DELLTechnologies

Release Notes
for the Dell Unity™ Family

These release notes contain supplemental information about this Unity release.
Current Release Version: 5.2.1.0.5.013
Release Type: Minor (MI)

Topics:

Revision history

This section provides a description of document changes.

Table 1. **Revision history**

Document revision	Date	Description
A02	July 2022	Release 5.2.1.0.5.013
A01	June 2022	Updates to New and Changed Features sections for system hardware
A00	April 2022	Initial release, 5.2.0.0.5.173

Product description

Dell 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 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 XT Family consists of 4 Hybrid Flash configurations (380/480/680/880) and 4 All Flash configurations (380F/480F/680F/880F) models.

- VxBlock (converged): Unity storage options are also available in Dell 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 Unity, UnityVSA, and Unity-based VxBlock deployment options 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 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 380/F, 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.

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.

New features

No new features in this release.

Changed features

Users running either software version 5.1.2.0.5.004 or 5.1.2.0.5.007 who have the Continuous Availability (CA) feature of SMB enabled should disable it prior to upgrading to 5.1.3.0.5.003 or later. See DTA (Dell Technical Advisory) 000195555 for more information. The feature can be re-enabled after the upgrade.

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

Functional area	Feature description	Summary of benefits
Hardware	New drive firmware support	Drive firmware version 20 is included in this software OE bundle and can be installed at the end of the Software Upgrade wizard. For more information on the impacted drives and models for this firmware, refer to Knowledgebase article 000021322.
Security	US Federal Core Certifications for USGv6/IPv6 Logo Ready	Unity systems are now fully compliant with US Federal Core Certifications for USGv6/IPv6 Logo Ready.
Unisphere CLI (UEMCLI)	Retired UEMCLI Client Solaris versions. Other UEMCLI Client versions (for Windows, Linux, Redhat, SUSE, and VMware) will continue to be released with the OE bundle. Previous UEMCLI Solaris drivers can still be downloaded.	Starting with Unity OE version 5.2.1 (and later), the following UEMCLI Clients are being retired: • Dell Unity Unisphere UEM CLI (Solaris Sparc 32-bit) • Dell Unity Unisphere UEM CLI (Solaris x86 32-bit)

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 3. **Resolved issues in product version**

Issue ID	Functional area	Description
UNITYD-56278/ UNITYD-56263	Connectivity - Networks	The front-end network throttling feature was added in Unity OE 5.1 to avoid an unexpected reboot of a single SP because of an out of memory situation. To mitigate the out of memory situation, this feature temporarily slows down the incoming I/O traffic to reduce the pressure on new memory usage. By default, this feature was Enabled in Unity OE 5.1 and OE 5.2.0. In Unity OE 5.2.1, this feature has been temporarily Disabled by default due to performance problems

Issue ID	Functional area	Description
		reported by several customers. The throttle values will be re-evaluated before potentially re-enabling it in a future release. Contact Dell Support if you need to enable this feature after performing an NDU to OE 5.2.1.
UNITYD-56258/ UNITYD-56061	Data mobility	If you change any property other than the connection type in the Unisphere UI or the UEMCLI on a synchronous or mixed remote system running Unity OE 5.2.0, the connection type is incorrectly changed to asynchronous. This change can result in failed remote system and replication operations.
UNITYD-55526/ UNITYD-55011	Hardware	A Storage Processor may unexpectedly reboot if it has been running a long time: approximately 340 days for a system running Unity OE 5.0, or 260 days for a system running Unity OE 5.1/5.2.0.
UNITYD-56274/ UNITYD-53094	Storage - File	When frequently running 2-way NDMP operations, an SP may unexpectedly reboot.
UNITYD-56149/ UNITYD-54286	Storage - File	An unexpected SP reboot occurs during a period of heavy I/O when internal cache resources are exhausted.
UNITYD-56092/ UNITYD-55883	Storage - File	When running OE 5.2.0, customers using Tree Quotas could experience an unexpected SP reboot or a file system may go offline due to an internal timing issue.
UNITYD-55735/ UNITYD-55667	Storage - File	On a system that is running OE 5.2.0, an SMB user that belongs to more than 400 groups from different domains or more than 2000 groups from the user's domain cannot access shares by using FQDN.
UNITYD-55616/ UNITYD-55432	Storage - File	When using SFTP on a system running Unity OE 5.2.0, if the SSH client is either using a version earlier than 2.0 or if the network is not stable, an SP may unexpectedly reboot.

Known issues

Table 4. **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-50686	Connectivity - Hosts	LED light may not be On when inserting either a 32G or 16G SFP into a 4-port 32Gb Fibre Channel I/O module slot.	Remove and reinsert the SFP card.
UNITYD-56290	Connectivity - Networks	An interoperability issue introduced in Unity OE 5.2.0 related to SCSI-3 Persistent Reservation is currently under investigation. Configuring Veritas Info Scale IO Fencing operations in multipath environments on Unity arrays that are running Unity OE 5.2.0 fails.	See Knowledgebase article 000201773 for more details and updates.
UNITYD-55879/ UNITYD-56227	Connectivity - Networks	The NAS Server cannot ping the hostname through the IPv6 interface in Unisphere UI	Use the ping6 command on the SP where the NAS Server is located. For

Issue ID	Functional area	Description	Workaround/Solution
		NAS/Network/Ping/Trace page, even though the hostname has an IPv6 address.	example: ping6 <hostname> -I <NAS ipv6 address>.
UNITYD-52587	Connectivity - Networks	During an SP reboot, mgmt_dev may not have an IP address configured correctly, causing the operation to fail with error code 0x100000a and the following message: "The system was unable to connect to the storage server."	Reboot the primary SP.
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 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-55786/ UNITYD-56194	Data mobility	Migration session stops when importing a node fails.	When a node has failed, remove the node from the migration session. When the migration session enters the "Commit" state, select to Commit the session. Then manually copy the failed node to the Unity side.
UNITYD-54629	Data mobility	Only the SMB1 protocol is supported for a Unified VNX (VNX1 or VNX2) storage system as the source storage system in a VDM file migration.	If either the SMB2 or SMB3 protocol is used on the VNX source system, the protocol must be changed to SMB1 before performing the migration.
UNITYD-54862	Data mobility	If you use an atypical advanced replication configuration, such as using asynchronous replication inbound and synchronous replication outbound, the synchronous replication destination NAS server	Before performing the planned failover asynchronous replication session, pause the synchronous replication session first. After the planned failover asynchronous

Issue ID	Functional area	Description	Workaround/Solution
		sometimes becomes faulted during a planned failover of asynchronous replication.	replication session completes, resume the synchronous replication session.
UNITYD-51634	Data mobility	In MetroSync when the MetroSync Manager is configured, if the MetroSync Manager detects that the source pool is offline, it initiates an unplanned failover. Even if the unplanned failover succeeds, the source site may not be cleaned up correctly, and the subsequent failback may fail.	Delete the synchronous session and recreate it, but note that a full synchronization will occur.
UNITYD-51288	Data mobility	When deleting a synchronous replication of a NAS server, if the peer SP is rebooting gracefully, the delete operation may fail.	Retry to delete the synchronous replication operation.
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-46339	Data mobility	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-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 -srclf \{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. |
943734/ UNITYD-4469	Data mobility	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.
906249/ UNITYD-2788	Data mobility	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.
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	No manual operation needed. The system will automatically recover after the reboot.

Issue ID	Functional area	Description	Workaround/Solution
		storage processor may experience an additional reboot after system comes back up.	
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 synchronous replication-protected file system during the session failback operation.	None.
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.
981344/ UNITYD-6289	Data protection	There are three Arrays: A, B, C. The following scenario occurs: 1. Site A-B set up synchronous replication sessions. 2. Site A-C set up asynchronous replication sessions. 3. Shut down site A and do a cabinet failover on B. 4. Preserve all asynchronous replication sessions immediately on B. 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.)	1. To prevent this issue, wait two minutes after the failover, then run the preserve operation. 2. If this issue occurs, rerun the preserve operation.
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.
821501	Data protection	When a user runs a token-based incremental backup using Networker, a full backup is performed instead.	Add ATTEMPT_TBB=Yto 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. "'{ "error": { "created": "2016-12-05T17:34:36.533Z",	Reduce the number of parallel operations and try again.

Issue ID	Functional area	Description	Workaround/Solution
		"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)" }] } } }"	
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.
UNITYD-52402/ UNITYD-53032	Hardware	Unity OE versions do not support a Fibre Channel direct attach of either the Emulex LPe 31/3200x or LPe 35/3600x host HBAs running their version 12.8 or later firmware.	For a Fibre Channel direct attach, use either Emulex HBAs that use firmware version 12.8 or earlier, or use Qlogic HBAs.
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-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 reports a "Major failure" during the incremental copy stage, after both SPs are recovered from a power outage or rebooted at the same time. 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.	Reboot the VDM owner SP on the VNX source system.
UNITYD-31523	Import	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. If using an NFS client to list these files, the file owner is the user. After migration, the owner of the files from the CIFS client will be the "administrator",	Change the owner to the correct user.

Issue ID	Functional area	Description	Workaround/Solution
		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.	
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.
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.	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. 2. If a pool out-of-space event does occur after cutover, cancel the migration session, and start again by creating a new session.
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-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.
908930	Storage - Block	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:

Issue ID	Functional area	Description	Workaround/Solution
			uemcli -u xxx -p xxx / stor/config/pool –id pool_97 set -snapPoolFullLWM 40
UNITYD-54738	Storage - File	When the "svc_topstats" command is used with the "fs.qtreeFile" statistic to monitor multiple file system quotas, an exception error may occur.	If an exception error occurs, avoid monitoring the "quotaTree" statistics. Remove "quotaTree" from any monitored statistics.
UNITYD-54408	Storage - File	Running a user quota command with the "-async" parameter when a file system has millions of files, a performance issue may occur.	Reboot the SP.
UNITYD-54287	Storage - File	Using Unisphere to manually shrink a file system to the Used Size causes the operation to stop responding.	Cancel the shrink operation from Unisphere.
UNITYD-54010	Storage - File	VDM failover happens when a file system auto-extend operation begins due to a file system running out of space, which results in an SP reboot and I/O write failure.	Reboot the SP in which the extend operation was last run to recover the system.
UNITYD-53835	Storage - File	A trusted subdomain user cannot access an SMB share when using an incorrect "\\nas_server\share /user:subDomain\user Password" command.	Use the "\\nas_server\share /user:user@subDomain Password" instead.
128333021/ UNITYD-52094/ UNITYD-53457	Storage - File	After upgrading to Unity OE version 5.1.x, the audit log path and size are reset to the defaults.	Change the "cifs userDefinedLogFiles" parameter to 0 and restart the VDM. Refer to Knowledge Base article 000193985 for more information.
UNITYD-51284	Storage - File	When creating many asynchronous replication sessions concurrently by using automatic scripts, the sessions may partially fail.	Delete any failed replication sessions from the destination system, and reconfigure them one at a time.
119078191 / UNITYD-48904/ UNITYD-53251	Storage - File	When adding a new interface to a NAS server, if the preferred interface has an "auto" setting, the preferred interface is not switched to the newly added one if it has same gateway availability and number of routes as the currently active preferred interface.	Either make a specific interface to be the preferred interface, or make sure the DNS servers added with the new interface are active before adding it.
20199488/ UNITYD-45132/ UNITYD-53297	Storage - File	During specific circumstances when a file system becomes full and is made Read-Only, the file cannot be deleted as expected. However, the return code from Unity system does not adhere to the RFC. There is no loss of functionality.	None.
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, isACEEnabled might erroneously indicate false.	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 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

Issue ID	Functional area	Description	Workaround/Solution
			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.
UNITYD-52201	System management	When trying to create or expand a traditional pool with the following conditions, the listed drive count available for a tier might be 0 due to an internal timeout error (>10mins): 1. RAID5 with maximum capacity option. 2. The disk group for this tier has 500+ free drives.	Use one of the following options to fix the issue: • Use the CLI to expand the pool. • Use either Unisphere or the CLI to create a dynamic pool that contains some of the drives in the large disk group, reducing the free drive count in the disk group to be less than 500. Then use Unisphere to expand the original traditional pool.
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	In Unisphere, navigate to another page and then return to the metrics

Issue ID	Functional area	Description	Workaround/Solution
		system generates "Query ID not found (0x7d1400c)" errors.	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 values for the shares associated with file system named \"\'.	Do not name file system \"\".
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.

Issue ID	Functional area	Description	Workaround/Solution
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 2_0_X . Unisphere will display these drives as faulted.	1. Identify the primary SP in Unisphere under Service → Service tasks. 2. Reboot the primary SP using the svc_shutdown -r service command.
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	None.

Issue ID	Functional area	Description	Workaround/Solution
		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 you pull out the cable #4, the alert would be reported on SPA. 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.	
801368 / 802226	UnityVSA	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. 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.	It is recommended that user storage be on a separate data store than the system data store where UnityVSA is deployed. 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 *UnityVSA Installation Guide*.
809371	UnityVSA	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.	Choose SP A when replicating to a single-SP UnityVSA.
UNITYD-44726	Virtualization	If a VMware traditional datastore is extended which does not have any host access, then host access cannot be added later.	Delete the VMware datastore and recreate it. A datastore that has never had any host access is supposed to be a clean datastore with no data.
940223 / 945505 / UNITYD-4468	Virtualization	A VM migration (using vMotion) to or from NFS3-NFS4 datastore sporadically fails when an SP is rebooted during migration.	Manually restart the vMotion migration when the SP is back online.

Issue ID	Functional area	Description	Workaround/Solution
811020	Virtualization	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.	Manually configure iSCSI target discovery of the storage systems iSCSI addresses on the ESXi hosts.
987324	Virtualization	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.	To work around the issue in ESXi 5.0 or later, increase the number of times to retry opening the disk: 1. Log in to the ESXi host with root credentials. 2. Open the /etc/vmware/config file using a text editor. 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.] 4. Save and close the file. 5. Reboot the host for the changes to take effect.
988933	Virtualization	When using Dell Virtual Storage Integrator (VSI), VMware datastore creation fails on Unity All Flash and UnityVSA systems.	Create the datastore in Unity Unisphere rather than the VSI. Refer to the following Knowledgebase articles for details: • UnityVSA: KB# 529580 • Unity All Flash: KB# 529700
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 5. **Limitations in product version**

Limitation	First affected release	Limitation lifted
In a replication cascading topology from an asynchronous replication session to a synchronous replication session, the synchronous replication destination data integration is not integrated.	5.2.0.0.5.173	Still in effect.
Moving drives between Unity x80/F models and non-x80/F models is not supported. This ensures that the drives are qualified and configured for the correct platform and will provide optimal performance and longevity.	5.1.0.0.5.394	Still in effect.

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.
A large thick file system (TB level) takes time to provision, even after the operation returns a success message in Unisphere. While the provisioning operation is in progress, many operations, such as asynchronous replication creation, cannot be run and will fail due to timing out. Operating on a newly-created thick file system after a certain amount of time is recommended. Run a query to check the status of the operation.	All versions	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
When setting I/O limit policies, observe the following restrictions: • For a shared KBPS I/O limit policy, set the limit to be at least 2048 KBPS. • For a non-shared KBPS I/O limit policy, set the limit to be at least 1024 KBPS. • The IOPS I/O limit policy's minimum is 100 IOPS.	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 *Dell Unity Secure Remote Services Requirements and Configuration* document.

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 devices use cannot be set to expire.

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.

    - 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.

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**.

Firmware

Drive firmware bundle version 20 is included in this software OE bundle. Once the software OE installation has completed, a prompt appears if updates are available. However, it is recommended to upgrade to the latest drive firmware prior to a software upgrade to help mitigate any non-disruptive upgrade issues. For a list of all drive firmware and their respective drives, refer to Knowledge Base article 000021322 (previously article 000490700).

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

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 https://www.dell.com/unitydocs.

Where to get help

The Dell Technologies Support site (https://www.dell.com/support) contains important information about products and services including drivers, installation packages, product documentation, knowledge base articles, and advisories.

A valid support contract and account might be required to access all the available information about a specific Dell Technologies product or service.

Advisories

For information on an individual technical or security advisory, go to the Online Support website and search by using the DSA number or "Dell Security Advisories" as the keyword.

You can also select an option to receive alerts for Dell Technical Advisories (DTAs) and Dell Security Advisories (DSAs) to stay informed of critical issues and prevent potential impact to your environment. Go to your account settings and preferences in Online Support, type the name of an individual product, click to select it from the list, and then click **Add Alert**. For the individual product or **All Dell Products**, enable the **DTA's** and/or **DSA's** toggle.

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.