



Zadara Storage Cloud

16.05-SP2 Release Notes

November 2017

Revision 6

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1. Scope

This document describes the Zadara Storage Cloud release notes.

Section 3 describes new functionality and list of changes per release.

Section 4 lists limitations and known issues

2. Revision History

Date	Revision	Released packages	Description
May 2017	1	VPSA image: 16.05-SP2-593-337 SN package: 16.05-SP2-593-337	16.05-SP2 GA
June 2017	2	VPSA image: 16.05-SP2-593-356 SN package: 16.05-SP2-593-356	Maintenance release
August 2017	3	VPSA image: 16.05-SP2-593-384 SN package: 16.05-SP2-593-384	Maintenance release
September 2017	4	VPSA image: 16.05-SP2-593-389 SN package: 16.05-SP2-593-389	Maintenance release
October 2017	5	VPSA image: 16.05-SP2-593-397 SN package: 16.05-SP2-593-397	Maintenance release
November 2017	6	VPSA image: 16.05-SP2-593-401 SN package: 16.05-SP2-593-401	Maintenance release

3. New Functionality and change list

Release 16.05-SP2 is an enhancement to 16.05 (on top of SP1) with some security, and usability improvements, as well as fixes to issues that were found in 16.05-SP1.

What's New in Zadara Storage Cloud

Renaming

Zadara products were renamed:

- VPSA is now VPSA® Storage Array
- ZIOS is now VPSA® Object Storage

However in the GUI, API, and system messages the old name are still in use.

10TB Drives

Zadara Clouds now support 10TB SATA drives for high capacity workloads

Command Center Dual Factor Authentication

For better security, Cloud admins can force policy of Dual Factor Authentication (#4202).

On first user login, a dialog message appear explaining the user that DF is enabled on her account. User will have to confirm that she has the required application (like authenticator).

Once confirmed, user will get the QR code for scanning.

On each login from now on user will be requested to enter the DF key after the regular login

Command Center Active Directory Authentication

For centralized access control Command Center can be configured to authenticate users against Active Directory. (#5072)

Command Center Improvements

Many improvements to command center monitoring and management capabilities. See Major Changes section below.

User Guides

Updated versions of **VPSA Storage Array User Guide** and **VPSA Object Storage User Guide** are available <http://guides.zadara.com> in HTML format. Users can also download a PDF file.

What's New in VPSA Storage Array

Active Directory Authentication

Improvements in Active directory integration to support complex forest of trusted domains

Backup to Object Storage

Added support for built-in Backup to Google Cloud Storage (#9935)

Servers

IBM AIX was added to the interoperability list of supported servers for FC block volumes. Note that **Veritas Dynamic Multi-Pathing (DMP)** is required on the AIX server.

IO Engines Specification

With the introduction of 10TB drives, we had to set a limit on the VPSA total raw capacity. The following table describes the IO Engines:

Engine	Previous Name	vCPU	Memory	Max #drives	Max Raw Capacity
200	Baby	2	6 GB	5	24 TB
400	Basic	4	12 GB	10	60TB
600	Boost	6	20 GB	20	100 TB
800	Blast	8	28 GB	30	150 TB
1000	Blazing	10	36 GB	40	200 TB
1200		12	52 GB	60	240 TB
1600		16	68 GB	80	300 TB
2400		24	100 GB	80	360 TB

Major Changes & Bug Fixes in 16.05 – SP2 Build 401

#	Component	Description
11396	VPSA Storage Array	New Samba version that address several important security vulnerabilities: https://www.samba.org/samba/security/CVE-2017-15275.html https://www.samba.org/samba/security/CVE-2017-14746.html

Major Changes & Bug Fixes in 16.05 – SP2 Build 398

#	Component	Description
11297	Provisioning Portal	Fix an exception triggered when user is submitting multiple change engine requests followed by delete VPSA request
11343	Storage Node	Fix to prevent failures of Intel 1.6 TB SSDs

Major Changes & Bug Fixes in 16.05 – SP2 Build 397

#	Component	Description
10764	VPSA Storage Array	Fix a rare Samba panic which may happen when accessing the same file from multiple clients.
10845	Provisioning Portal	Chinese language is now presented correctly upon language change
11085 10061 11223	VPSA Storage Array Storage Node	New Qlogic HBA Firmware (8.07.70) and Driver (8.07.00.24.Trunk-SCST.17.15-k-01) solve number of instability issues with Fiber Channel attached hosts

Major Changes & Bug Fixes in 16.05 – SP2 Build 389

#	Component	Description
10348	VPSA Storage Array	Fixed an issue in XFS that might cause metadata corruption on file shares.
10750	Cloud Controller Command Center	At VPSA creation the new VPSA's domain name is registered using DNSimple API V2 (V1 will be discontinued on October 1st, 2017)
10836	Storage Node	Intel RAID Controller RS3SC008 Card is now supported
10938	Storage Node	Open Radius OpenOTP server port 1812 on ccmaster/ccslave SN
10949	Cloud Controller Command Center	Fix an issue in which DNSimple registration of wrong VPSA domain returns success

Major Changes & Bug Fixes in 16.05 – SP2 Build 384

#	Component	Description
10714	VPSA Storage Array	Fixed an issue in which all Quota types (user, group and project) inherit the same default value from user default quota.
10733	Provisioning Portal	Fixed extended cache submit hidden button
10736	VPSA Storage Array	Slowness in opening a SMB session against AD was resolved
10747	VPSA Storage Array	Fix an issue where a Pool may go Partial after VC failover due to memory shortage
10755	VPSA Storage Array	Allow setting SMB "store dos attributes" parameter on SMB share
10788	VPSA Storage Array	Fixed a very rare race condition that might lead to metadata corruption when VC crashes during VC failover
10812	VPSA Storage Array	Fixed an issue in which connection to S3 bucket in regions that support only V4 authentication fails

Major Changes & Bug Fixes in 16.05 – SP2 Build 356

#	Component	Description
9216	Cloud Controller	Allow large SSD drives to be used as cache drives by changing their capacity. By default, any SSD drive with capacity greater than 800GB that is designated as cache will be trimmed to 800GB.
9568	Command Center	new API to obtain Command Center access logs
10386	VPSA Storage Array	Fixed a file system problem when a connection is forced closed
10407	Command Center	Block the option to reboot CCMaster via Command Center
10425	VPSA Object Storage	Fix storage policy set price issue
10438	VPSA Storage Array	Fixed an issue in which Volume Migration may get stuck if the Volume is under remote mirror
10440	Command Center	Added an option in Command Center to move a drive to offline
10446	VPSA Storage Array	Improved Fiber Channel VPSA failover time
10451	VPSA Storage Array	Added a warning event log when Setup Volume is slow
10453	Command Center	Fixed an issue in which Access Log viewer returns server error after user deletion
10454	Command Center	User deletion is now logged in Access Log
10458	Command Center	VPSA filter by name is now case-sensitive
10469	VPSA Storage Array	Fixed file system error when trying to open a locked file

10471	VPSA Storage Array	Fixed an issue in which pool name editable field is invisible when pool cache is on
10475	Command Center	Fixed an issue in which re-importing a deleted AD user keeps the previous role
10477	VPSA Storage Array	Fixed a rare issue in which GUI application fails to send messages to Event Log
10505	VPSA Storage Array	Custom option in the "Connect Remote Object Storage" is now available
10518	VPSA Storage Array	Fixed a regression in 16.05-SP2 where Raid-6 Integrity Check is running too frequently
10533	VPSA Storage Array	Fixed a regression issue in which deletion of hardlink on an NFS share zeroes the original file

Major Changes & Bug Fixes in 16.05 – SP2

#	Component	Description
4086	Command Center	Added an option to manage VLANs
4739	Command Center	Absent drives are marked in red color in Drives dashboard
5041	Command Center	New operation to move Virtual Controllers to another SN
5172	Command Center	Multiple VLANs per tenant are now supported
7422	Command Center	Disabled drives are marked in gray color in Drives dashboard
8967	VPSA Storage Array Command Center VPSA Object Storage Provisioning Portal	For security reasons TLSv1.0 is no longer supported
9086	VPSA Storage Array	Improved NAS quota management
9414	VPSA Object Storage	New design for Object Storage dashboard
9444	VPSA Storage Array	Fix for a problem of volume disconnecting and reconnecting every 10 seconds due to Mellanox NIC driver issue
9472	Command Center	Improved Pools display with current and historical capacity consumption
9488	VPSA Storage Array	An issue of recently added drives are not visible in the VPSA GUI, was resolved
9490	VPSA Storage Array	Solved an issue of 1 hour gap of snapshot timestamp when converting UTC to local time
9503	Provisioning Portal	Solved an issue of rename VPSA from local provisioning portal
9526	Command Center	Added the ability to filter VPSA's by Name, Owner, Comment
9529	VPSA Object Storage	Performance improvement when working with large objects
9545 10088	Command Center	Free text comment filed was added to all major objects
9583	VPSA Storage Array	Improved CPU utilization and IO performance thresholds Alerts
9610 10010	VPSA Storage Array	Improved integration with AD: Customize Computer Name When Joining Active Directory
9721	Cloud Controller	CCVM is now equivalent to engine 400, not 200 to prevent out-of-memory situations
9785 10053	Command Center	Improved VPSA's display with current and historical capacity consumption
9860	VPSA Storage Array	Added "High Memory Allocation" alerts on overloaded VPSA's
9866	VPSA Storage Array	An option to create snapshot policy with invalid/unsupported parameters was blocked

9878	Command Center	Cloud Recycle Bin - Protect against accidental VPSA deletion
9935 9946	VPSA Storage Array	Built in backup now support Google Cloud Storage
9955	VPSA Storage Array	Fix for wrong error "Not enough space on disk" due to duplicate UUID
9956	VPSA Storage Array	Attaching an NFS volume to a host that was created with no IP address is now possible
10074	Command Center	Storage Node upgrade can, now, be done from the command center
10085	VPSA Storage Array Command Center VPSA Object Storage	Improved UI to upload certification files.
10133	VPSA Storage Array	Support for project Quotas was added to NAS shares
10159	VPSA Storage Array	The limit of 100 volumes in Mirror Reconnect GUI was removed
10189	VPSA Storage Array	10TB SATA drives are now supported
10190	Provisioning Portal	Limit RAW capacity Per Engine type
10198	VPSA Storage Array	For Active Directory made of multiple trusted domains, Kerberos Realms beyond the primary domain is now supported
10293	VPSA Storage Array	Longer time out to prevent failover on small NAS VPSA configurations due to heavy load that causes long latencies
10397 10413	VPSA Storage Array	Fix samba vulnerability CVE-2017-7494 (Remote code execution from a writable share)

4. Known Issues and Limitations

#	Component	Description
455	VPSA Storage Array	VPSA GUI is not support on IE-8
542	VPSA Storage Array	Failure of both active controller and a drive at the same time may result in a temporary failure of RAID5 group. To recover, either wait for the drive to come back online, or issue "Force Recover" from the VPSA GUI.
661	VPSA Storage Array	Linux Server LVM limitation: It is required to de-activate LV before issuing iSCSI logout. Failing to do so will result in a failure to re-login to a VPSA iSCSI Target.
867	VPSA Storage Array	Enabling IPsec may affect IO throughput in some Windows machines
1186	VPSA Storage Array	The option to replace a drive in a 'rebuild' state is blocked Workaround: Replace the drive once rebuild completed
1257	VPSA Storage Array	"Server Connect" requires open-iscsi initiator on Linux-based Servers
1614	VPSA Storage Array	Servers behind a NAT are not supported (for NFS or iSCSI connectivity).
1795	VPSA Storage Array	For a proper NFS functionality, need to run Server Connect after NFS client is installed on the Server
2048	VPSA Storage Array	Multiple drives removal through VPSA GUI may fail if one or more of those drives store VPSA Boot data. Workaround: Remove the drives one by one

2273	Storage Node	When adding a first drive of a new drive type to the Zadara Cloud (HDD, SSD or Cache SSD), you must wait 1 minute before allocating such a drive type to a VPSA. Please note that removing the last drive of a given drive type removes this drive type from the Cloud.
2382	VPSA Storage Array	IO onto an NFS share may be suspended up to 2 min following a VC failover or shutdown due to slow retry logic on the NFS client side.
2409	VPSA Storage Array	Microsoft Limitation: If you are creating a clone of a Microsoft cluster volume/disk resource through the VPSA GUI and assign the clone to the same cluster nodes, the disk will come online as Reserved on both nodes. Hence, you will not be able to access the disk or add it as a new disk resource. Workaround: To prevent this from happening you can change the disk id from within diskpart. Please follow the steps below: 1) Assign the clone to a non-clustered server. 2) Login to the server and online the drive through Disk Management utility. 3) Open a command line and type "diskpart" 4) Now follow the next diskpart commands: DISKPART> list disk DISKPART> select disk [type here the disk number of your clone] DISKPART> uniqueid disk id=[type here a unique ID, should be 8 digits] 5) Goto VPSA GUI, detach the clone from the non-clustered servers and attach it to your clustered servers. 6) Now you can use the clone as a cluster disk resource.
2593	VPSA Storage Array	If a RAID-5 rebuild of a new or replaced Drive is aborted, when it is resumed - it will restart from the beginning.
2920	VPSA Storage Array	VPSA GUI is presenting wrong metering values for controller's cache and system if Read or Write chart are disabled
3350	VPSA Storage Array	If a VPSA does not expose LUN 0 and LUN 1 (but exposes other LUNs), Linux iscsiadm will not present any other VPSA LUNs. Windows Hosts will not present VPSA LUNs greater than 7.
4363	ALL	Moving from local license server to public license server and vice

		versa is not supported
4916	Command Center	"Add Drive" operation (via Command Center) can be performed only against VPSA with software version 14.11 or newer.
5033	SN	Maximum 11 VCs are supported on a Storage Node with Mellanox NICs
5578	Storage Node	Disk is not removed from SN drives list upon ejection if previously it was moved between different slots
5639	VPSA Storage Array	VC failover may fail if HB network is down
5851	VPSA Storage Array	IOs from Containers are not counted in Volume's performance metering
6501	VPSA Object Storage	Customers using external Load Balancer, should upload a custom certificate generated for the matching IP\domain name, or they will get SSL warning when connecting to the ZIOS.
7051	VPSA Object Storage	It takes few minutes for ZIOS account capacity to update
7067	VPSA Object Storage	When an account member is connected to the GUI, and the zios admin switches between SSL termination on-off, the member does not see the updated REST URL until she logged out and in again

7169	VPSA Object Storage	SSL Certificate trust warning when using Public IP for Object Storage. Customers are advised to bring their
7616	VPSA Object Storage	Account is created with no permissions when untrusted custom SSL certificate is used
7795	VPSA Object Storage	Setting container permissions via S3 browser is partially supported
7806	VPSA Storage Array	Can't mirror encrypted volumes from 16.05 VPSA to a remote VPSA running 15.07 or earlier versions
8104	VPSA Storage Array	SMB File History snapshot cannot be deleted if Restore is in progress or snapshot is in use
8125	Provisioning Portal	When creating VPSA 15.07 over Cloud 16.05, must set Extended cache bar to Zero
8142	Provisioning Portal	After upgrading the cloud, the option to create new ZIOS will be missing for few minutes...
8186	VPSA Storage Array	NAS Quota Limitations: <ul style="list-style-type: none"> - Changing the default quota limit does not affect existing users/groups - Cannot monitor users consumption without setting quota - User's consumption is taken in account only for her primary group, even if the user belongs to multiple groups - Quota limits might not be effective for users defined in trusted domains
8377 8786	VPSA Object Storage	Some GUI functions do not work if GUI was opened via Command Center: ZIOS Console, Account Permissions tab
8423	VPSA Storage Array	Explicit ALUA mode is not supported in FC host connectivity
8496	VPSA Object Storage	Metadata policy expansion is not supported when the first 3 VCs are fully populated with drives
8471	Cloud Manager	If FC HBA is removed from an SN that hosts VPSA with FC enabled, the VC's will fail to start. All VCs of VPSAs with FC support should be evacuated or deleted before removing the FC HBA.
8535	VPSA Object Storage	If an account is created during the first minutes after VPSA Object Storage creation (while policies are in "Not Ready" state) it will have no permissions set. Permissions will have to be set later
8540	VPSA Object Storage	When uploading a custom certificate, it is used for objects operations (REST API) however GUI keeps using the default certificate
8789	VPSA Object Storage	When creating an account via ZIOS API, the default account permissions (allow all members) is not automatically assigned to it, as it is when the account is created via the GUI.
8841	Storage Node	Link failure and recovery ticket is sent only for the primary interface of the bebond for Case-B (back-to-back BE connection)
8901	VPSA Storage Array	B2S3 uses its own mechanism to maintain its backups, do not delete any of the objects stored by the B2S3 service, nor archive them to Glacier
8915	VPSA Object Storage	Policy metering shows wrong display of GET operations
8941	VPSA Storage Array	User may get a warning message which says that Destination share has newer data than source following to break and reconnect
9087	VPSA Storage Array	File system quotas: Import of quota CSV file does not work
9089	VPSA Storage Array	User or Group hard limit inherits the value of the last updated default limit of user or group in case the hard limit of the user or group is set to 0
9146	VPSA Storage Array	A volume with file history enabled can't be a mirror destination. As a result, one cannot reconnect a mirror job in the opposite way if file history is enabled on the original source volume.

9165	Command Center	Site domain name will be lost on every CC failover in 15.07 cloud, and on cloud upgrade from 15.07 to 16.05 or 16.05-sp1.
9248	VPSA Object Storage	Policy/Account metering shows wrong units (B instead of TB)
9249	VPSA Object Storage	There is a 30 GB difference between the "used capacity" displayed in Policy and Account
9288	VPSA Object Storage	Evacuation of a VC out of an offline (down) SN is not possible. VC will recover once the SN is replaced and up again. Drives can be evacuated if required
9240	VPSA Storage Array	A Block volume cannot be attached to iSCSI and FC servers at the same time
9406	VPSA Object Storage	Constant high CPU usage might be experienced when Object Storage is out of space
9652	VPSA Object Storage	UTF-8 containers\objects names cannot be handled via S3 interface. Swift interface must be used for multi byte characters support
9759	VPSA Storage Array	SMB client will continue to have access to a share after it was detached if this share is attached to other SMB clients
9822	Storage Node	When upgrading Fiber-Channel enabled SN, if SCST needs to be restarted, it will cause all the SN drives to go offline for a short period of time
9886	VPSA Object Storage	zios_admin account is created with no member permissions
9959	VPSA Object Storage	It takes 5 minutes to the new container\account permissions to take effect
10075	VPSA Storage Array	Cannot select a primary SMB group on NAS user creation when NFS & SMB option are checked
10240	VPSA Storage Array	NAS Project Quota - Impossible to add a directory with space to the project
10405	VPSA Storage Array	SMB File History policy cannot be detached from a volume as long as Server is attached
10407	Command Center	Command Center can't reboot a Storage Node as long as there is CCmaster active on it