

# Dell EMC<sup>®</sup> Release Notes for the Dell EMC Unity<sup>™</sup> Family

These release notes contain supplemental information about this Unity release.

**Current Release Version:** 5.1.0.0.5.394

**Release Type:** Minor (MI)

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## Revision history

This section provides a description of document changes.

**Table 1. Revision history**

Document revision	Date	Description
37	June 2021	Added Windows host LUN feature description for release 5.1.0.0.5.394.
36	June 2021	Release 5.1.0.0.5.394
35	April 2021	Release 5.0.7.0.5.008
34	January 2021	Release 5.0.6.0.5.008
33	December 2020	Release 5.0.5.0.5.002
32	November 2020	Release 5.0.4.0.5.012
31	July 2020	Additional feature removal and change information for 5.0.3.0.5.014
30	May 2020	Release 5.0.3.0.5.014
29	January 2020	Release 5.0.2.0.5.009
28	November 2019	Release Notes update only. Additional information about password resets. Updated information for fix 1014081. New known issue 1019225 added.
27	October 2019	Release 5.0.1.0.5.011
26	June 2019	Release 5.0.0.0.5.116

<b>Document revision</b>	<b>Date</b>	<b>Description</b>
25	March 2019	Release 4.5.1.0.5.001
24	January 2019	Release 4.5.0.0.5.096
23	October 2018	Release 4.4.1.1539309879
22	August 2018	Release 4.4.0.1534750794
21	May 2018	Release 4.3.1.1525703027
20	April 2018	Addition of Proxy NAS server under New Features section.
19	March 2018	Release 4.3.0.1522077968
18	March 2018	Release 4.2.3.9670635
17	January 2018	Release 4.2.2.9632250
16	October 2017	Release 4.2.1.9535982
15	October 2017	Release 4.2.0.9476662 with new features included from 4.2.0.9392909.
14	August 2017	Release 4.2.0.9476662
13	July 2017	Release 4.2.0.9392909
12	April 2017	Release 4.1.2.9257522
11	February 2017	Release 4.1.1.9138882
10	January 2017	Release 4.1.0.9058043
09	December 2016	Release 4.1.0.8959731 (upgrade only) Release 4.1.0.8940590
08	November 2016	Release 4.0.2.8627717
07	October 2016	Documentation update only - ESRS Requirements.
06	September 2016	Release 4.0.1.8404134
05	September 2016	Release 4.0.1.8320161
04	August 2016	Release 4.0.1.8194551
03	July 2016	Documentation update only
02	June 2016	Localization information
01	May 2016	Initial release, 4.0.0.7329527

# Product description

Dell EMC Unity is targeted for midsized deployments, remote or branch offices, and cost-sensitive mixed workloads. Unity systems are designed for all-Flash, deliver the best value in the market, and are available in purpose-built (all Flash or hybrid Flash), converged deployment options (through VxBlock), and a software-defined virtual edition.

## The Dell EMC Unity Family consists of:

- Unity (purpose built): A modern midrange storage solution, engineered from the ground-up to meet market demands for Flash, affordability and incredible simplicity. The Unity Family is available in 12 All Flash models and 12 Hybrid models.
- VxBlock (converged): Unity storage options are also available in Dell EMC VxBlock System 1000.
- UnityVSA (virtual): The Unity Virtual Storage Appliance (VSA) allows the advanced unified storage and data management features of the Unity family to be easily deployed on VMware ESXi servers, for a 'software defined' approach. UnityVSA is available in two editions:
  - Community Edition is a free downloadable 4 TB solution recommended for non-production use.
  - Professional Edition is a licensed subscription-based offering available at capacity levels of 10 TB, 25 TB, 50 TB, and 350 TB. The subscription includes access to online support resources, EMC Secure Remote Services (ESRS), and on-call software- and systems-related support.

All three deployment options, i.e. Unity, UnityVSA, and Unity-based VxBlock, enjoy one architecture, one interface with consistent features and rich data services.

## Unity is Redefining Storage Simplicity and Value

Here are some of the features and supporting statements that allows Unity to redefine midrange storage:

- Simple: Simplified ordering, all-inclusive software, rack-and-stack in less than 2 minutes, customer installable, a new slick HTML5 user interface, proactive assist, and CloudIQ internet-enabled monitoring.
- Modern: Unity is designed to support the latest dense Flash drives such as 3D TLC NAND with a Linux-based architecture, new Intel Haswell, Broadwell, and Skylake multicore processors, up to 440K IOPS, 2U dense configurations, scalable 64bit file system & file system shrink, unified snapshots & replication, Data-at-Rest-Encryption (D@RE), support for public and private cloud access, deep ecosystem integration with VMware (native vVols) and Microsoft, and much more.
- Affordable: Unity delivers the best midrange Flash economics with a great entry price and overall TCO. Unity All Flash configurations start under \$15K and Unity Hybrid Flash configurations start under \$10K. UnityVSA allows anyone to get started for free and upgrade into the supported virtual edition, a purpose-built hybrid or all-Flash system, or into converged infrastructure.
- Flexible: You can meet any storage deployment requirement with Unity from virtual to purpose-built to converged infrastructure. All deployment options support the same data unified data services (SAN/NAS and vVols) to support any workload with traditional file (file consolidation, VDI user data, home directories) as well as transactional workloads for both file and block on both all Flash and hybrid configurations (Oracle, Exchange, SQL Server, SharePoint, SAP, VMware and Microsoft Hyper-V).

## Unity XT Platform (380/F, 480/F, 680/F, 880/F series)

The Unity Next Generation Platform refresh, also known as the Unity XT Series, consists of 8 hardware models, including 4 Hybrid Flash and 4 All Flash configurations—the Dell EMC Unity 380, 380F, 480, 480F, 680, 680F, 880, and 880F. The XT series increases performance of I/O, maximizes storage efficiency features like Advanced Data Reduction with inline deduplication, and supports a 25Gb interface card.

The Unity 380(F) is based on the existing platform today for the 350F model, but with additional memory (64GBs per SP).

The Unity 480/F, 680/F, and 880/F are built on an Intel Skylake platform. For more information, see the *Unity 480/F, 680/F, and 880/F Hardware Information Guide*.

The Unity XT series supports Advanced Data Reduction in both dynamic and traditional pools in All Flash (F) models, and All Flash pools in Hybrid models.

Unity software OE version 5.x and later supports the new x80 series models, in addition to all existing x00 and x50 series models.

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**NOTE:** The Unity XT 480/F, 680/F, and 880/F are available for both high-line (200v-240v) and low-line (100v-120v) power environments, but you must select the appropriate option when ordering your system. Low-line is used in a select countries that supply 100-120V, typically through a wall outlet, while high-line is used in environments that supply 200-240V. Country-specific cables are available for plugging a Unity system directly into a wall outlet that either supplies 100-120V or 200-240V. If supplying 100-120V to a Unity XT 880/F, a step-up transformer is required.

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## New features

Table 2. **New features in product version**

Functional area	Feature description	Summary of benefits
Connectivity – Hosts	Prevent LUNs from going offline for Windows hosts after a Unity OE upgrade	This feature allows Unity OE upgrades to be transparent to hosts to avoid LUNs from appearing offline, thus preventing the need for a manual update to Windows host registry settings.
Data protection and mobility	Avoid full copy when performing a replication fallback operation	You can avoid a data full copy by using previously created common base user snapshots on the source and destination systems either manually, or by creating a snapshot schedule, so that only the data that is modified after the common base snapshot is copied. This can be used in many scenarios in synchronous and asynchronous file or block replication to save both data synchronization time and the required bandwidth.  Note: Snapshots of a LUN group or VMFS created on a Unity OE release prior to 5.1 and replicated by asynchronous replication are not eligible to be used as a common base.
Data protection and mobility	Advanced replication fan-in and fan-out	You can now replicate snapshots on all asynchronous replication sessions in a fan-out topology, rather than only one session as in previous Unity versions.
Data protection and mobility	Multiprotocol migration	This feature allows you to migrate multiprotocol-configured VDMs from a VNX source system to destination Unity systems. A multiprotocol-supported Unity NAS server will be created on the Unity system as the migration destination.

Functional area	Feature description	Summary of benefits
Data protection and mobility	Cloud Tiering Appliance stub awareness	<p>If you are using the CIFS protocol, you can preserve stub files when you import from a VNX source to a Unity destination. Preserving stub files lessens the workload when migrating data from VNX to Unity systems. Cloud Tiering Appliance (CTA) must be configured on the source VNX system and set for file archive.</p>
Data protection and mobility	Continuous protection for synchronous file replication during NAS server failover	<p>During a NAS server failover, data remain synchronized even when the source NAS server and the destination NAS server are on different SPs. The system merely generates an alert that tells you that the operational status has degraded on each file system of the NAS server. Latency might increase as the operation proceeds.</p> <p>The data remains synchronized if the source NAS server fails over to the other storage processor and the direct FC connection is lost while a synchronous replication session is in progress.</p>
Data protection and mobility	Throttle asynchronous replication sessions	<p>You can now throttle the bandwidth for asynchronous block and file replication through Unisphere and the Unity CLI, enabling you to better control replication traffic over your network.</p>
Data protection and mobility	Managing scheduled time zone	<p>Schedule time zone applies only to snapshot scheduling and asynchronous replication throttling scheduling and is set through the CLI command <code>/sys/schedtimezone set -name &lt;timezone_string&gt;</code>.</p> <p>It is not a general system time zone setting. Be aware of the following possible impacts of changing time zone:</p> <ul style="list-style-type: none"> <li>• Existing snapshot schedules and bandwidth schedules are not updated to the same absolute time when the time zone is changed. Check whether your snapshot schedule and bandwidth schedule need to be updated after changing the time zone.</li> <li>• If the time zone is changed at the same time a scheduled snapshot or bandwidth schedule is created, the scheduled snapshot or bandwidth schedule may not be created properly. Avoid changing the time</li> </ul>

Functional area	Feature description	Summary of benefits
		zone at the same time a scheduled snapshot or bandwidth schedule is created.
Storage - File	File Top Talkers (File Correlated Statistics)	The new <code>svc_topstats</code> service command captures real-time statistics about specific I/O activity on the SP.
Storage - File	Unlimited quota grace periods	The tree quota grace period can now be set to unlimited (no limit) using the Unisphere CLI.
Hardware	New FC 32 Gb I/O Module	Added support for a 4-port 32Gb Fibre Channel I/O module.
Hosts	Host Groups	Hosts can now be grouped together for streamlined management of access to block resources (LUNs, consistency groups, and VMFS datastores). This increases the ease of host-to-block resource mapping and management.
Networking	MTU speed half duplex support	You can now change the MTU speed to half duplex using the <code>svc_network</code> Service Command.
Security	New Key Management support	Unity OE versions 5.1 and later support KMIP version 1.4 and the following brands of KMIP Server: <ul style="list-style-type: none"> <li>• CloudLink</li> <li>• Gemalto</li> <li>• IBM SKLM</li> <li>• Thales CipherTrust</li> <li>• Unbound</li> <li>• Vormetric</li> </ul>
Security	Disable TLS 1.1	The storage system administrative setting, <code>tls1Enabled</code> , has been replaced in OE versions 5.1 and later with <code>tlsMode</code> , which specifies the lowest Transport Layer Security (TLS) protocol version supported on the system.  The default setting supports TLS 1.0 and above for SSL communications. By specifying the TLS 1.1 protocol using this setting, the storage system will only support SSL communications using the TLS 1.1 and TLS 1.2 protocols and TLS 1.0 will not be considered a valid protocol. By specifying the TLS 1.2 protocol using this

Functional area	Feature description	Summary of benefits
		<p>setting, the storage system will only support SSL communications using the TLS 1.2 protocol and above and TLS 1.0 and TLS 1.1 will not be considered valid protocols.</p> <p>Refer to the <i>Unity Security Configuration Guide</i> for more information.</p>
Serviceability	Service Command for Codepage support	<p>The VDM codepage command defines the default code page used for filename translating from NFSv3 and FTP clients. Options are available for EUC-KR (Korean), UTF-8 (8-bit Unicode), Latin-1 Western Europe, and Latin-9 (Latin 1 + Euro symbol).</p>
Serviceability	New network alerts	<p>New alerts have been added to indicate when there are management network problems.</p>
Serviceability	UDoctor packages	<p>If you have SRS enabled, UDoctor packs may become available for installation on your system. An available UDoctor pack will create a Unisphere alert and you can choose to install or decline the update. UDoctor packs can deliver minor fixes to your system. They do not require a reboot or non-disruptive upgrade (NDU) to take effect."</p>
Serviceability	New location for REST API Reference documentation	<p>Unity REST API documentation can now be found on the Dell Technologies Developer Portal at <a href="https://developer.dell.com">https://developer.dell.com</a>.</p> <p>The Dell Technologies Developer Portal is a single location for sharing and disseminating developer-focused documentation in an easily consumable and consistent format. Using the Developer Portal, developers can discover, explore, and test Dell APIs needed to integrate with other solutions and automate tasks. This enables the 'build once/re-use often' mindset for faster implementation and easier automation of solutions built using Dell's enterprise products.</p>
Serviceability	Support added for SLES15	<p>Unity now supports SUSE Linux Enterprise Server (SLES) 15, which has an updated Linux kernel version, tool chains, libraries, and applications that create a Linux distribution.</p>

Functional area	Feature description	Summary of benefits
UnityVSA	UnityVSA Dual-SP capacity increase to 350 TB	The maximum capacity for Dual-SP UnityVSA has been increased to 350 TB.
UnityVSA	UnityVSA Performance increase	You can now scale Dual-SP UnityVSA SPs to 12 cores and 96 GB RAM.
UnityVSA	Support for subordinate VMware Certificate Authority (VMCA)	<p>Unity now supports subordinate certificate authority configuration.</p> <p>The VMCA is the default certificate authority that is used to secure communications between vCenter Server and a VASA Provider. With Unity releases before 5.1, the VASA provider (VP) only supports self-signed certificates from the VMCA. Only VASA 2.0 and VASA 3.0 configurations in which the VP can be registered are supported.</p>
Virtualization	vSphere ESXi 7.0 support	Unity and the UnityVSA now support vSphere ESXi 7.0.
Virtualization	Support for native vVol snapshots	Native snapshots of individual VMDK (data) vVols are now supported.
Virtualization	Balanced placement of vVols between SPs	Upon creation, vVols will automatically be placed on the appropriate SP for load balancing.

## Changed features

Table 3. Changed features in product version

Functional area	Feature description	Summary of benefits
Hardware	New drive firmware support	Drive firmware version 17 is included in this software OE bundle. Refer to Knowledge base article 000021322 for more information on the affected drives.
REST API	Retired/changed objects	<p>The following API changes have been made:</p> <ul style="list-style-type: none"> <li>importSession: The “flimport” argument has been removed as this was previously used to ignore File-level Retention (FLR) file systems before Unity import support FLR import. Now it is supported, and this argument is no longer needed.</li> <li>svcStorageProcessor: The “isServiceMode” attribute has been removed and has been replaced by the “state” attribute, which will now show a detailed state of the SP</li> </ul>

		<p>rather than simply if it is in normal mode or service mode.</p> <p>Refer to the Unity REST API Reference Guide Appendix for detailed information on REST API object and option changes for this release.</p>
Security	SSH SHA2 update	<p>The Unity SSH server for the Management Interface has been reconfigured to only support SHA2 HMACs.</p> <p>Use of the insecure SHA1 HMAC, hmac_sha1, is no longer supported. SSH clients that only use hmac_sha1 can no longer connect to the system. To resolve this, the user must update their SSH client to a version that supports SHA2 HMACs. Examples:</p> <ul style="list-style-type: none"> <li>• Most Linux distributions use openssh, which has supported SHA2 HMACs since version 5.8, released 2/14/2011.</li> <li>• PuTTY (a Windows SSH client) has supported SHA2 HMACs since at least version 0.67, released 3/15/2016 (over 5 years ago).</li> </ul>
Security	KMIP support updates for RC2	<p>KMIP configuration requires upload of a client certificate file in PKCS12 format. Many users create this file using openssl, which by default uses a weak algorithm, 40-bit RC2, to encrypt the file contents.</p> <p>Unity OE 5.1 does not support the 40-bit RC2 algorithm for the client certificate file. To prevent KMIP connection failures, the certificate file upload checks the encryption algorithm and will fail with an "invalid PKCS12 certificate" error if the file is encrypted using 40-bit RC2.</p> <p>This update will cause an issue after upgrading an array to Unity OE 5.1 if KMIP is enabled and it is using a client certificate file encrypted using 40-bit RC2. The upgrade will succeed, but the array would no longer be able to connect to the configured KMIP Server. For example for a power shutdown, if both SPs are rebooted, they will reboot into service mode until a new client certificate file, which is encrypted using a stronger encryption algorithm such as Triple DES, is uploaded using the svc_kmip script.</p> <p>To prevent this from occurring, a health check (PUHC) was added that will cause the upgrade to Unity OE 5.1 to fail if:</p> <ul style="list-style-type: none"> <li>• KMIP is configured and enabled, AND</li> </ul>

		<ul style="list-style-type: none"> <li>The client certificate file is encrypted using 40-bit RC2.</li> </ul>
Serviceability	SupportAssist Enterprise 4.x support	SupportAssist Enterprise (SAE) 4.x now supports Unity and the UnityVSA. Refer to the SAE documentation and the Unity Support Matrix for the most updated compatibility information.
Serviceability	Dell EMC website changes	<p>All Unity technical documentation, software, and support content, including knowledgebase articles, can now be accessed from <a href="https://Dell.com/support">Dell.com/support</a>.</p> <p>Links from Unisphere to the Support site are all updated to reflect the new Dell Support site rather than support.emc.com.</p> <p>Unity How To documents and manuals can be accessed from <a href="https://dell.com/unitydocs">dell.com/unitydocs</a>.</p> <p>Refer to Knowledge Base Article 000185727 for further guidance.</p>
Software Install and Upgrade	Pre-Upgrade Health Check (PUHC) enhancement	If you are upgrading to Unity release 5.1.0 to a later release and have drives with C342 firmware, the Pre-upgrade Health Check will notify you that a firmware update is mandatory prior to the OE upgrade. This is to prevent potential drive hangs as described in DTA 183830.
Storage - File	Increase in NFS share host access limit	You can now add access for up to 256 hosts per NFS share, compared to the previous limit of 128.
Storage efficiency	Configurable hot spares in Dynamic pools	You can now reserve twice as much spare space in a dynamic pool as before. This means that you can reserve 2 hot spare drives when the pool size is between 1 and 32 drives, 4 hot spare drives when the pool size is between 33 and 64 drives, and so on.
System management	Unity OE Code version format change	<p>The main Unity Operating Environment Code version display has been shortened by one decimal and updated to include the full build information.</p> <p>A.B.C.D followed by (build type, build_number, date_time, current_version_schema)</p> <p>A=Major software version (product) B=Minor software version C=Service Pack version D=0 (all released code versions)</p> <p>For example:</p> <p>Unity 5.1.0.0 (Release, Build 001, 2020-10-26 14:44:00, 5.1.0.0.5.001)</p>

Unisphere CLI	Updated CLI client support		Unity OE 5.0	Unity OE 5.1
		Red Hat Linux	4.0+	6.0+
		SUSE Linux	10.0+	10.0+
		Solaris	10+	10+
		Solaris Sparc	v8+	v8+
		Windows	Windows 7+ (server 2008+)	Windows 7+ (server 2008+)
		ESXi	4.0+	5.0+

## Resolved issues

This table lists the issues fixed in this release. For all issues fixed in previous releases, refer to the release notes for that specific Unity OE.

**Table 4. Resolved issues in product version**

Issue ID	Functional area	Description
UNITYD-19520	Common Event Enabler	The CEPP server being offline may cause the SP to reboot.
UNITYD-28871	Common Event Enabler	When the CAVA server is scanning a file, renaming that file may cause the SP to reboot.
UNITYD-32264	Common Event Enabler	Renaming a CEPP pool name while the pool is offline caused a disk space error.
UNITYD-8861/ UNITYD-11102	Common Event Enabler	The file system went offline when CAVA was enabled on McAfee (VSE 8.8 patch 12).
998839 UNITYD-7871/ UNITYD-8116	Connectivity - Hosts	If a user configures host access for file storage using a string format (for example, specifies hosts without first registering them) instead of selecting the registered hosts, the "Hosts" column of the NFS Shares page always displays "0", regardless of how many hosts the user configures access for.
999301/ UNITYD-8004/ UNITYD-8308	Connectivity - Hosts	When there is a scheduled snapshot operation running in the background, removing multiple LUNS (60 LUNs) for host access through Host → Delete will cause a timeout with a message such as the following: "Timeout Occurred: An unexpected timeout has occurred, Refresh your browser to reload Unisphere UI. "
UNITYD-18042	Connectivity - Hosts	An SP may reboot if an invalid fibre channel completion status is received on an XLS (eXtended Link Service) command.
UNITYD-19744	Connectivity - Hosts	An SP may reboot if an unexpected fibre channel SOF (Start-of-Frame) is received on an XLS (eXtended Link Service) command.
UNITYD-25730	Connectivity - Hosts	Hundreds of iSCSI logouts on RecoverPoint connections over a period of a few minutes or less caused a single SP to reboot.
UNITYD-28661 /UNITYD-28531	Connectivity - Hosts	In rare cases, a single SP may reboot due to an internal timing issue processing cancelled I/O.
UNITYD-31574/ UNITYD-38335	Connectivity - Hosts	ESXi hosts that had a management interface configured on a VMware NSX-T distributed switch (N-VDS) could not be added.

Issue ID	Functional area	Description
UNITYD-32730	Connectivity - Hosts	The error "initiator registered with more than one hosts" was reported when switching an FC initiator to another host after the FC HBA was physically relocated to another host.
UNITYD-6186/ UNITYD-38542	Connectivity - Hosts	Hosts with the same IP, but different subnets (subnet types), could not be added.
UNITYD-8117/ UNITYD-8308	Connectivity - Hosts	Adding or modifying access for multiple LUNS to one host might take a long time and might fail after a time with error "Failed to add host access to LUNs".
UNITYD-9190	Connectivity - Hosts	Windows 10 update 1903 is not able to access shares from Unity. The negotiate protocol request fails with "STATUS_INVALID_PARAMETER". Refer to Knowledgebase Article 534173 for more information.
UNITYD-16054/ UNITYD-7586	Connectivity - Networks	Some IO operations stopped progressing when using NFSv3 over User Datagram Protocol (UDP).
UNITYD-20636/ UNITYD-45456	Connectivity - Networks	During a system reboot, some key components started up in the wrong order, which in rare cases caused an upgrade failure.
UNITYD-21212	Connectivity - Networks	An ESXi host lost access to an NFS datastore after a new IO module was added and committed.
UNITYD-24424	Connectivity - Networks	Occasionally network issues, such as burst traffic or connection accidentally shutting down, can lead to a service processor reboot.
UNITYD-26017/ UNITYD-37276	Connectivity - Networks	Creating a DNS or NAS server could fail if the internal DNS service received an unexpected response packet.
UNITYD-27786	Connectivity - Networks	The SP may reboot unexpectedly during I/O cancellation.
UNITYD-28324/ UNITYD-32436	Connectivity - Networks	If there are only two available speeds for one ethernet port, such as 25GB and AUTO, you cannot set the speed to 25GB when the current speed is AUTO, even though the request returns a success message.
UNITYD-29763	Connectivity - Networks	An unexpected connection shutdown may cause an NDMP backup failure.
UNITYD-33054/ UNITYD-43269	Connectivity - Networks	An upgrade failed during the "Final Tasks" stage when the management network was not stable.
UNITYD-35119/ UNITYD-43209	Connectivity - Networks	Turning on Packet Reflect on an NAS server with an IPV6 address caused an SP to reboot.
UNITYD-39745/ UNITYD-41249	Connectivity - Networks	Under heavy network load, an invalid RPC packet triggered an SP reboot.
UNITYD-7434	Connectivity - Networks	An unexpected SP reboot happened during an upgrade due to an internal service that did not shutdown within the allotted time period.
UNITYD-9201	Connectivity - Networks	When connecting an SMB share from a Windows 7/10 terminal to a Unity NAS server, Windows Explorer stops responding for around 20 seconds if the file interface is created on a Link Aggregation or Fail-safe Network (FSN).
1000114/ UNITYD-8252	Data mobility	When using the LUN migration feature, a user may see a "LUN offline" alert, followed shortly by a "LUN is operating normally" message.
894343/ UNITYD-2080	Data mobility	Changing the system name is not reflected on the remote systems.
999164/ UNITYD-7968	Data mobility	When a LUN move session fails due to the pool being offline which was caused by disk failure or fault, the LUN move session cannot be deleted and the following error is displayed: "Operation failed. Error code: 0x7d1315d The request has not been completed within 7,200 seconds. (Error Code:0x7d1315d)"

Issue ID	Functional area	Description
		The failed session cannot be deleted until both SPs are rebooted.
UNITYD-13232	Data mobility	An unexpected storage processor reboot occurred on system configured with replication.
UNITYD-17869	Data mobility	The SP rebooted during a local move operation.
UNITYD-22655	Data mobility	A LUN becomes inaccessible after starting a LUN move session.
UNITYD-23931/ UNITYD-25876	Data mobility	The storage processor rebooted unexpectedly a second time after a reboot following a NAS server local move.
UNITYD-8141/ UNITYD-41217	Data mobility	When multiple LUN move operations were attempted close together, a storage processor rebooted unexpectedly.
1000185/ UNITYD-8275	Data protection	A block synchronous replication session status frequently switches between "lost sync communication" and "syncing" in the Unisphere UI or UEMCLI.
1000816/ UNITYD-8514/ UNITYD-33355	Data protection	The synchronous replication IP connection lost communication and could not resume after upgrading the Unity OE software. The following error displayed on the Replication Connection tab in Unisphere.  "One or more replication interface pairs are experiencing network connectivity issues between the local and remote systems."
1001453/ UNITYD-8743	Data protection	In a replication session, if one resource has two or more sessions, and one session is in the process of being deleted while other sessions are also executing operations (create/pause/resume/failover/failback), the replication operation can stop responding.
1018278/ UNITYD-9151	Data protection	Failback or failover loopback using the CLI <code>"/prot/rep/session -syncData ignore"</code> option enabled encounters an error.  For example: <ol style="list-style-type: none"> <li>In configuration A-&gt;B-&gt;C, B-&gt;C is the loopback session. After an unplanned failover of B-&gt;C, failback B-&gt;C fails with the following error message: "Group failback operation failed. All replication sessions on the NAS server skip the resume operation because of the syncData ignore option, but at least one session has failed to reverse the role."</li> <li>In configuration A-&gt;B, A-&gt;B is the loopback session. Failover from A-&gt;B fails with the following error message: "Group failback operation failed. All replication sessions on the NAS server skip the resume operation because of the syncData ignore option, but at least one session has failed to reverse the role."</li> </ol> <p>This issue does not impact failback sessions without -syncData or with -syncData force enabled on the loopback session. It also does not affect failback of local or remote async sessions, either with or without -syncData options enabled.</p>
1034933 / UNITYD-29386/ UNITYD-30682	Data protection	When assigning a cluster schedule to a sync replication source file system, it could fail to sync the association to the destination file system due to an issue in either the sync session or destination file system. This caused the schedule on the source file system to be disassociated and trigger a degraded warning.
1035065 / UNITYD-29469	Data protection	If a user assigns the same cluster snapshot schedule to large number of file systems or LUNs and then modifies the cluster snapshot schedule, the modification may take a long time, then timeout and fail.
1037185 / UNITYD-30699/ UNITYD-31003	Data protection	For asynchronous replication, the source NAS server LDAP configuration is always "is overridden". After failover, the "Override IP Address" checkbox is set to true for the new destination NAS server to avoid synchronizing the IP address back. However, the same setting prevents other LDAP configuration settings

Issue ID	Functional area	Description
		such as base DN, SSL, and so on, from syncing back during failover with sync or fallback.
1037730 / UNITYD-31005/ UNITYD-18390	Data protection	After a file system snapshot is restored, the file system related quota settings will not be restored automatically.
1038868/ UNITYD-31615/ UNITYD-31769	Data protection	When the pool is nearly full, asynchronous replication operations, such as stop, resume, or delete, will fail. This also caused the Pre-upgrade Health Check for a later upgrade to fail.
900886/894343/ UNITYD-2373/ UNITYD-5084/ UNITYD-2080	Data protection	After resetting the Unity system name, file replication session system names are not updated in Unisphere.
998221/ UNITYD-7788/ UNITYD-8017	Data protection	When trying to resume a group of sessions on an asynchronous replication destination after a group planned failover operation at the NAS server level, the direction of individual file system replication sessions may be different from the NAS server replication session. This occurs if the resume operation is started before the previous planned failover ends. This usually happens when a large volume of data needs to be synced from source to the destination during planned failover.
999780 UNITYD-8154	Data protection	Replication of an IPv6 connection lost communication after upgrading with the following error on the Unisphere Replication Connection tab: "One or more replication interface pairs are experiencing network connectivity issues between the local and remote systems."
UNITYD-19123	Data protection	A backup operation stopped responding when the server archive failed to send back a response to the system.
UNITYD-20500	Data protection	Creating a file synchronous replication session on a NAS server failed.
UNITYD-20540/ UNITYD-35114	Data protection	For NFS and SMB shares, some snapshots were not visible in the checkpoint folder.
UNITYD-21583	Data protection	Following a Data-in-Place upgrade, synchronous replication sessions could not be resumed.
UNITYD-22248/ UNITYD-44023	Data protection	An unexpected storage processor reboot occurred while deleting snapshots of a file system or LUN.
UNITYD-22357/ UNITYD-25662	Data protection	Directories could not be excluded when performing an NDMP backup.
UNITYD-22748/ UNITYD-35868	Data protection	A synchronous replication destination file system went offline due to a storage processor reboot during an unplanned failover.
UNITYD-23454	Data protection	A fan-out or cascade configuration could not be created due to the failure of the interface validation.
UNITYD-26642/ UNITYD-30860	Data protection	After a reboot of the owner storage processor on the source storage system during a planned failover, some block synchronous replication sessions remained in the "syncing" status permanently.
UNITYD-27589	Data protection	An NDMP restoration operation stopped progressing when critical failures occurred in the data restoration process.
UNITYD-28354	Data protection	When creating a file or block synchronous replication session, in very rare cases, the sync replication session became "in-sync" immediately without copying any data to the remote system. Then, when sync replication failover happened, most of the data on source site was unavailable.

Issue ID	Functional area	Description
UNITYD-28591/ UNITYD-24380	Data protection	When the owning SP of a synchronous replication session was rebooted, I/O to the LUN or filesystem failed on the peer SP.
UNITYD-28953	Data protection	The system rebooted unexpectedly during the NDMP backup operation.
UNITYD-28971/ UNITYD-28449	Data protection	In rare cases, the IP address of the replication session configured on a NAS server was not updated when the NAS server was moved from one SP to the other SP. Operations against the replication session failed due to the incorrect IP address.
UNITYD-30216/ UNITYD-31453	Data protection	When a storage processor was restarted on an asynchronous replication source storage system, the other storage processor unexpectedly rebooted.
UNITYD-31446/ UNITYD-37186	Data protection	If both SPs reboot or power down in a synchronous replication source system simultaneously, all the synchronization sessions became full synchronizations if one of the SPs comes back online.
UNITYD-31871/ UNITYD-28621	Data protection	If a file system snapshot is being created and has not reached the ready state, deleting the snapshot could cause it to get stuck in the destroying state.
UNITYD-32637	Data protection	A storage processor rebooted unexpectedly when using the svc_dataprotection service command to delete an asynchronous replication consistency group.
UNITYD-33895/ UNITYD-35680	Data protection	In rare cases when asynchronous replication was configured, a scheduled user snapshot was not created.
UNITYD-35100	Data protection	An NDMP backup operation stopped progressing when the file system being backed up was in the progress of being unmounted.
UNITYD-38054/ UNITYD-39415	Data protection	An NDMP backup operation stopped progressing when a tape write failure occurred in the backup process.
UNITYD-39493/ UNITYD-40488	Data protection	When more than 15 NDMP backup tasks were run at the same time and another running system operation, such as load balancing, was done simultaneously, storage processor reboots could occur.
UNITYD-42355/ UNITYD-42909	Data protection	If the network connection used by synchronous replication is unstable, a storage processor may unexpectedly reboot.
UNITYD-42408/ UNITYD-44021	Data protection	Attempting to fail back a NAS server synchronous replication session after a failover failed and the file system became inaccessible if the session operational status is either "Non-recoverable error" or "lost Sync communication", while other file system sessions were still syncing.
UNITYD-44070/ UNITYD-44673	Data protection	Attempting to create a replication session on a Consistency Group using the REST API failed when the member LUNs were explicitly specified.
UNITYD-44190/ UNITYD-43324	Data protection	When a synchronous replication session was replicating a file system snapshot, a storage processor unexpectedly rebooted.
UNITYD-44297/ UNITYD-44620	Data protection	If a file system larger than 2199023255040 (2 <sup>41</sup> – 512) bytes was being synchronously replicated and was expanded or shrunk, the storage processor rebooted before all the data had been copied. When the storage processor came back up, the replication session showed "in sync", but not all the data had been correctly replicated.
UNITYD-5635	Data protection	Attempting to resume a synchronous Consistency Group replication session where all the LUNs are thick failed with an "out of space error".
UNITYD-6730	Data protection	When enabling replication of a Consistency Group, the Unisphere UI incorrectly disallowed selecting a thin LUN destination pool if there was no remaining available space.

Issue ID	Functional area	Description
UNITYD-8345	Data protection	When the source LUN owner SP rebooted during an asynchronous replication session before a planned failover or failback was complete, the operation failed instead of recovering automatically.
UNITYD-8831/ UNITYD-45486	Data protection	When an asynchronous replication session was paused, a storage processor on the destination system unexpectedly rebooted.
UNITYD-9060/ UNITYD-36587	Data protection	A Berkeley DB deadlock prevented an asynchronous replication session from being recovered and prevented other operations from being performed.
UNITYD-9894	Data protection	In a sync replication environment, when both SPs reboot or power down and then one SP reboots, all of the sync sessions may start a full sync. This can trigger snapshots on the destination side and cause the destination pool to run out of space.
997336/ UNITYD-7669/ UNITYD-7793	Data reduction	When the pool space is full, an operation to enable or disable LUN data reduction failed. The job failed with the message: "Job failed, and its roll back failed. Check job details for error statuses. (Error Code:0x6000dfa)"
UNITYD-16402/ UNITYD-16833	Data reduction	During an SP reboot, the FAST VP component may time out and fail to shut down properly.
UNITYD-26639/ UNITYD-45010	Data reduction	The file system may go offline when running FSCK with the "checkzipheader" option for LUNs that have inline compression enabled.
UNITYD-33255/ UNITYD-39734	Data reduction	Inline compression or inline deduplication read I/O during a space reclaim operation may cause the storage resource to go offline.
UNITYD-40570	Data reduction	The FAST VP Estimated Relocation Time for a storage pool did not display the correct value.
UNITYD-8605	Data reduction	When an inline compression or inline deduplication-enabled file system or LUN is reclaiming free space, the SP would reboot unexpectedly.
UNITYD-9086/ UNITYD-30845	Data reduction	An unexpected storage processor reboot occurred in an environment with heavy inline compression or inline deduplication usage.
UNITYD-15576/ UNITYD-31403	Hardware	A drive fault in DAE Enclosure 0_0 incorrectly lights the enclosure fault LED on the DPE for Unity XT 480/680/880 series systems.
UNITYD-23180/ UNITYD-8656/ UNITYD-41099	Hardware	If using 4-Port 10Gb Fiber Channel IO module, the port 0 MAC-Address was switching between other active interfaces. Refer to Knowledge Base article 000498225 for more information.
UNITYD-26830/ UNITYD-29810	Hardware	An internal communication issue between SPs resulted in an unexpected SP reboot.
UNITYD-27120	Hardware	Following an upgrade or unplugging of a SAS cable on a system running OE 4.5 or later, incorrect SAS controller reset/error handling can result in an unexpected SP reboot.
UNITYD-33863/ UNITYD-38593	Hardware	After coming up after a power failure, a port conflict resulted in one of the SPs rebooting.
UNITYD-34815/ UNITYD-40447	Hardware	With Japanese/Korean language installed, if you select "Use firmware package included with the OE software upgrade bundle" to upgrade drive firmware, the system returns an error after you click "Next".
UNITYD-35740/ UNITYD-30543	Hardware	On a heavily loaded system, an internal communication failure between SPs could lead to one of the SPs rebooting.
UNITYD-35847/ UNITYD-17688	Hardware	In rare cases, an SP rebooted unexpectedly when the SAS controller was unresponsive.

Issue ID	Functional area	Description
UNITYD-41626/ UNITYD-41247	Hardware	The system runs out of memory due to a high load condition, resulting in an unexpected SP reboot.
UNITYD-43895	Hardware	Specific drives running C342 firmware and OE version 4.x.x can be exposed to drive hangs after upgrading to Unity 5.x.x. This caused data to be unavailable, as described in KB article 000182501 and DTA article 000183830. New C360 drive firmware, included in the v17 firmware bundle is included in this 5.1 OE, fixes the issue.
UNITYD-44147/ UNITYD-44650	Hardware	An SP rebooted unexpectedly while restarting management services when running the "svc_restart_service" command.
UNITYD-8207/ UNITYD-31838	Hardware	Log files are not closed correctly during shutdown, resulting in an SP reboot.
1023609 / UNITYD-22419/ UNITYD-20017	Import	In some cases, during the migration initial-copy phrase, a deadlock may occur with enable_quota_tree and caused the CIFS migration session to stop progressing.
1024636 / UNITYD-23060	Import	When creating file/mkdir/symlink operations and simultaneously removing files, a directory, or symlink, the operation will sometimes fail. When checking the newly created file, the file was successfully created, despite the error.
1025577/ 1036093/ UNITYD-23692/ UNITYD-30422/ UNITYD-30098	Import	When creating files with the same names during a migration, I/O performance is degraded.
999144/ UNITYD-7965/ UNITYD-11054/ UNITYD-16767	Import	After cutover of an import session, the session may appear in a "Major failure" state when using the uemcli /import/session -id import_24 show -detail command when the migrated file system has more than 21760 directories. A message similar to the following appears: "Health state = Major failure (20) Health details = The import session failed importing data during initial/incremental copy due to target IO failure."
UNITYD-13884/ UNITYD-36835	Import	File system access was slow following a cutover of an NFS-only or CIFS-only migration.
UNITYD-14646	Import	If a VNX password contained metacharacters (such as ^, \$, +, *, ?, ..  , (, ), {, }, [, ]), the import session could not create a connection to the VNX system.
UNITYD-15261/ UNITYD-28882	Import	During migration, a file import session may fail with the "Major failure" state error; the svc_imt service command shows many failed nodes with a path similar to the following: "/imt20/imt-12345678"
UNITYD-17414	Import	Initial sync during migration didn't complete due to quota modification. Beginning with 5.1, the following operations are no longer allowed at any point during a migration session: - create/delete tree quota - create user quota  The following operations are no longer allowed before the start of the migration session is "ready to cut over": - modify/update tree quota - modify/update user quota - modify quota config - create quota check
UNITYD-17887	Import	A NAS server import session from VNX to Unity failed when the source file system was mounted on the VNX more than a year ago using the asyncmtime option.

Issue ID	Functional area	Description
UNITYD-20239/ UNITYD-30303	Import	An imported CIFS share was not shown by Unisphere or the CLI if there was a case mismatch between the names of the CIFS share and its mount point on VNX.
UNITYD-20258	Import	An unexpected storage processor reboot occurred during a CIFS migration where multiple clients on the Unity system were accessing the same file or directory.
UNITYD-21499/ UNITYD-17704	Import	The OpLocks setting was not migrated when a file system was migrated from VNX to Unity.
UNITYD-30684/ UNITYD-15132	Import	During the initial copy phase of a NAS server migration, if an alternate data stream was deleted and a new file created, the import session failed with a target I/O error.
UNITYD-31070	Import	Unisphere did not discover a CIFS VDM on a VNX2 system when attempting to create an import session.
UNITYD-32857/ UNITYD-37387	Import	Quota limit modifications might fail on the file systems which are migrated to Unity using import from VNX.
UNITYD-33224	Import	If a cancelled import session had a blank "Source Resource" property, attempting to create a new block import session from VNX to Unity failed.
UNITYD-34276/ UNITYD-37576	Import	An unexpected storage processor reboot occurred during a CIFS migration.
UNITYD-34444/ UNITYD-38825	Import	Following cutover of a CIFS import session from VNX to Unity, incremental progress was stuck at 0% if there was an FLR filesystem containing protected files.
UNITYD-37107/ UNITYD-37344	Import	Only 2 SAN Copy sessions for each SP are run concurrently, instead of the maximum number of 16 concurrent sessions.
UNITYD-37166/ UNITYD-39074	Import	Attempting to create an import session with incorrect credentials failed silently, and further attempts, even with correct credentials, then also failed.
UNITYD-37806/ UNITYD-40184	Import	The system log displayed incorrect information during migration.
UNITYD-41046/ UNITYD-42700	Import	For file migration and import, storage processor failover and failback operations became slower than normal.
UNITYD-41287/ UNITYD-41753	Import	A CIFS Import session stopped responding as the detailed state is "Syncing Data Failed" while the state shows "OK" in the Unisphere UI.
UNITYD-41967/ UNITYD-42106	Import	If the connection between VNX and Unity was unstable after cutover of an import session, or a Unity SP rebooted, then files may not have been correctly synchronized between the two systems.
UNITYD-42561/ UNITYD-32672	Import	The system failed to create a new alternate data stream (ADS) after cutover of a NAS (CIFS) import session.
UNITYD-43187/ UNITYD-44530	Import	During the incremental copy phase following cutover of a NAS server migration session, when an item was deleted by a host while the migration engine is processing its parent folder of that item, the migration encountered a non-recoverable error.
UNITYD-44087/ UNITYD-44730	Import	If an NFS export was configured with host access for a netgroup, and only root access was specified for that netgroup (without read-write or read-only access), the import failed when the session is created.
UNITYD-7374	Import	Concurrent read/write operations for the same (large) file were slow after a migration cutover.

Issue ID	Functional area	Description
UNITYD-7494	Import	During a file migration, attempting to open a file from the host resulted in an unexpected storage processor reboot.
UNITYD-7660	Import	When network connectivity problems happened during a CIFS migration, a storage processor unexpectedly rebooted.
UNITYD-8776	Import	After starting a file migration cutover, enabling, disabling, or modifying FTP on the destination NAS server resulted in repeated storage processor reboots.
UNITYD-9548	Import	The VDM import session Start operation fails when the source VNX2 data mover is renamed.
UNITYD-9701	Import	The file system tree quota grace period was set to an invalid value.
UNITYD-25304	Other	The system CPU utilization increased when the svc_dc and svc_arrayconfig service commands were run at the same time in large system configuration.
UNITYD-32882	Other	Unity systems that have FIPS mode enabled could not be added to Unisphere Central. If FIPS mode is enabled after adding the Unity systems to Unisphere Central, Unisphere Central cannot continue to monitor those Unity systems.
UNITYD-35577	Other	Due to Dell website changes after the Unity OE 5.0.0 release, some links from the Unisphere "Support" page and other places within the Unisphere UI were not working correctly. Refer to Knowledge Base article 00018572 for more information.
UNITYD-13555/ UNITYD-46021	Performance Metrics	Following an SP reboot, the performance data for the peer SP may not display on the performance page.
UNITYD-7725	REST API	The embedded REST API Reference Guide for UnityVSA included links that were only relevant for physical Unity systems.
UNITYD-8152/ UNITYD-21751	REST API	When opening an initiator path on the Host Properties screen in Unisphere using a filter and ordering the result by columns, an unexpected error message appeared.
UNITYD-19474	Secure Remote Services	Storage processor reboots due to being out of memory when centralized ESRS fails to respond.
UNITYD-28130	Secure Remote Services	There was a typo "outband" which should have been "outbound" in the Network Check step of the "Configure ESRS" wizard in the Unisphere UI.
982323/ UNITYD-6323/ UNITYD-31151	Security	After resetting the admin and service account passwords to their default values using the NMI button, the admin will be prompted to update their password on the next Unisphere UI login. If they check the option to also update the service password, the password update operation will fail if the peer SP is not available or is in service mode. Specifically, the admin password will be updated, but the service password update will fail.
UNITYD-16221/ UNITYD-26925	Security	Following an upgrade, the system went into service mode.
UNITYD-17449	Security	When an active directory (AD) user account was deleted, attempting to log into the system as an Administrator account failed.
UNITYD-20852	Security	Adding a server to the LDAP configuration caused an unexpected reboot of the primary storage processor.
UNITYD-25288	Security	If the LDAP server is not available when a REST request is received, an unexpected storage processor reboot occurred.
UNITYD-25667	Security	Some STIG rules were not applied after an OE upgrade until all SPs had been rebooted and were in normal mode. This resulted in alerts indicating a failure of some STIG rules.

Issue ID	Functional area	Description
UNITYD-30485/ UNITYD-37046	Security	Enabling or disabling STIG fails if the front-end (management) processing is running on one Storage Processor (SP) and the backend processing is running on the other SP.
UNITYD-31330	Security	The system cannot boot up if the /nbsnas partition is full.
UNITYD-32243	Security	The SSL certificate did not automatically regenerate as it approached its expiration.
UNITYD-33923	Security	Apache would not start if the certificate was imported using the svc_custom_cert service command and had text in front of the PEM encoded certificate. For example, output from "openssl x509 -text" command.
UNITYD-36142/ UNITYD-41413	Security	If an LDAP server was configured to require Administrator privileges to use the SortKey control in an LDAP search, an array running Unity OE 5.0 or later would fail to configure user and group role mapping if the configured bindDN or DistinguishedName was for an account that did not have Administrator privileges.
UNITYD-38612/ UNITYD-39773	Security	An LDAP user was not able to log in using Unisphere or the CLI when the username or password contained a special character like "\$".
UNITYD-39198/ UNITYD-40676	Security	Unity permission handling differs from Windows Server.
UNITYD-40190	Security	If KMIP was enabled with more than two servers, the KMIP server state was incorrectly displayed/reported, even if the KMIP verification process succeeded.
UNITYD-11311	Serviceability	The svc_cifssupport command fails when the special character "&" appears in the password.
UNITYD-22475	Serviceability	When a DIP upgrade process is complete, the finish time is not updated correctly and is earlier than the start time. The Unisphere status indicates that the SPs are rebooting and degraded, but the CLI indicates that the SPs are online and in normal mode.
UNITYD-34027	Serviceability	The subject line of a notification email using Japanese multi-byte characters is not correctly displayed or legible.
UNITYD-34339/ UNITYD-41646	Serviceability	When one SP was replaced and the new SP had an incorrect date and time, NTP time sync and management interface errors may have occurred.
UNITYD-37110/ UNITYD-39363	Serviceability	A new alert [13:1038000d] was added to indicate when there are too many files opened by SMB clients. To enable this alert, an interval parameter must be configured using the CLI.
UNITYD-37906	Serviceability	The "svc_change_hw_config -f" command can cause an IO module fault.
UNITYD-39348/ UNITYD-40313	Serviceability	If snapshot creation failed when the number of read-only file snapshots reached the system limit, no alert notification was triggered. A new alert has been added to notify the user when the maximum checkpoint file systems snapshot limit has been reached. 14:60004a: "The maximum number of checkpoint snapshots has been reached on the system."
UNITYD-40432/ UNITYD-45452	Serviceability	Data collection or configuration backup and restore operations may fail to allocate enough space for an internal operation, resulting in an unexpected SP reboot.
UNITYD-43570/ UNITYD-44686	Serviceability	An authentication failure was caused by the system not being able to connect to any LDAP Servers. This led to the same internal configuration files being opened too many times without being properly closed.

Issue ID	Functional area	Description
UNITYD-7826	Serviceability	In rare cases, SNMP trap alerts were not received.
UNITYD-7847	Serviceability	Unexpected internal debug messages were forwarded to the remote syslog server.
UNITYD-8094	Serviceability	For the "friendly_name" option of the svc_initial_config command, using a dot character or more than 32 characters results in an error.
UNITYD-8705	Serviceability	When an alert notification email title contained non-English characters, the email header did not display properly, and the user needed to manually specify the encoding to UTF-8.
1036063 / UNITYD-30080	Software Install and Upgrade	If an upgrade from 4.0.x to 5.0.0 failed, and one of the SPs has already been upgraded, the Unisphere UI will stop responding.
UNITYD-27835/ UNITYD-40546	Software Install and Upgrade	Resuming a failed upgrade when the primary SP is booting will incorrectly enable the "cancel" option which, when selected, will result in the inability to complete the upgrade.
UNITYD-27966	Software Install and Upgrade	For the Unity 650F model, an upgrade from certain 4.5.1 hotfix versions to 5.0 could fail if the repartition process causes the content in the root partition to go missing.  Hotfix versions that are susceptible to this are the following: <ul style="list-style-type: none"> <li>• 4.5.1.0.6.149</li> <li>• 4.5.1.0.6.152</li> <li>• 4.5.1.0.6.154</li> <li>• 4.5.1.0.6.155</li> <li>• 4.5.1.0.6.156</li> <li>• 4.5.1.0.6.158</li> </ul>
UNITYD-37204/ UNITYD-37852	Software Install and Upgrade	During an upgrade from 4.2 or later, user-generated files may be deleted from the /cores directory.
UNITYD-7723	Software Install and Upgrade	When upgrading from Unity OE 4.4.x or earlier to OE 4.5.0 or later, the cores partition may not have been expanded.
1000736/ UNITYD-8486/ UNITYD-12565	Software Install and Upgrades	After a non-disruptive upgrade from Unity release 4.2.0 or later, the certificates associated with KMIP will not appear in the UI, REST API, or UEMCLI.
1000877/ UNITYD-8531	Software Install and Upgrades	When upgrading to an array with an ongoing VDM local move operation, an upgrade failure message displayed. The VDM local move operation failed as well.
948331/ UNITYD-4723	Software Install and Upgrades	During a non-disruptive upgrade (NDU), an Internal Error or Storage server unavailable message may be returned in response to any CLI commands. The issue is experienced only when two conditions are met: <ol style="list-style-type: none"> <li>1. An upgrade is paused when SPs have different software revisions (for example, during an upgrade when one SP has been upgraded and the other has not).</li> <li>2. The SP rebooted during the upgrade.</li> </ol>
UNITYD-15390	Storage - Block	When restoring a snapshot of a file system, the file system went offline.
UNITYD-16785/ UNITYD-41934	Storage - Block	An internal coding error caused an unexpected storage processor reboot.
UNITYD-18918	Storage - Block	An internal logic error can result in an unexpected storage processor reboot.
UNITYD-20750/ UNITYD-19595	Storage - Block	Attempting to delete a LUN failed due to an internal coding error.
UNITYD-26629/ UNITYD-27568	Storage - Block	In rare cases when a LUN is offline, one or both storage processors rebooted unexpectedly.

Issue ID	Functional area	Description
UNITYD-29643/ UNITYD-25438	Storage - Block	Slow LUN I/O response time eventually caused the SP to reboot.
UNITYD-29772/ UNITYD-11213	Storage - Block	In rare cases if the DAE bus was configured incorrectly, or the SP was replaced, a pool could enter a degraded state from which it could not be recovered.
UNITYD-31428	Storage - Block	One SP rebooted unexpectedly due to an internal timing condition.
UNITYD-34112/ UNITYD-41752	Storage - Block	If LUN0 is not set up as a tape/robot device in the tape library, all tape/robot devices following LUN0 will not be detected by the 2-way NDMP service in the array.
UNITYD-37393/ UNITYD-38122	Storage - Block	In rare cases, if the peer SP rebooted during a LUN trespass operation, that LUN became inaccessible.
UNITYD-37928/ UNITYD-39287	Storage - Block	An attempted OE upgrade failed when there was an ongoing shuffle or copy operation which was triggered by end-of-life (EOL) drive handling or dynamic pool rebalancing.
UNITYD-5852	Storage - Block	In rare cases when a pool was nearly full, LUNs went offline unexpectedly.
UNITYD-8499/ UNITYD-20354	Storage - Block	In rare cases, I/O could not be processed and a storage processor would unexpectedly reboot.
UNITYD-8933	Storage - Block	When one storage processor was rebooted which resulted in a failover or fallback, in rare cases the other storage processor would unexpectedly reboot.
UNITYD-8939/ UNITYD-36933	Storage - Block	The system stopped responding when a drive was removed from a pool while the pool was being expanded. Refer to Knowledge Base article 184456 for more information.
1001765/ UNITYD-8838	Storage - File	SFTP group authorization will not work for CIFS users in an SMB-only NAS server.
1036763 / UNITYD-30456/ UNITYD-30830	Storage - File	LDAP auto-discover configuration may fail to connect to the LDAP server in an unstable network environment and reported a "Disconnected-Failed" error.
997463/ UNITYD-7691/ UNITYD-8166	Storage - File	In cascade mode for asynchronous replication, SMB shares become inaccessible after NAS server failover and fallback, but this is not shown in the UI or CLI.
998960/ 999192/ UNITYD-7894/ UNITYD-7976	Storage - File	The LDAP state was Failed when running the following service command: svc_nas <NAS_SERVER> -ldap LDAP queries were not successful, even though the actual LDAP state was "Connected".
UNITYD-10343	Storage - File	If an NFS server is configured with more than one IP address on the same IP subnet, automount (and other commands) fail to work correctly.
UNITYD-11713/ UNITYD-31004	Storage - File	Attempting to unmount a fragmented file system can cause an unexpected storage processor reboot.
UNITYD-11804/ UNITYD-16821	Storage - File	Attempting to access a snapshot of a deleted file system resulted in the storage processor rebooting several times then entering service mode.
UNITYD-12549	Storage - File	A multiprotocol filesystem that uses Windows access policy does not correctly set Unix permissions.
UNITYD-14825	Storage - File	When a large file is truncated, the request may hang for a long time without response.
UNITYD-15161/ UNITYD-22066	Storage - File	The user cannot reach the defined quota hard limit of an exported CIFS directory.

Issue ID	Functional area	Description
UNITYD-16011	Storage - File	After a NAS server configuration is changed, the next time an SP reboots, a file system unmount timeout error occurs, and the file system goes offline.
UNITYD-16070	Storage - File	The svc_cifssupport command will fail to export the secmap database if the database contains non-ASCII characters.
UNITYD-16518	Storage - File	When a NAS server is unmounted, the owning storage processor may unexpectedly reboot.
UNITYD-16709/ UNITYD-29958	Storage - File	When hosts issue heavy write I/O on thin storage objects and the system cannot handle the I/O on time, the system may reboot unexpectedly.
UNITYD-17048	Storage - File	In rare cases during internal space reallocation, an internal deadlock caused a storage processor reboot.
UNITYD-17103/ UNITYD-36083	Storage - File	Some scanners/printers may fail to connect to the SMB share.
UNITYD-17690	Storage - File	After one SP reboots, the NAS server on that SP takes too long to fail over to the peer SP.
UNITYD-18025	Storage - File	Sometimes the SP rebooted unexpectedly when a NAS server or SP was in the process of failing over.
UNITYD-18345/ UNITYD-17635	Storage - File	During an auto-shrink or repurpose operation on the file system, a timing window issues may cause a write I/O failure.
UNITYD-18459	Storage - File	An NFS client host no longer had root permissions when adding or exporting netgroups.
UNITYD-18486	Storage - File	When header metadata was corrupted, FSCK failed to recover a file system after an unplanned reboot.
UNITYD-18567/ UNITYD-34697	Storage - File	If a large number of files in an FLR-enabled file system are operated on at the same time, such as locking files with a retention date, an unexpected SP reboot may occur.
UNITYD-19555	Storage - File	If a user had more than 16 auxiliary GIDs, NFS server access was denied even if extended Unix credentials had been enabled.
UNITYD-19596	Storage - File	If the management port is down during the initialization of the array, the array may boot into service mode.
UNITYD-19722	Storage - File	The FTS or SFTP ls command may take a long time for a large directory and cause a system reboot.
UNITYD-20869	Storage - File	The SP rebooted unexpectedly when it was generating a quota report.
UNITYD-21042/ UNITYD-40151	Storage - File	Mounting an export with the security type configured as Kerberos through the UDP protocol results in a storage processor reboot.
UNITYD-21229	Storage - File	In some cases, an NFSv3 client cannot delete a file created by an NFSv4 client.
UNITYD-21367/ UNITYD-29470	Storage - File	After deleting a large number of snapshots from a file system, unmounting a file system occasionally causes a timeout.
UNITYD-22053/ UNITYD-39906	Storage - File	An SP may reboot unexpectedly if another mount command is incoming for an already-mounted sparse volume.
UNITYD-22453	Storage - File	Heavy Secure FTP (SFTP) traffic can trigger an unexpected SP reboot.
UNITYD-22629	Storage - File	When LDAP is using Kerberos as its authentication type, if the security negotiation fails, LDAP will result in the SP crashing due to problematic error handling.

Issue ID	Functional area	Description
UNITYD-22636/ UNITYD-23626	Storage - File	When reading a large amount of data in a file system, a shortage of memory sometimes triggered a reboot.
UNITYD-22692/ UNITYD-27248	Storage - File	When multiple clients tried to recall the same NFSv4 delegation concurrently, the storage processor could reboot due to thread timing issue.
UNITYD-23176/ UNITYD-36287	Storage - File	A system reboot occurred due to NAS server failover/failback when SMB was enabled.
UNITYD-23285	Storage - File	In rare cases when a file system is reclaiming free space or during repurpose processing, the SP may reboot unexpectedly.
UNITYD-23967	Storage - File	When opening a file that has two different file attributes from the same client, an NFSv4 deadlock may occur and cause an unmount timeout issue.
UNITYD-24329/ UNITYD-28648	Storage - File	A storage processor rebooted unexpectedly if the cached file system ID was different from the ID of the sparse volume.
UNITYD-24470	Storage - File	When the MMC application is used to create SMB shares, an audit log is not created correctly.
UNITYD-24934/ UNITYD-37961	Storage - File	Creating dense files in CIFS or NFS may lead to the file system running out of space and going offline.
UNITYD-25301	Storage - File	When LDAP is configured, an error occurs when running the svc_cifssupport - checkup command because organizational units are not found.
UNITYD-25509/ UNITYD-31230	Storage - File	A memory leakage issue was caused by large amount of NFSv3 mount failures, which triggered an out of memory issue.
UNITYD-25532/ UNITYD-14715	Storage - File	If creating over 1,000 file systems on a single VDM and one SP reboots, the peer SP may also reboot.
UNITYD-25630/ UNITYD-38796	Storage - File	In the rare case that creating or deleting snapshots frequently may cause an invalid memory access, an unexpected reboot could occur. The Unity system could be recovered after rebooting.
UNITYD-26001/ UNITYD-33397	Storage - File	An internal timing condition might cause multiple I/O threads to deadlock. Writing new data might fail as the system reclaims space and takes snapshots.
UNITYD-26293	Storage - File	In rare cases, the NFS server could double lock the same state and cause an unmount timeout issue.
UNITYD-26674	Storage - File	SMB clients cannot connect to the NAS server during file operations, such as a file rename or a move operation.
UNITYD-26889	Storage - File	Because the user ID in the LDAP cache was not case-sensitive, a query of the group identifier list retrieved user IDs that were similar, but in different cases.
UNITYD-26983/ UNITYD-30299	Storage - File	If the CPU load is high, there is a very small possibility that a reference leak causes the SP to reboot.
UNITYD-28266	Storage - File	After restoring from an NDMP file system which was configured as master user profile (MUP) with only an NFS share, an extra access control list (ACL) may have been added and access was restricted for regular users.
UNITYD-28267/ UNITYD-38341	Storage - File	A file system unmount would occasionally time out when the file system was in a fragmentation condition and there was a lack of free window lifetime.
UNITYD-28827	Storage - File	When SMB encryption is enabled, performance impacts occur.
UNITYD-29353/ UNITYD-31578	Storage - File	An NFS datastore went offline during a clone operation.

Issue ID	Functional area	Description
UNITYD-29606/ UNITYD-40685	Storage - File	Blocked threads may occur when DHSM stub file is being accessed and gets removed from another client at the same time.
UNITYD-29764	Storage - File	LDAP or LDAPS could not be configured from Unisphere if the LDAP domain name contains a dash or a hyphen (-) in their last field (after the last dot).
UNITYD-29911	Storage - File	A storage processor might reboot during a file system unmount operation when replication is configured.
UNITYD-31055/ UNITYD-36505	Storage - File	A storage processor might reboot if ownership of a LUN changes between storage processors due to one processor rebooting or shutting down.
UNITYD-31693	Storage - File	Copying files to Unity from SMB2 becomes very slow when encryption is enabled on a Windows 2012 host.
UNITYD-32593	Storage - File	The NAS server fails to recover if its root file system is out of space.
UNITYD-32683/ UNITYD-37503	Storage - File	The SP rebooted when unmounting configured file systems.
UNITYD-32895	Storage - File	The SP might reboot during an unmount operation on a file system if it has been issued a certain debug command.
UNITYD-33913/ UNITYD-35741	Storage - File	I/O may be blocked on a quota-enabled file system in a rare situation.
UNITYD-33984/ UNITYD-39076	Storage - File	An FTP connection was disrupted during NAS server failover or failback.
UNITYD-34422/ UNITYD-37327	Storage - File	An SP rebooted unexpectedly because the NFSv3 server cannot handle the concurrent Network Lock Manager requests properly.
UNITYD-35011/ UNITYD-38071	Storage - File	Using special characters, such as small Latin characters, in a file name may cause a quota tree create operation to fail.
UNITYD-35266	Storage - File	In rare cases, the NFSv3 server cannot handle the concurrent NLM requests properly, which can cause an unmount timeout or a segment fault.
UNITYD-35582/ UNITYD-33381	Storage - File	An SP rebooted when asynchronous replication failover occurred.
UNITYD-36238/ UNITYD-39269	Storage - File	A file system went offline if auto-shrink was enabled.
UNITYD-36411/ UNITYD-37936	Storage - File	In a file synchronous replication environment, if the owning SP of a VDM is gracefully rebooted, the file systems were unavailable for an extended time period during failover.
UNITYD-36887/ UNITYD-37347	Storage - File	Attempting to set an FLR auto-lock time between 30-59 minutes in the Unisphere UI incorrectly sets the value to 1 hour.
UNITYD-37246/ UNITYD-38083	Storage - File	Attempting to change the NAS server configuration while the CPU is busy may cause an unexpected storage processor reboot.
UNITYD-37921/ UNITYD-41448	Storage - File	The user can access files from an NFS share, but not from a CIFS share.
UNITYD-38033/ UNITYD-42774	Storage - File	When synchronizing a NAS server LDAP configuration to the destination NAS server, the change of bind_dn on the source NAS server is not synchronized.
UNITYD-38456/ UNITYD-38534	Storage - File	An NFS share with a "/" in the name could not be mounted.
UNITYD-38502/ UNITYD-39580	Storage - File	When writing large files, the filesystem went offline unexpectedly.

Issue ID	Functional area	Description
UNITYD-38580/ UNITYD-39290	Storage - File	Attempting to access a file on a CIFS share from a Windows client unexpectedly failed.
UNITYD-39334/ UNITYD-42157	Storage - File	After a file is moved to another directory on a CIFS share, it also remains visible in the original directory.
UNITYD-39642/ UNITYD-41764	Storage - File	An unexpected storage processor reboot occurred during a filesystem shrink.
UNITYD-39722/ UNITYD-41032	Storage - File	Due to an internal coding error, the NAS servers a storage processor became inaccessible.
UNITYD-39977/ UNITYD-41168	Storage - File	An NFS v4.1 file system fails to mount on a proxy NAS server.
UNITYD-40244/ UNITYD-42666	Storage - File	Network issues between Unity and the Domain Controller caused the system to reboot.
UNITYD-40418/ UNITYD-45408	Storage - File	CIFS outages occurred after a password update with the key distribution center if RC4 (Rivest Cipher 4) support was disabled through group policy objects.
UNITYD-41095/ UNITYD-41640	Storage - File	In some cases, the process of virus checking blocked the fallback of the NAS server.
UNITYD-41127/ UNITYD-22917	Storage - File	If the computer name and NetBIOS name do not match when joining Active Directory (AD), a later CIFS share mount will fail. There are two scenarios that can cause a mismatch between the computer name and the NetBIOS name:  <ol style="list-style-type: none"> <li>1. The NetBIOS name is changed intentionally.</li> <li>2. If the computer name is longer than 15 characters, the NetBIOS name is automatically truncated to 15 characters.</li> </ol>
UNITYD-41185/ UNITYD-44554	Storage - File	After deleting one or more filesystems or their snapshots, a storage processor may unexpectedly reboot.
UNITYD-41355/ UNITYD-41821	Storage - File	After a replication session was deleted, the source LUN or consistency group could not be deleted.
UNITYD-4149/ UNITYD-10276	Storage - File	File system calculated used space does not match actual used space.
UNITYD-42174/ UNITYD-42453	Storage - File	In rare cases, when a heavy load of I/O and a shrink operation are both running, I/O stops responding because no space is available, and a storage processor reboots.
UNITYD-43059/ UNITYD-44287	Storage - File	Following a firmware update, an HP scanner failed to connect to an SMB share on Unity.
UNITYD-43793/ UNITYD-44653	Storage - File	The svc_cifssupport -Join -ou command does not allow commas when specifying multiple organizational unit names.
UNITYD-43862	Storage - File	In order to take the new value for NFS v3dtpref in the svc_nas service command, the NFSv3 client needs to remount the export.
UNITYD-44735/ UNITYD-45208	Storage - File	If the network is not stable and a virus check is in progress, unmounting a file system could cause an unexpected storage processor reboot.
UNITYD-44760/ UNITYD-45151	Storage - File	An internal coding error caused an unexpected storage processor reboot while communicating with the Domain controller.
UNITYD-45335/ UNITYD-45548	Storage - File	Using the svc_nas command to look up a group could cause an unexpected storage processor reboot.
UNITYD-4576	Storage - File	Unexpected storage processor reboots and DNS timeout errors occurred.

Issue ID	Functional area	Description
UNITYD-46077/ UNITYD-46160	Storage - File	When the quota hard and/or soft limits are changed, no error is reported, but the previous values continue to be used by the system.
UNITYD-5889	Storage - File	A CIFS outage occurred if there was an incorrect configuration for the security and system log files.
UNITYD-5908	Storage - File	In rare case, the SP may panic due to a timing issue on a multiprotocol file system.
UNITYD-5945	Storage - File	The 4 second timeout for DNS queries is insufficient in some environments, resulting in unnecessary alerts.
UNITYD-6239	Storage - File	For Linux clients, a secure NFS mount fails when using the default Kerberos keytab configuration file.
UNITYD-6480	Storage - File	Incorrect handling of network traffic resulted in an unexpected storage processor reboot.
UNITYD-6779	Storage - File	An ABE-enabled share could not be added to a file system.
UNITYD-7081	Storage - File	LDAP netgroups do not work when there is a hyphen ("-") character in the domain field of the netgroup.
UNITYD-7208	Storage - File	During asynchronous replication, a CIFS share was created during one update, then it was deleted and another one created with the same name during a later update. The new share was not visible in either Unisphere or the CLI on the destination.
UNITYD-7410	Storage - File	When more than 10 interfaces are created for a NAS server, that server cannot join a domain.
UNITYD-7565/ UNITYD-38466	Storage - File	An unexpected single-SP reboot occurred in a continuous availability-enabled SMB environment.
UNITYD-7570	Storage - File	When creating a snapshot for a LUN or file system, the create operation may fail, causing a future snap delete operation to stop responding.
UNITYD-7734	Storage - File	An unexpected storage processor reboot occurred when the connection between the NAS server and the Kerberos Domain Controller was reset.
UNITYD-7813/ UNITYD-20481	Storage - File	The svc_cbr -b command failed with a database verification error.
UNITYD-8633	Storage - File	If an SMB share has more than 2147483648 (0x80000000) files/directories, attempting to delete a file or directory may cause the file system to go offline.
UNITYD-8830	Storage - File	If the CEPP configuration on the source storage system is incorrect, repeated DNS alerts are generated on the destination storage system.
UNITYD-8838/ UNITYD-33629	Storage - File	SFTP group authorization does not work for CIFS user in SMB only NAS server.
UNITYD-8858/ UNITYD-40191	Storage - File	On a system with a high utilization of snapshots, an expected storage processor reboot can occur.
UNITYD-9025	Storage - File	On a CIFS share, when trying to list the snapshots using the .ckpt hidden folder, no snapshots were found.
UNITYD-9108/ UNITYD-12955	Storage - File	When similarly named files and/or directories were used in a directory tree, the file system went offline unexpectedly.
UNITYD-9127/ UNITYD-10590	Storage - File	The system indicated one SP rebooted during an upgrade, even if the upgrade operation was successful.

Issue ID	Functional area	Description
UNITYD-9393	Storage - File	When unmounting a NAS server, if the NAS LDAP server is either reconfigured or updated during that time, the unmount timer times out and the system reboots.
UNITYD-9622	Storage - File	A storage processor rebooted unexpectedly when a Windows host accessed a vDisk.
UNITYD-9636	Storage - File	The FTP audit log is missing issues when set to a non-default path.
UNITYD-9811	Storage - File	An unexpected SP reboot may occur when intensively performing IO operations on the same directory.
1002455 / UNITYD-9122/ UNITYD-8095	Storage - File	More than 256 items could still be selected in the NFS Share Host Selected Access dialog.
995434/ UNITYD-7426/ UNITYD-7762	Storage - File	If a NAS server destination site became the source site, the "modify DNS" operation for this NAS server failed.
999664/ UNITYD-8107	Storage - File	When the FLR file system was migrated using CIFS migration, after cutover, if the FLR Toolkit or Windows were not used to lock a file and if the last access time ('atime') for that file is later than the max RP (current time + max retention period), the file lock may fail with an "Access Denied" or "No Permission" error.
UNITYD-15717	System Management	Setting up SSH key-based authentication from a client system to Unity through a service account failed.
UNITYD-19337/ UNITYD-44568	System Management	In releases prior to 5.1.0, if a job failed and the error message that followed contained parameters, a job clean-up failed. The jobs accumulated to a number that could have caused a database connection failure in other management operations. The SP rebooted unexpectedly.
UNITYD-24326/ UNITYD-33424	System Management	A move session that is in progress cannot be cancelled.
UNITYD-26549	System Management	When the system encounters an out of memory issue, the SP rebooted due to some special signals were not handled correctly.
UNITYD-30807	System Management	If a LUN modification job gets stuck in the running state, the system drive may fill up and triggers an alert such as "System drive management service on SPA has less than 5% of its drive space left, which can impact system functionality."
UNITYD-38416/ UNITYD-45922	System Management	If a drive is removed from a pool or becomes faulted, the pool displays a degraded state, even if the drive is replaced.
UNITYD-41041/ UNITYD-34043	Unisphere CLI	The Unisphere CLI client was not supported on VMware ESXi hosts running ESXi 6.7 and above prior to Unity OE 5.1. (Refer to the Changed Features section for more detail).
UNITYD-29010/ UNITYD-36350	Unisphere CLI (UEMCLI)	The "/net/nas/cava" CLI command may display an incorrect CAVA status.
UNITYD-29028	Unisphere CLI (UEMCLI)	Particular CLI commands, such as /stor/prov/fs/cifs, could not be run when LDAP was using a global catalog.
UNITYD-31658	Unisphere CLI (UEMCLI)	The CLI /remote/host -removeLuns command failed when removing LUNs from a RecoverPoint host.
UNITYD-38050/ UNITYD-38485	Unisphere CLI (UEMCLI)	VMware NFS export information was not shown on the replication destination side using the uemcli -show command.
UNITYD-7318	Unisphere CLI (UEMCLI)	There is no confirmation message when setting host access for the following objects:

Issue ID	Functional area	Description
		<ul style="list-style-type: none"> <li>/stor/prov/luns/group</li> <li>/stor/prov/luns/lun</li> <li>/stor/prov/vmware/vmfs</li> <li>/stor/prov/vmware/nfs</li> <li>/stor/prov/vmware/vvolds</li> </ul>
UNITYD-7969/ UNITYD-8436	Unisphere CLI (UEMCLI)	The CLI did not show an error message when a user tried to create a VMFS datastore through using an unsupported ESXi version (6.0 or earlier).
UNITYD-8410/ UNITYD-8373	Unisphere CLI (UEMCLI)	Running the "uemcli /sys/task/job -completed delete" command caused Unisphere to become inaccessible for up to three minutes.
1001250 UNITYD-8660	Unisphere UI	After creating a NAS server replication session from the NAS server properties dialog Replication tab, the newly created session is not displayed on the NAS server properties dialog Replication tab until after clicking the "Refresh" button.
1038083 / UNITYD-31207/ UNITYD-18120	Unisphere UI	On the Unisphere UI Block resource page, when a block resource (LUN, VMFS datastore, or CG) is only participating in a sync replication session, the column Replication Types incorrectly displays "remote remote" instead of "remote none".
UNITYD-12993/ UNITYD-21123	Unisphere UI	Unisphere stops responding when listing the snapshot schedule of file systems on the replication destination.
UNITYD-31958	Unisphere UI	Modifying the HLU ID in the Unisphere UI did not remove other hosts for the LUN.
UNITYD-34550	Unisphere UI	The description of threshold alert 14:520093 did not clearly state that there is a problem with the system other than reduced performance.
UNITYD-34869	Unisphere UI	If the German language is selected in Unisphere, you cannot create a file system whose size field contains a fractional part, for example, 100,2.
UNITYD-36143/ UNITYD-36351	Unisphere UI	On the LUNs tab of the Host properties page in Unisphere, the table could not be sorted by the Hosts column.
UNITYD-44203	Unisphere UI	The Storage Administrator role is no longer able to modify the proxy server under Settings→Support Configuration→Proxy Server.
UNITYD-8473	Unisphere UI	On the NFS share page in the Unisphere UI, the hosts column displayed an incorrect number of the hosts if those hosts were given access to the share with the "By entering a comma separated list of hosts" option.
UNITYD-9001	Unisphere UI	In rare cases, the UI view of the host access list for exports are not matching between the source and destination since the destination export list is not correct. This is a UI display issue and does not impact replication functionality.
UNITYD-16101	UnityVSA	Service logs were lost when a single-SP UnityVSA was migrated from an HDD backend datastore to an SSD backend datastore (or vice versa).
UNITYD-22877	UnityVSA	A newly added virtual disk did not show up in Unisphere if an existing pool contained a special character in its description.
966903 UNITYD-5559	Virtualization	For an NFS datastore, even if esxMountProtocol for the resource created on the source is NFSv4, the destination will still be NFSv3 and Site Recovery Manager (SRM) recovery failed.
996157/ UNITYD-7500/ UNITYD-7717	Virtualization	If vMotion operations are in progress, a user may see alert messages on the corresponding vVol datastore in vCenter.
UNITYD-24576	Virtualization	The svc_dc service command generated a data collection archive with a compressed log that contained many "^@" characters.
UNITYD-26571	Virtualization	The system drive became full if too many vVols were deleted at the same time.

Issue ID	Functional area	Description
UNITYD-29734	Virtualization	When many VMs on a vVol datastore were removed, deleting the vVol datastore in Unisphere would take a long time.
UNITYD-42310/ UNITYD-42709	Virtualization	Unity could not add a VMware vCenter server if it did not use the default port 443.
UNITYD-6389	Virtualization	A single storage processor reboot occurred when a Windows host client performed a file copy.
UNITYD-7508	Virtualization	When ESXi host initiators were not logged in, warning messages were displayed for the initiators in Unisphere.
UNITYD-8381	Virtualization	When many VMs on vVol datastores started a routine snapshot operation at the same time, some VMs went offline.

## Known issues

Table 5. Known issues in product version

Issue ID	Functional area	Description	Workaround/Solution
869166	Common Event Enabler	When a host is configured to use CAVA for the CEPA server, there is a host IO error on SMB protocol with the following message in the logs: "Too many access from CAVA server xx.xx.xx.xx without the EMC VirusChecking privilege:>>> User credential (xx.xx.xx.xx address of the host)."	Do not use CAVA/CEPA NAS servers for regular host IO.
UNITYD-46552	Connectivity - Networks	When a NAS server networking base is on a hierarchy fail-safe network (FSN) which has Link Aggregation (LACP) bonds as child ports, and the MTU of the FSN is changed, the child LACP bonds may be degraded or inaccessible.	Reboot the affected SP.
UNITYD-42194	Connectivity - Networks	In rare cases, if a link aggregation or fail-safe network (FSN) link is composed of two or more ports on a 4-port 1-GbE BaseT I/O module, changing the MTU speed for the link aggregation or FSN may cause an SP reboot.	First, modify the MTU speeds of the ports on the 4-port 1-GbE BaseT I/O module to the expected values. Then, modify the MTU speed of the link aggregation or FSN.
932347/ UNITYD-5837	Connectivity - Networks	Immediately upon creation, the Fail-Safe Network (FSN) appears in a "Link Down" state. An alert similar to the following is displayed. "System XXX has experienced one or more problems that have had a minor impact" With a detailed description of "The system has experienced one or more minor failures. Check related alerts and fix the underlying problems."	If all Ethernet ports participating in this FSN port, either directly or using Link Aggregation, are connected properly, the FSN port will automatically recover from "Link Down" state within 30 seconds or less. It is also possible that FSN port recovery goes through "Degraded" state, for approximately 60 seconds after the FSN creation. This alert can be ignored, unless the FSN port fails

Issue ID	Functional area	Description	Workaround/Solution
			to enter the "Link Up" and "Health OK" state approximately 60 seconds after creation.
UNITYD-46251	Data collection	When performing a minimum data collection, the collection result may be named as "minimum_spa(b)_***.tar", indicating it is for one SP only, instead of "minimum_unity_***.tar".	Collect a minimum profile data collection on the two SPs separately. Normal data collection may work correctly after 1000 seconds.
UNITYD-46362	Data mobility	When the system in a busy status, there is a rare chance that the local move operation returns an error message such as "Failed to clean up NAS server replication service".	Wait some time and retry the NAS server local move operation.
UNITYD-45838	Data mobility	When verifying a remote system, if one local replication interface on the current Unity system can successfully ping a remote replication interface on another remote Unity system, but the ping fails the other way around, the verification will fail with error code 0x65002db and the corresponding error message will display:  "Failed to retrieve connectable replication interfaces between the local system and the remote system. Verify that there is at least one connectable replication interface between the local SP and the remote SP by running the 'uemcli /net/util ping -srcif \{0} -addr \{1}' command. Then retry the original command again."  The \{0} and \{1} values will display the actual interface ID value and IP address value respectively, but do not.	Go to the remote Unity system and verify the same remote system, then the same error message will be correctly displayed with \{0} and \{1} values properly populated.
UNITYD-46339	Data protection	There is a very small chance an asynchronous replication session gets stuck at 99%, and the session cannot be paused.	Reboot the owner SP of the asynchronous replication destination LUN. Refer to Knowledge Base article 000187383 for more information.
UNITYD-46300	Data protection	Rarely, a replication session reports a 'Non-recoverable error'.	Pause and resume the replication session.
UNITYD-45110	Data protection	When the system is configured with a larger number of replications (over 1000) and both SPs are rebooted simultaneously, one storage processor may experience an additional reboot after system comes back up.	No manual operation needed. The system will automatically recover after the reboot.
UNITYD-45005	Data protection	When failing back or resuming a file synchronous replication session after an unplanned failover, if an asynchronous replication is also configured on the NAS server, this triggers an unexpected storage processor reboot.	Before failing back or resuming the synchronous replication session, pause the asynchronous replication on the NAS server.  After the synchronous replication session is failed back, resume the asynchronous replication session.
UNITYD-36280	Data protection	The snapshot schedule function failed to create a scheduled snapshot of a	None.

Issue ID	Functional area	Description	Workaround/Solution
		synchronous replication-protected file system during the session failback operation.	
UNITYD-31870	Data protection	The snapshot schedule timer reset (restarted from 0) after the Unity management service was rebooted, or a new resource was assigned to it. This leads to this schedule being applied to existing resources.	None.
UNITYD-29841	Data protection	An NFS share became inaccessible after the NAS server failed over or the system was rebooted.	Access the standby snapshot .ckpt directory under its primary file system to trigger a full mount to restore accessibility.
908047/ UNITYD-2740	Data protection	The time of last sync of the replication session becomes "N/A" and the delta data is not transferred from source side to destination side.	Pause and resume that replication session.
906249/ UNITYD-2788	Data protection	A request to create a replication session for VMware NFS datastore which resides in a multiprotocol NAS server will fail until the first synchronization of the associated NAS server replication session.	Synchronize the NAS server replication session at least once prior to creating a replication session for a VMware NFS datastore residing on the multiprotocol NAS server.
943734/ UNITYD-4469	Data protection	The "Last sync time" of a replication session is updated, but "transfer remaining size" is not zero.	Wait about 2 minutes, then view the replication session details again.
958911/ UNITYD-5303	Data protection	When resuming a paused synchronous replication session, the operational status of the session remains "Syncing".	Reboot the SP where the source resource is located.
967435/ UNITYD-5593	Data protection	When testing the replication preserve feature, rebooting both SPs of site A could generate a core dump. However, this core dump is harmless.	Rebooting the system again will perform a system auto-recovery.
981344/ UNITYD-6289	Data protection	<p>There are three Arrays: A, B, C. The following scenario occurs:</p> <ol style="list-style-type: none"> <li>1. Site A-B set up synchronous replication sessions.</li> <li>2. Site A-C set up asynchronous replication sessions.</li> <li>3. Shut down site A and do a cabinet failover on B.</li> <li>4. Preserve all asynchronous replication sessions immediately on B.</li> </ol> <p>Some asynchronous replication sessions are not preserved. (No Error message in Site B. The asynchronous replication sessions which are not preserved will be "Lost Communication" in Site C.)</p>	<ol style="list-style-type: none"> <li>1. To prevent this issue, wait two minutes after the failover, then run the preserve operation.</li> <li>2. If this issue occurs, rerun the preserve operation.</li> </ol>
949119 / UNITYD-4769/ UNITYD-5112	Data protection	If an NDMP restore restores a file which exceeds a quota hard limit, the file will be restored as owned by the root user.	The administrator should manually increase the quota limitation for the user and correct the file ownership.

Issue ID	Functional area	Description	Workaround/Solution
821501	Data protection	When a user runs a token-based incremental backup using Networker, a full backup is performed instead.	Add ATTEMPT_TBB=Y to Application Information while configuring the NDMP client, or change the value in the NDMP client properties.
875485	Data protection	The following error could be returned when multiple snap diff REST API requests were sent in parallel. <pre> { "error": { "created": "2016-12-05T17:34:36.533Z", "errorCode": 131149826, "httpStatusCode": 503, "messages": [ { "en-US": "The system is busy. Try again later. If the problem persists, search for the error code on the support website or product forums, or contact your service provider, if available. (Error Code: 0x7d13002)" } ] } } </pre>	Reduce the number of parallel operations and try again.
917298	Data protection	NAS_A or NAS_B and related user VDMs failed to recover due to error occurs in the system VDM NAS_A or NAS_B, as seen in the Unisphere CLI or UI. After following the recommended resolution steps in the health details, the NAS servers are recovered and go into a ready state. However, the replication sessions on these system VDMs and related user VDMs will no longer be visible.	After recovery, reboot the primary SP. After the SP reboot, system NAS servers will be recovered successfully, allowing replication sessions to be recovered.
17379	Hardware	In some Unity XT 480/F, 680/F, and 880/F model DPEs, the Non-maskable Interrupt (NMI) (hard reset) button is misaligned.	Press the NMI button at an angle. Refer to KB 487443 for more information.
UNITYD-46441	Import	A VNX VDM configured with a standalone DFS is not supported by a CIFS-only migration.	None.
UNITYD-46182	Import	The share umask is not migrated for a multiprotocol NAS server import from VNX2 to Unity, and the default share umask 022 is used.	Manually change the umask from the UI or CLI after the import session is committed.
UNITYD-45718	Import	When a multiprotocol migration session is in "Ready to Commit" state, deleting a directory from a NFS host failed with error "Directory not empty", while the directory is actually empty.	Perform one of the following workarounds:  1. Use the "svc_imt <NAS_server_name> -r   --resync-nodes <id> --node <ino>" service command to re-sync the directory. Then it can be deleted successfully.  2. Commit the migration session.
UNITYD-45678	Import	One of the following may occur:  1. A CIFS or multiprotocol migration session is stuck at initial copy stage after both SPs are recovered from a power outage or rebooted at the same time.  2. A CIFS or multiprotocol migration session	Reboot the VDM owner SP on the VNX source system.

Issue ID	Functional area	Description	Workaround/Solution
		<p>reports a "Major failure" during the incremental copy stage, after both SPs are recovered from a power outage or rebooted at the same time.</p> <p>3. Canceling a CIFS or multiprotocol migration session failed at turning down the destination interface task, after both SPs are recovered from a power outage or rebooted at the same time.</p>	
UNITYD-31523	Import	<p>When using a "UNIX" access policy, if a domain user belongs to "domain admin" or the "administrators" group, files created by the user will use "administrators" as owner, which is expected behavior for Windows.</p> <p>If using an NFS client to list these files, the file owner is the user.</p> <p>After migration, the owner of the files from the CIFS client will be the "administrator", and the owner of files from NFS client will be "2151678452". This may cause some files created by the CIFS client before migration cut over to be inaccessible by the NFS client after migration cutting over.</p>	Change the owner to the correct user.
938977/ UNITYD-4327	Import	When creating a remote system for file import, when the SANCopy connection is created and the remote system is verified prior to starting a block import, the SANCopy host is not created, so the user cannot create a block import session.	Delete and recreate the remote system. After re-creating the remote system, the SANCopy host can be created successfully.
965654/ UNITYD-5488	Import	After cutover, the file import session does not change to "Ready to Commit". In the summary report, one of the file system migration sessions is not visible.	Use the following command to restart the NAS server:  svc_nas <nas server name> -restart
969495	Import	If a pool out-of-space event occurs on a destination Unity array after a file migration session cutover from VNX to Unity, it is possible that some folders and files are lost on the Unity array. Although the migration session can resume and complete after expanding the destination pool, no warning or error message will occur mentioning that data may be missing.	<ol style="list-style-type: none"> <li>1. Always plan to have enough space on the destination pool before starting a migration. Extra buffer space may be needed if there might be continuous large I/O during the migration.</li> <li>2. If a pool out-of-space event does occur after cutover, cancel the migration session, and start again by creating a new session.</li> </ol>
UNITYD-45639	Notifications and Alerts	<p>In the pop-up dialog for some Unisphere health alerts, the "More" link may point to the Welcome page of the Online Help, or the "Search Knowledge Base" link may launch the Support site search with '0' as the search string keyword.</p> <p>In these cases, there is no dedicated online help topic or knowledge base article for the alert.</p>	Follow the instructions for alert resolution provided in the alert details in Unisphere.

Issue ID	Functional area	Description	Workaround/Solution
952772/ UNITYD-5971	Notifications and Alerts	A misleading alert "Unable to detect Ethernet port or link aggregation for the network interface N/A configured on NAS server %1." displays during NAS server deletion, even though it completes successfully.	Ignore the erroneous alert.
999112	Notifications and Alerts	The health description for Ethernet port is incorrect; it shows that this port was not in used, but in fact it was used for some file interfaces.	Bring up the ethernet port and then the health status and description will be updated.
UNITYD-29557	REST API	Normally a REST API user authentication failure returns a 401 or 403 error code. However, if a session ticket is reused after the associated user account is deleted from the system, the request will instead fail with a '500' error.	Clear the browser or REST client cache to remove the stale session ticket.
UNITYD-45762	Secure Remote Services	The integrated ESRS configuration could not be switched from "Outbound Only" to "Outbound and Inbound" connectivity on an ESRS-enabled system under some conditions from the ESRS readiness check wizard or the ESRS configuration wizard.	Relaunch the ESRS readiness check wizard or ESRS configuration wizard, keep the Integrated ESRS connectivity option as the current type, then proceed to the end of the wizard.
UNITYD-45882	Serviceability	When running the svc_reinit service command on a STIG-enabled system which should reset the system to factory settings with STIG disabled, the STIG banner is still displayed in Unisphere.	Run the "svc_banner -d" service command to remove the banner after system reinitialization.
908930	Serviceability	Even when snap auto delete is disabled on the storage pool, the storage pool may still show a degraded state indicating it could not reach low water mark.	Use the CLI to increase the pool space low water mark in order to bring the pool back to normal state. For example:  uemcli -u xxx -p xxx / stor/config/pool -id pool_97 set - snapPoolFullLWM 40
UNITYD-44958	Software Install and Upgrade	During an upgrade from Unity OE 5.0.x to 5.1.x on Unity XT 480/480F, 680/680F, 880/880F systems, due to the firmware contents change between 5.0 and 5.1, in the first reboot cycle, a firmware upgrade was started.  During this short time window, if an unexpected firmware issue occurred, this leads to the firmware becoming corrupted and it cannot be recovered by a system reboot or power cycle. The SP goes into service mode after the firmware upgrade fails.	None. Refer to Knowledge Base article 000185732 for more information.
855767/ UNITYD-1261	Storage - File	When you customize a list of CIFS Shares Access Control Entries (ACEs) by either making a REST API call, editing the share permission using the Windows MMC console, or by using the SMI-S API,	Ignore the value isACEEnabled=false in this case. When ACEs are properly set, they are always enabled, despite this value in the REST API attribute. A REST API request for list of ACEs

Issue ID	Functional area	Description	Workaround/Solution
		isACEEnabled might erroneously indicate false.	will return the correct list of custom ACEs for the share, and those ACEs will all apply.  Alternatively, force a reload of the management model for the share by changing the share description, or for the whole system by restarting the management software.
942923/ UNITYD-7663	Storage - File	If you have set different user quotas on a non-multiprotocol SMB file system that you are changing to a multiprotocol file system, the Remapping File Owner process will not preserve the specific user quotas you had set previously. If the user quotas are all the same or (have default value), this issue does not occur.	After remapping users to their Unix user counterpart, re-issue the specific User Quota settings.
959208/ UNITYD-5257	Storage - File	If an LDAP user is configured before Directory Services (LDAP) is configured, and a local user account with the same name exists, the array will report that the LDAP user already exists, instead of 'not found in the LDAP database'.	Configure LDAP and reboot the SP. Then, add the LDAP user (role) again. This will be allowed even if a local user with the same account name exists.
974999	Storage - File	When opening or deleting a locked file from an FLR-enabled file system on a Windows client, sometimes there are several additional log events generated in the FLR activity log.	This issue will not happen on NFS client, and it just generates some additional log events, which can be seen by administrator. Ignore these log events.
975192	Storage - File	When automatic file locking is enabled on an FLR-enabled file system, the file on the SMB share can be locked automatically. This means that the file state is locked by the FLR Toolkit. However, the file mode property is not READ-ONLY, even though it is locked.	Use the FLR Toolkit to determine whether the file is automatically locked or not on the SMB client. It may not be read-only, even if it shows as in READ-ONLY mode.
1035681/ UNITYD-29836	Storage - File	If the LDAP configuration on a destination NAS server is different from the source NAS server, such as the following scenarios, the LDAP password will be lost and the new source NAS server cannot connect to the LDAP server after failover.  1. DST NAS overrides the IP. 2. SRC NAS changes the configuration, such as the authentication type, server IP, etc., but did not sync to the DST NAS server.	Re-enter the password in the new source NAS server after failover.
896002	System management	If a Unity system uses NTP for synchronization, when the time is adjusted to an earlier time from the current time, real-time system metrics do not appear, and the system generates "Query ID not found (0x7d1400c)" errors.	In Unisphere, navigate to another page and then return to the metrics page, or log out of Unisphere and log in again.
973979	System management	When you create a file system named "\", the SMB share page in the GUI does not display the proper description for the shares associated with file system named "\" and the UEMCLI does not display the proper	Do not name file system "\".

Issue ID	Functional area	Description	Workaround/Solution
		values for the shares associated with file system named \"\".	
998582/ UNITYD-7835	Unisphere UI	When there are many storage resources configured on the array, (for example, 6000 LUNs and 2000 file systems), filtering the LUNs using a keyword for the LUN name in the Unisphere UI may take over five minutes, and then show an error message if there are multiple matches (1500+ matches).	Reload the Unisphere UI, then choose a more specific keyword that matches fewer LUNs, or do not use keyword filters on large configurations.
UNITYD-46074	Unisphere UI	On the Unisphere UI File Systems properties dialog Snapshots tab, the "Last Refresh Time" attribute is not available.	Use the CLI to obtain the "Last Refresh Time" attribute value for the file system snapshot.
UNITYD-46064	Unisphere UI	If the size of source thin file system is greater than the destination pool size, it will show the following warning message "The selected pool doesn't have enough free space to create destination File System" when changing the recommended destination pool for the file system to the smaller destination pool.	Close the view and reopen it.
921511/ UNITYD-3397	Unisphere UI	Unisphere returns the following message: "Your security session has expired. You will be redirected to the login page."	Confirm that the Unisphere login account in use is still active has Storage Admin privileges. Be sure to close the active browser session before logging with another account.
946287/ UNITYD-4572	Unisphere UI	When logging into Unisphere as one user and then trying to log in as another user without restarting the browser, some login information is cached by the browser and this will result in a failure.	Restart the browser to log in successfully.
968227/ UNITYD-5636	Unisphere UI	In rare circumstances, when a user creates a snapshot by using the Unisphere UI, an unexpected error may occur. However, the actual snapshot creation completed successfully. The newly created snapshot will display immediately.  The unexpected error occurs because the REST API failed to fetch the snapshot ID.	Ignore the error if the newly created snapshot appears.
849914	Unisphere UI	The Job Details page in Unisphere does not display the name of a LUN group after it failed to be deleted.	There is no workaround for this issue.
907158	Unisphere UI	After upgrading from a system running Unity OE 4.0 or 4.1, the Unisphere UI did not allow the NAS server SP owner to be changed	Clear browser cookies to and refresh Unisphere.
995936 UNITYD-7474	Unisphere UI	Incorrect drive health information may display in the Unisphere UI if switching a SAS cable from an onboard SAS port to backend SLIC port. FBE show these drives as "OK" while Unisphere shows these drives as faulted.  For example, if switching the SAS cable from SAS port 0 to backend SLIC port 0, then DAE 0_0 becomes DAE 2_0, and the related disks change from Disk 0_0_X to Disk	<ol style="list-style-type: none"> <li>1. Identify the primary SP in Unisphere under Service → Service tasks.</li> <li>2. Reboot the primary SP using the svc_shutdown -r service command.</li> </ol>

Issue ID	Functional area	Description	Workaround/Solution
		2_O_X . Unisphere will display these drives as faulted.	
895052	UnityVSA	SSH is disabled after a single-Storage Processor UnityVSA upgrade.	After performing a Unity OE upgrade, re-enable SSH using Unisphere or the following Unisphere service command: svc_ssh -e.
945773	UnityVSA	The following error displays on the UnityVSA:  "Error : <CPU of the physical server hosting UnityVSA does not meet the CPU instruction set minimum requirement (SSE4.2 or greater) for upgrading to this release or later.> Action: Migrate the UnityVSA to a server with a CPU that supports SSE4.2 or greater, or deploy a new UnityVSA on a CPU that supports SSE4.2 or greater. Then retry the upgrade."	When upgrading the UnityVSA to Unity 4.3 or deploying a new 4.3 UnityVSA on an older server that does not support CPU instruction set SSE4.2, migrate the VSA offline to another VMware ESXi server or cluster.  If the upgrade fails on the ESXi cluster and that cluster contains any servers that do not support CPU instruction set SSE4.2, modify the Enhanced vMotion Capability (EVC) settings within the VMware cluster to disallow vMotion from the newer servers that support SSE4.2 to the older servers.  Remove the older servers from their cluster. Power cycle the UnityVSA and retry the upgrade.
933016	UnityVSA	The system reports an alert that the network heartbeat is questionable on the peer when the local physical network cable is broken.  This occurs when:  1. UnityVSA SPA runs in the physical server #1, UnityVSA SPB runs in the physical server #2.  2. The physical network cable #1 connects the uplink #1 of server #1 and the physical switch.  3. The physical network cable #2 connects the uplink #2 of server #2 and the physical switch.  4. The physical network cable #3 connects the uplink #1 of server #1 and the physical switch.  5. The physical network cable #4 connects the uplink #2 of server #2 and the physical switch.  6. When one of the physical network cables #1 or #2 is broken or pulled out, the system reports the alert. But if you pull out cable #1, the alert would be reported on SPB. If you pull out the cable #2, the alert would be reported on SPA.  7. When one of the physical network cables #3 or #4 is broken or pulled out, the system would report alert. But if you pull out cable #3, the alert would be reported on SPB. If	None.

Issue ID	Functional area	Description	Workaround/Solution
		<p>you pull out the cable #4, the alert would be reported on SPA.</p> <p>This happens because the UnityVSA vNIC #1 is connected to the port group #1 and NIC #2 to the port group #2. Also, by the VMware teaming function, port group #1 has been bound to uplink #1 and port group #2 to uplink #2. It is expected that after pulling out cable #1 (the physical uplink #1 is down), the traffic going through NIC #1, port group #1, uplink #1 should be cut off. However, because of a VMware limitation, the teaming only controls the egress, but not the ingress. The traffic sent from NIC #1 is truly cut off, but the traffic from the peer's port group #1 still comes through the physical uplink #2 and is routed to the port group #1.</p>	
801368 / 802226	UnityVSA	<p>The storage system restarts unexpectedly with a monitor timeout or software watchdog timeout. This occurs when the system and user data share the same datastores (physical disks) and the system is overloaded with aggressive I/O workloads.</p> <p>For example, a system can become overloaded when the workload includes heavy sequential write block I/O mixed with random file read and write I/O.</p>	<p>It is recommended that user storage be on a separate data store than the system data store where UnityVSA is deployed.</p> <p>If that is not possible, ensure that there are no more than four virtual disks on the system data store. If user data is allocated on the system data store, it can be migrated to a different data store. See the vSphere documentation for details. For UnityVSA deployment considerations, see the <i>UnityVSA Installation Guide</i>.</p>
809371	UnityVSA	<p>When configuring a NAS server for replication from a Unity system to a UnityVSA system, the user can choose a storage processor on the destination, although a single-SP UnityVSA has only one storage processor (SP A). Choosing SP B and continuing to create the session results in an error.</p>	<p>Choose SP A when replicating to a single-SP UnityVSA.</p>
940223 / 945505 / UNITYD-4468	Virtualization	<p>A VM migration (using vMotion) to or from NFS3-NFS4 datastore sporadically fails when an SP is rebooted during migration.</p>	<p>Manually restart the vMotion migration when the SP is back online.</p>
811020	Virtualization	<p>When there are no datastores enabled for access to a target ESXi host during replication, the storage system iSCSI targets are not registered on the target ESXi server. When the Storage Replication Adapter (SRA) requests that the storage system enable Snaps-Only access to the target ESXi server, the operation succeeds, but rescan does not discover the snapshots.</p>	<p>Manually configure iSCSI target discovery of the storage systems iSCSI addresses on the ESXi hosts.</p>
987324	Virtualization	<p>With multiple VM clones from the same source VM, part of clone could fail. vCenter Server reports events similar to: Unable to access file xxx.vmdk since it is locked.</p>	<p>To work around the issue in ESXi 5.0 or later, increase the number of times to retry opening the disk:</p> <ol style="list-style-type: none"> <li>1. Log in to the ESXi host with root credentials.</li> </ol>

Issue ID	Functional area	Description	Workaround/Solution
			<ol style="list-style-type: none"> <li>2. Open the /etc/vmware/config file using a text editor.</li> <li>3. Add this line to the end of the file: diskLib.openRetries=xx [Where xx depends on the number of virtual machines being deployed in the vApp. VMware recommends a value between 20 and 50.]</li> <li>4. Save and close the file.</li> <li>5. Reboot the host for the changes to take effect.</li> </ol>
988933	Virtualization	When using Dell EMC Virtual Storage Integrator (VSI), VMware datastore creation fails on Unity All Flash and UnityVSA systems.	<p>Create the datastore in Unity Unisphere rather than the VSI. Refer to the following Knowledgebase articles for details:</p> <ul style="list-style-type: none"> <li>• UnityVSA: KB# 529580</li> <li>• Unity All Flash: KB# 529700</li> </ul>
989789	Virtualization	When a VM migration in VMware vSphere is in progress, a planned failover of the underlying synchronous replication file system on Unity at the same time may cause VM migration failure on vSphere.	Do not perform a synchronous replication planned failover on Unity while migrating a VM on VMware vSphere at the same time. If the error occurs, wait until planned failover completes and retry the VM migration in VMware vSphere.

## Limitations

Learn about limitations in Unity.

**Table 6. Limitations in product version**

Limitation	First affected release	Limitation lifted
After a failover, the UNIX and Windows names may not display immediately and could take up to 24 hours to display. You can manually refresh the username for a UID or wait until the next system refresh to see the correct names.	5.1.0.0.5.394	Still in effect.
When replicating VMware VMFS datastores, they are treated like Consistency Groups in that they are subject to the same replication limits as CGs (for example, the maximum number of replication sessions for CGs is 64, which also applies to VMFS datastores).	All versions	Still in effect.
Using VSI 7.4 or VSI 8.0 to create a VMFS Datastore on a Unity all Flash array or UnityVSA will fail. It is recommended to always provision VMFS datastores and vVols through the Unity Unisphere UI or CLI.	All versions	Still in effect.
VMware vSphere 6.5 is not supported on the UnityVSA 4.1.x.	4.1.0.8940590	4.2.0.9392909

Limitation	First affected release	Limitation lifted
When setting I/O limit policies, observe the following restrictions: <ul style="list-style-type: none"> <li>For a shared KBPS I/O limit policy, set the limit to be at least 2048 KBPS.</li> <li>For a non-shared KBPS I/O limit policy, set the limit to be at least 1024 KBPS.</li> <li>The IOPS I/O limit policy's minimum is 100 IOPS.</li> </ul>	4.0.0.7329527	Still in effect.
The current Unity vVol implementation has not yet been fully certified for use with VMware Horizon View. Although it may work, it is recommended that you do not deploy VDI desktops using Unity vVol datastores. Support and issue resolution will not be available for this integration.	4.0.0.7329527	Still in effect.

## Environment and system requirements

In order for your Unity Family system to function properly, ensure that your environment meets these minimal requirements.

### Support matrix

Refer to the Unity Support Matrix on the support website for compatibility and interoperability information.

### Screen size

The minimum resolution for using the Unisphere GUI is 1024 x 768 pixels. Smaller screens may be able to display the GUI in full screen mode.

### ESRS VE (Centralized) and DHCP

Dynamic IP addresses (DHCP) cannot be used for any EMC Secure Remote Services Virtual Edition (ESRS VE or Centralized ESRS) component (ESRS VE servers, Policy Manager, or managed devices). You must assign static IP addresses to those devices that you plan to have managed by ESRS VE.

Unity Hybrid and All Flash support both the Centralized and Integrated versions of ESRS VE. UnityVSA supports the Centralized version of ESRS VE only. More information about the ESRS VE is available in the *EMC Unity Secure Remote Services Requirements and Configuration* document.

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**Note:** If the system automatically assigns a dynamic IP address to any ESRS VE component, you must change it to a static IP address. Also, leases for the IP addresses that Dell EMC devices use cannot be set to expire.

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## Software media, organization, and files

Learn about software media, organization, and files required for the Unity Family.

### Required update

It is recommended that you keep your Unity Family system up to date by upgrading to the latest software version at your earliest opportunity.

### Problems downloading this release

If you have difficulty downloading this release using Microsoft Internet Explorer version 7, try using a newer version of Microsoft Internet Explorer, Google Chrome, or Mozilla Firefox version 4 or greater.

# Obtain and install product licenses

Before you begin:

- Register your product. This provides you instant access to easy-to-use tools to plan, install, maintain, and service your product. It also entitles you to software updates, installation tools, and more.
- Ensure that you have the following:
  - License authorization code (LAC)—The LAC is sent by email from Dell EMC.
  - The system serial number (physical systems) or the system UUID (virtual systems).

Before you can create storage, you must install product and feature licenses on your system.

## Initial Configuration

1. On the **Unisphere Licenses** page of the Initial Configuration wizard, select **Get License Online**.
2. Follow the instructions on the licensing website and download the license file locally.  
**Note:** Do not change the name of the license file.
3. Select **Install License** and use **Chose File** to browse to the license file you downloaded locally.
4. Select **Open**.  
The **Results** page will confirm the license was successfully installed.

## Obtaining and installing additional licenses after initial configuration

1. In Unisphere, select the **Settings** icon, and then select **Software and Licenses > License Information**.
2. Select a product license from the list to display a description of that license.
3. To obtain a product license, select **Get License Online**.
  - a. Use the link provided in the LAC email or access the product page on the support website, and download the license file locally.  
**Note:** Do not change the name of the license file.
  - b. Transfer the license file to a computer that has access to the storage system, or connect the computer you used to obtain the license file to the same subnet of the storage system.
4. To upload a product license, select **Install License**.
  - a. Review the Software License and Maintenance Agreement and select **Accept license agreement**.
  - b. Locate the license file, select it, and select **Open** to install the license file on the storage system.

The license file is installed on the storage system.

For sites with restricted internet access, or for more information on obtaining your license, go to the Unity Info Hub at [dell.com/unitydocs](http://dell.com/unitydocs).

## Firmware

The following firmware variants are included with this release:

- If a lower revision is installed, the firmware is automatically upgraded to the revision contained in this version.
- If a higher revision is running, the firmware is not downgraded to the revision contained in this version.

Enclosure Type	Firmware
3U, 15-drive DAE	2.38.10
2U, 25-drive DAE	2.38.10
3U, 80-drive DAE	2.38.10
DPE expander	2.38.10

Platform Type	BIOS	BMC Firmware	Post
2U, 25-drive DPE	60.02	24.50	34.50
2U, 12-drive DPE	60.02	24.50	34.50
2U, 25-drive DPE Unity XT 480/F, 680/F, and 880/F	66.07	25.06	52.02

## Unique identifier for UnityVSA

For UnityVSA, use the License Activation Key instead of the serial number or UUID as the unique identifier for setting up EMC Secure Remote Services (ESRS) and for obtaining customer support (professional editions).

## Installing and enabling language packs

To install a language pack:

1. Review the considerations included in the [Software Media, Organization, and Files](#) section.
2. In Unisphere, select the **Settings** icon, and then select **Software and Licenses > Language Packs**.
3. Select **Obtain Language Pack Online** and enter your Support credentials when prompted.
4. Download the appropriate language pack file to your local system.
5. Return to Unisphere and select **Install Language Pack** to launch the Install Language Pack wizard.
6. Select **Choose File** and then select the language pack you want to upload.
7. Select **Next** to begin the installation of the language pack onto your system.
8. Select **Finish**.
9. Once language package installation completes, view the results and close.

To enable a language pack on your system:

1. In Unisphere, select the **My Account** icon and select **Preferences**.
2. Select the preferred language from the **Language** list.
3. Select **OK**.

## Documentation

### Unity Family Info Hubs

Additional relevant documentation can be obtained from the Unity Family Info Hub. Visit the Info Hub for your Unity Family product to access helpful utilities, videos, and other guides and <http://www.dell.com/unitydocs>.

## Where to get help

Dell Technologies maintains support pages for all products at [www.dell.com/support](http://www.dell.com/support).

The product support pages provide important information about the products. This information includes product and user documentation, knowledge base articles, drivers, and other software installation packages, downloads, advisories, knowledge base articles and more.

A valid support contract and registration may be required to access all the information available on the product support sites.

## Notes, cautions, and warnings

**NOTE:** A NOTE indicates important information that helps you make better use of your product.

**CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

**WARNING:** A WARNING indicates potential for property damage, personal injury, or death.