 • https://nvd.nist.gov/vuln/detail/CVE-2017-10125 • https://nvd.nist.gov/vuln/detail/CVE-2017-10135 • https://nvd.nist.gov/vuln/detail/CVE-2017-10145 • https://nvd.nist.gov/vuln/detail/CVE-2017-10176 • https://nvd.nist.gov/vuln/detail/CVE-2017-10193 • https://nvd.nist.gov/vuln/detail/CVE-2017-10198 • https://nvd.nist.gov/vuln/detail/CVE-2017-10243 • https://nvd.nist.gov/vuln/detail/CVE-2017-1000364

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Ref. number	Description
RNO-5080	**CVE-2018-8037: Apache Tomcat vulnerability** An Apache Tomcat vulnerability allows the simultaneous completion of an async request and triggering of an async timeout to result in a user seeing a reposnse intended for a different user. **Fix:** HCP S Series Nodes are no longer affected by this vulnerability. For more information on these CVEs, see https://nvd.nist.gov/vuln/detail/CVE-2018-8037.
RNO-5103	**CVE-2018-5390: Linux kernel vulnerability** A Linux kernel vulnerability allows the kernel to be forced to make very expensive calls to tcp_collapse_ofo_queue() and tcp_prune_ofo_queue() for every incoming packet, which can lead to a denial of service. **Fix:** HCP S Series Nodes are no longer affected by this vulnerability. For more information on these CVEs, see https://nvd.nist.gov/vuln/detail/CVE-2018-5390.
RNO-5128	**CVE-2018-11776: Apache Struts vulnerability** An Apache Struts vulnerability makes remote code execution possible when alwaysSelectFullNamespace is true. **Fix:** HCP S Series Nodes are no longer affected by this vulnerability. For more information on these CVEs, see https://nvd.nist.gov/vuln/detail/CVE-2018-11776.

Known issues

The table below lists known issues in the current release of the HCP S Series Node. The issues are listed in order by reference number.

Ref. number	SR number	Description
RNO-2266	-	**Alert misplaced for database drive degraded, resyncing, or recovering** The alert that indicates that a database drive is degraded or being resynced or recovered should appear on the details page for the enclosure. Instead, the alert appears on the details page for the applicable server module. Additionally in this case, on the details page for the applicable slot, the row that shows the status of the database partition is not highlighted in red.
RNO-2287	-	**Time server IPv6 address truncated on server module details page** When the time server being used by the S Series Node is identified by an IPv6 address, the address is truncated in the **Time server** field in the **Core Hardware** section of the server module details page.
RNO-2375	-	**Beaconing off and on during early Sunday mornings** If beaconing is on for an enclosure or a component in an enclosure at 1:00 a.m. on a Sunday, for a brief period after that time, the event log may contain messages indicating that beaconing was turned off and back on a few times. At the end of this period, beaconing remains on.
RNO-4546 RNO-5451	04458254 04506478 00647682 00689285 00804348	**Repeated restarts due to multiple writes of same data** When the same data is written to an S Series Node a very large number of times, S Series Node performance degrades. If the same data continues to be written, the S Series Node eventually goes into a cycle of failing and restarting. To recover from this situation, in HCP, delete a large number of the objects with that data.
RNO-4623	-	**False report about unavailable server module during reboot of other server module** Rarely, while one server module is rebooting, the S Series Node incorrectly reports that the other server module is unavailable. A message about the unavailability is written to the event log, and an alert reporting the unavailability is briefly in effect (no more than a few seconds). Despite the report, the server module did not, in fact, become unavailable.

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Ref. number	SR number	Description
RNO-4942 RNO-5954	-	**Changed bucket owners identified by user ID in event log** When you change the owner of a bucket, the message in the S Series Node event log identifies the old and new bucket owners by their internal user IDs instead of by their usernames.
RNO-5094	-	**False report about MTU after changing network MTU to 9,000** After you change the MTU to 9,000 for the access or management network, the S Series Node falsely reports that a network interface is not operating at the correct MTU. A message about the incorrect operation is written to the event log, and an alert reporting the incorrect operation is briefly in effect (no more than two minutes). Despite the report, the MTU is operating at the correct MTU.
RNO-5300	-	**Inconsistent indication of broken SAS connection in diagrams** The diagrams on the enclosure details page show broken SAS connections by changing port colors. However, when you disconnect a SAS cable from enclosure 1, only the SAS port on enclosure 1 turns red. The port the cable is still connected to on the I/O module stays green. Similarly, when you disconnect a SAS cable from an I/O module, only the port on the I/O module turns red. The port on enclosure 1 stays green.
RNO-5310	-	**Object limit due to metadata storage** The S Series Node generates metadata for each object when the object is created. Currently, the S Series Node stores all this metadata on the base enclosure. As a result, when the storage on the base enclosure is full, no more objects can be stored on the S Series Node, even if storage space is available on the expansion enclosure.
RNO-5527	-	**Deny list with both IPv4 and IPv6 addresses ignored for Management Console access on IPv6 access network** While the access network IP mode is IPv6, if the deny list for access to the HCP S Series Management Console contains both IPv4 and IPv6 addresses, those addresses are not denied access to the Console on the access network.

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Ref. number	SR number	Description
RNO-5692	-	**Communication with DNS servers or time servers on management network disabled by change of access network to IPv6 mode** With the access network and management network both configured for IPv4 and the *management* network selected for communication with DNS servers or time servers, if you change the IP mode of the *access* network to IPv6, the S Series Node can no longer communicate with the DNS servers or time servers, as applicable, on the *management* network. To re-enable communication with the DNS servers or time servers on the management network, use the HCP S Series Management Console or management API to reboot the S Series Node.
NO-5723	-	**False report about unsupported fan hardware after enclosure power outage** When an enclosure powers back on after losing power, the S Series Node falsely reports that the fan hardware is unsupported for each rear fan and each controller-bay fan. Messages about the unsupported hardware are written to the event log, and alerts reporting the unsupported hardware are briefly in effect. The part number shown for each fan in the full message text is NO_PSN_PRE. Despite the reports, the fan hardware is still supported, and the fans are operating correctly.
RNO-5758	-	**False report of eth4 down after management network monitoring is enabled** When you enable management network monitoring while the management port is connected to an active network, the S Series Node falsely reports that the eth4 network interface is down. A messsage about the condition is written to the event log, and an alert reporting the condition is in effect. Despite the report, the network interface is connected and operating correctly.

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Ref. number	SR number	Description
RNO-5783	-	**S Series Node enclosure warning condition reported on HCP** When a component fails in an S Series Node enclosure, the HCP system using the S Series Node receives a message indicating that the enclosure has a warning condition but does not receive a message indicating which component is causing the message. If you see this message on the HCP system, check the S Series Node for more information. The message may be due to an individual drive failure, which is reported at the informational level, not the warning level, on the S Series Node. A message about an individual data drive failure does not mean that the drive needs to be immediately replaced. Data drive replacement is necessary only when the S Series Node issues this alert: "*number-of-drives* data drives have failed or are unavailable."
RNO-5793	-	**False report about inaccessible BMC** Rarely, the S Series Node falsely reports that the BMC on a server module is inaccessible while the BMC is operating correctly. A message indicating that the BMC is inaccessible is written to the event log, and an alert reporting that condition is in effect for a short time. Despite the report, the BMC is accessible. If the alert doesn't clear within 15 minutes, contact your authorized service provider for help.
RNO-5810	-	**Virtual IP address for one server module unavailable after VLAN ID change to zero** When you change the VLAN ID of the access network from a nonzero value to zero, the virtual IP address for one of the S Series Node server modules cannot be used to access the HCP S Series Management Console or to issue management API requests for approximately 10 to 15 minutes.
RNO-5826	-	**Active fields grayed on network details pages** On the details page for the access network, the **Duplex**, **Bonding Mode**, and **MTU** fields are grayed, making those fields appear to be inactive. Similarly, on the details page for the management network, the **MTU** field is grayed, making that field appear to be inactive. In fact, these fields are active, and you can select values in them.

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Ref. number	SR number	Description
RNO-5856	-	**Uninformative error message on HCP when S Series Node TLS is higher than 1.0** If you try to add an S Series Node to a release 7.*x* HCP system, where the minimum TLS version on the S Series Node is higher than 1.0, an error occurs on the HCP system. The error message displayed in the HCP System Management Console is "peer is not authenticated." This message is also displayed for other types of errors. If you see this message, check the minimum TLS version setting on the S Series Node. If the setting is 1.0, a different error has occurred.
RNO-5858	-	**Unavailable drives reported after enclosure power outage ends** When an enclosure loses power, the available drives on the enclosure become unavailable, and the S Series Node reports that drives need to be replaced. When the enclosure powers back on, the drives that became unavailable due to the power outage become available again. At the point when the number of drives that have not yet become available plus the number of drives that were already unavailable or failed before the power outage goes below the threshold for requiring drive replacement, the S Series Node writes a message to the event log indicating that a drive replacement is no longer needed. The message specifies the number of drives that remain unavailable or failed. After an enclosure power outage, this message can be safely ignored. The drives that are still unavailable due to the power outage continue to become available.
RNO-5933	-	**Internal VLAN IDs not shown clearly in Management Console** For internal purposes, the S Series Node uses VLAN IDs of either 700 and 800 or 701 and 801. To determine which pair of VLAN IDs is being used internally, check the network interface name for the server interconnect network in the **Network Interfaces** section on the server module details page in the HCP S Series Management Console. If the name is eth4.800, VLAN IDs 700 and 800 are in use. If the name is eth4.801, VLAN IDs 701 and 801 are in use.

Accessing product documentation

Product documentation is available on Hitachi Vantara Support Connect: https://knowledge.hitachivantara.com/Documents. Check this site for the most current documentation, including important updates that may have been made after the release of the product.

Getting help

Hitachi Vantara Support Portal is the destination for technical support of products and solutions sold by Hitachi Vantara. To contact technical support, log on to Hitachi Vantara Support Connect for contact information: https://support.hitachivantara.com/en_us/contact-us.html.

Hitachi Vantara Community is a global online community for Hitachi Vantara customers, partners, independent software vendors, employees, and prospects. It is the destination to get answers, discover insights, and make connections. **Join the conversation today!** Go to community.hitachivantara.com, register, and complete your profile.

Note: If you purchased your HCP S Series Node from a third party, please contact your authorized service provider.

Comments

Please send us your comments on this document:

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Include the document title and part number, including the revision (for example, -01), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Vantara Corporation.

Thank you!

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