

## HyperCore™ 8.3.3

Release Notes

## Table of Contents

---

<a href="#"><u>HyperCoreTM 8.3.3 - Release Notes</u></a>	<a href="#"><u>3</u></a>
<a href="#"><u>Release Classification - General Availability</u></a>	<a href="#"><u>3</u></a>
<a href="#"><u>Impact on Cluster - Non-Disruptive</u></a>	<a href="#"><u>3</u></a>
<a href="#"><u>New Features</u></a>	<a href="#"><u>4</u></a>
<a href="#"><u>Other Bug Fixes / Enhancements</u></a>	<a href="#"><u>4</u></a>
<a href="#"><u>Previous release notes</u></a>	<a href="#"><u>4</u></a>
<a href="#"><u>Known Issues</u></a>	<a href="#"><u>4</u></a>
<a href="#"><u>Resources</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>Scale HyperCoreTM – Supported Platforms</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>HyperCoreTM 8.3.3 – Supported Update Paths</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>Feedback &amp; Support</u></a>	<a href="#"><u>8</u></a>
<a href="#"><u>Document Feedback</u></a>	<a href="#"><u>8</u></a>
<a href="#"><u>Technical Support and Resources</u></a>	<a href="#"><u>8</u></a>

---

# HyperCore™ 8.3.3 - Release Notes

Scale Computing has announced the general availability of the 8.3.3 version of the HyperCore™ software. This release introduces support for the new registration process for OEM partners and air-gapped or dark-site installs. The details of the release can be found in the [New Features](#) section.

## Release Classification - General Availability

The HyperCore™ software version 8.3.3 is currently available for production use through the user interface for supported upgrade paths. See section [HyperCore™ 8.3.3 – Supported Update Paths](#) for information on update paths to the 8.3.3 release.

## Impact on Cluster - Non-Disruptive

See section [HyperCore™ 8.3.3 – Supported Update Paths](#) for information on update paths to the 8.3.3 release.

**Taking a snapshot before the update is recommended.** If you take a snapshot of VMs before beginning the update, you can easily recover data from the snapshots should there be any issues.

**20 Minute Update Window Per Node.** Updating from older versions of the HyperCore™ software may take longer. Refer to the [HyperCore™ 8.3.3 – Supported Update Paths](#) section of this document for more information.

**Refresh Browser After Firmware Update.** When the update completes, refresh your browser. The HC3 web interface may not appear correctly without a refresh.

**When updating a primary and target HC3 system used in replication, minimum software versions are required.** The target HC3 system must be on HyperCore software version 8.1.3 at minimum before the primary system will allow the update to 8.3.3. This is to ensure environmental compatibility between replicating HC3 systems.

**Windows 10 & Windows Server 2019 CPU Utilization Issue** - Scale Computing has been made aware of a revision to the function of Windows time keeping introduced in a recent Windows patch. In a preliminary review, this Windows change has been seen to result in higher-than-normal HC3 host CPU utilization due to increased CPU interrupts generated by the guest VM. This increased CPU utilization may be magnified when combined with the industry-wide performance impacts of the Spectre mitigations introduced in HyperCore software version 8.0 and above.

The CPU service interrupts generated by the Windows guest OS cause a discrepancy between the CPU utilization displayed in the guest operating system—which shows the CPU cycles used by the guest and its applications—and the CPU utilization shown in the HC3 web interface VM card—which shows guest usage as well as the additional CPU cycles used by the HyperCore operating system to service the guest VM.

If you have a large number of running HC3 VMs or consistently high overall CPU usage, these changes may be seen as a significant impact to your environment. Additional HC3 nodes and/or additional HC3 nodes with increased CPU capabilities may be necessary to maintain environmental operating performance. The ultimate impact on system performance will be dependent on your unique system use, specific workloads, guest configurations, and security configurations.

The additional Spectre mitigations provided by Scale Computing in software versions 8.2 aim to ensure the best possible security, performance, compatibility, and stability for our customers and their guest VM environment. In this goal, additional remediations for Spectre and similar style attacks will be included in future HyperCore software updates. The operating systems of HC3 guest VMs are vulnerable to Spectre and must be patched using the recommendations of the guest VM's OS provider to mitigate against this threat. Scale Computing recommends applying all available guest OS patches from your software vendor as soon as possible.

Scale Computing is committed to investing in the security and reliability of our product, and we continue to investigate all of the possible solutions provided by industry research to combat security threats while maintaining the best possible performance and experience for our customers.

## New Features

HyperCore software version 8.3.3 is a patch release to HyperCore which includes:

- This release adds a minor fix when older releases between 7.1 and 7.5 stall during upgrade to latest.

## Other Bug Fixes / Enhancements

- N/A

## Previous release notes

- [HyperCore 8.3.2 release notes](#)

## Known Issues

- **Hot Add of virtual drives for FreeBSDx is not recognized by guest OS without a reboot** - FreeBSD 10, 11 and 12 do not recognize hot added drives without a reboot.
- **Taking a snapshot with a node offline in the cluster will not succeed.** – Snapshot functionality will be blocked until all nodes have rejoined the cluster.
- **If a VM is deleted in the UI, all associated snapshots will also be deleted with the VM** – This behavior is expected and precautions should be taken to ensure the VM should in fact be deleted, including all associated snapshots. VMs already restored from the VM snapshots will not be affected.
- **Lack of error message while trying to manually restart VMs in a node failure state** – During a node failure state, the UI allows users to click the "start" button for VMs, but the VMs will not start immediately as they are being processed by the automated failover. There is no error message or indication to the user as to why the VMs are not started.
- **2003R2 Mouse can become accelerated in the VM console.**
- **Disconnecting the performance drivers from CentOS 5 will not allow for incoming connections** – This requires a service network restart on the VM to restore inbound traffic.
- **HC3x, HC2000 and HC4000 nodes are unable to cascade boot** – If the first drive is missing from the HC3x, HC2000 and HC4000 chassis, the node will not be able to boot correctly.
- **Migration of an already migrated VM with a hot inserted CDRom leads to an unusable CDRom post the second migration.**

- **All devices on all VMs show 0b after a cluster restart.** – The correct sizes are updated within the first 24 hours of operation after the cluster restart.
- **Duplicate alerts can be sent within a roughly 24 hour window in a node down situation when the cluster name has been changed.**
- **Inaccurate Alert during ICOS to HyperCore migration** - While migrating a VM from ICOS to HyperCore through a Scale service engagement, users will incorrectly receive an alert stating a VM has crashed.
- **Replicating a VM to a cluster with a smaller resource footprint can lead to VMs cloned with higher than supported CPU/RAM configurations** – Users in this scenario should edit cloned VMs prior to starting to update the RAM/CPU to within the limits supported within the target cluster.
- **Deleting unreachable remote cluster incorrectly reports failed** – The connection is appropriately removed.
- **IE 11 only allows 2 console sessions at a time to the same cluster** – It is recommended to connect to the console remotely using an appropriate protocol for the OS.
- **In some scenarios, Chrome does not hold position on VM card when modifying an element** – Chrome will automatically scroll back to the top instead of holding position.
- **Squelched alerts are logged in the cluster log** – These conditions are typically seen in scenarios such as a rolling upgrade when CRITICAL or WARNING level conditions are created, but not alerted to the end user.
- **The initial replication of cloned VMs will not show progress in the UI** – During this initial replication the UI will report as “transmission idle” despite an active replication.
- **The UI shows NaN for CPU utilization when a node is down or unavailable** – NaN will incorrectly be displayed for CPU utilization when a node is down or unavailable in the cluster.
- **During specific times in the upgrade process, shutting down a VM from within the guest can impact progress** – It is advised not to manipulate VM state from within the guest while an upgrade is in progress.
- **After deleting a remote cluster connection for replication, you will be prompted to create a new remote connection, even if another exists** – If you have more than one remote cluster connection, after deleting a remote connection, refresh the browser before setting up a new replication to avoid being prompted.
- **A node add falsely indicate critical errors and offline VMs** – The cluster will incorrectly display critical data redundancy errors and offline VMs when a node is added to the system.
- **iPads and iPhones are unable to access the browser UI at this time** – The browser page will load and prompt you to accept the certificate, but will only display the “Disconnected...” page due to certificate loading issues.
- **When trying to connect to the UI through a node that has lost the backplane connection the login prompt will hang indefinitely** – If a node has lost backplane connection the login prompt will display and hang indefinitely or the “Disconnected...” message will be displayed indefinitely. Please connect through an online node in this case.
- **There is currently no email alert related to the redundancy degraded condition** – this condition is normally triggered alongside other conditions (drive failures, node down, etc.).
- **Windows Event ID 122 showing in system log for Windows VMs** – “access to drivers on Windows update was blocked by policy” – installing the virtio serial drivers from the CD Drive Scale Tools should prevent the event from being logged. Please see the User Guide in the customer/partner portal for installation steps.
- **During the installation of Windows 2003R2 using performance drivers, the mouse is unresponsive for initial few steps** – Users can continue through setup using the keyboard until mouse becomes responsive.
- **Virtual Disks (VSDs) / Snapshots are sometimes orphaned when attempting to delete** – Users should contact support to have these deleted.

- **After cloning VMs, the priority on virtual disks appears as 0 for a short period of time** – Waiting for some period of time, the default priority on virtual disks will show correctly at 4.
- **Hot blocks for offline virtual disks will not retier from SSD to HDD** – Turning on the VM while stopping the workload will allow destaging to continue.
- **As of Chrome build 51.0.2704.103, icons on VM cards only may appear as small squares instead of showing the correct icon** – A full refresh of the page and cache (Mac: cmd + shift + r, Windows: ctrl + shift + r ) will resolve this.
- **Internet Explorer 11 (OS Windows 7) does not display SSD Slider priority changes** – Please use other supported browsers when updating SSD slider priority.
- **Latency gauge shows 0 when connecting to storage only node** – Connecting to virtualization supported HC3 nodes shows the accurate latency value.
- **UI shutdown and reboot commands are currently not logged in cluster log.**
- **Only the default NIC on an HC3 Cloud Unity VM can successfully be disconnected.**
- **Windows 2012 VMs created and started under 7.1 or earlier, that have not been rebooted since upgrading from 7.1, can experience a BSOD after upgrading to 7.6 or 8.0.**
- **Replicating CentOS 7.6 versions from 8.2 to 8.1 may cause the VM not to start on clone.** Please upgrade DR cluster before production cluster as recommended in the support matrix.
- **Sometimes when performing a drive removal, the hypervisor fails to delete the drive (very rare)** – In such conditions completely shutdown and restart the affected VM to resolve the issue.
- **Windows 10 can sometimes crash on boot (very rare) when starting.** A reboot resolves this issue.
- **Windows drives** will sometimes present “0” as the serial-id. This value is purely cosmetic and does not affect the system in any way.
- **Windows 2012 can experience a crash** when “hot-adding” a new drive consecutively. To prevent this issue, please wait 30 seconds before adding a new drive. If you do experience a crash, reboot fixes it.

## Resources

If you need help upgrading, you can find many helpful resources by logging in to either the [Customer Portal](#) or [Partner Portal](#), then clicking **Support Knowledge**.

### Scale HyperCore™ – Supported Platforms

The HyperCore™ software version 8.3.3 is currently available for production use.

### HyperCore™ 8.3.3 – Supported Update Paths

The latest HyperCore™ release is available for update through the HC3 web interface. Depending on which build you are on, you may have more or less steps to your update. The following table displays the number of steps required for your update.

Release	# of Update Steps	Update Path
8.3.0	1	Update to 8.3.3 (Non-Disruptive Update)
8.2.0	1	Update to 8.3.3 (Non-Disruptive Update)
8.1.3	1	Update to 8.3.3 (Non-Disruptive Update)
8.1.2	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
8.1.1	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
8.1.0	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
8.0.4	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
8.0.3	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
8.0.2	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
8.0.1	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
7.6.7	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
7.5.21***	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
7.4.22***	2	Update to 8.1.3, then to 8.3.3 (Non-Disruptive Update)
7.4.21** and Previous	See <i>Supported Upgrade Paths</i> in prior Release Notes to upgrade to 7.2.24	

\* **Windows 10/Windows Server 2016 Issue** – If upgrading from this build, users may experience a reboot from bugcheck (0x00000109) during the live migration of VMs. Please contact ScaleCare support prior to upgrading.

\*\* **Windows 2012 VMs created and started under 7.1 or earlier which have not been rebooted since upgrading from 7.1 can experience a BSOD while upgrading to 7.6 or 8.0.**

\*\*\* **RHEL/CentOS 6.6 and prior, as well as SUSE, Ubuntu, and Fedora relying on kernel prior to 2.6.34 without appropriate patches expose a kernel issue that causes a hang after upgrading to HyperCore version 7.6 and above** – Please update all Linux VMs to kernel versions with patches and/or 2.6.34 or above prior to upgrading the HyperCore software.

## Feedback & Support

### Document Feedback

Scale Computing welcomes your suggestions for improving our documentation. Please send your feedback to [documentation@scalecomputing.com](mailto:documentation@scalecomputing.com).

### Technical Support and Resources

There are many technical support resources available for use. Access this document, and many others, at <http://www.scalecomputing.com/support/login/>.

#### Online Community

Scale Computing has an online forum and community! This is a great medium in which to solicit the advice of your peers, benefit from their experience, find and discuss documentation, and participate in ongoing conversations. Please note this community is not intended to provide ScaleCare Support assistance or replace other Scale Computing communication channels. Find the Scale Legion HC3 Discussion Forum at <https://scalelegion.community>.

#### Online Support

You can submit support cases and view account information online through the Scale Computing Customer and Partner Portals at <http://www.scalecomputing.com/support/login/>. You can also Live Chat with support through [www.scalecomputing.com](http://www.scalecomputing.com) during standard hours Monday-Friday from 8-8 local time.

#### Telephone Support

Support is available for critical issues 24/7 by phone at +1 877-SCALE-59 (+1 877-722-5359) in the US and at +44 (0) 808 234 0699 in Europe. Telephone support is recommended for the fastest response on priority issues, and the only response after standard Support hours.