Zadara Storage Cloud

16.05-SP1 Release Notes

September 2017

Revision 11

Contents

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
September 2016	1	VPSA image: 16.05-SP1-593-50 SN package: 16.05-SP1-593-50	16.05-SP1 GA
October 2016	2	VPSA image: 16.05-SP1-593-53 SN package: 16.05-SP1-593-53	Maintenance release
December 2016	3	VPSA image: 16.05-SP1-593-88 SN package: 16.05-SP1-593-88	Maintenance release
December 2016	4	VPSA image: 16.05-SP1-593-91 SN package: 16.05-SP1-593-91	New Model Introduced
February 2017	5	VPSA image: 16.05-SP1-593-100 SN package: 16.05-SP1-593-100	Maintenance release
March 2017	6	VPSA image: 16.05-SP1-593-110 SN package: 16.05-SP1-593-110	Maintenance release
March 2017	7	VPSA image: 16.05-SP1-593-113 SN package: 16.05-SP1-593-113	Maintenance release Format change
March 2017	8	VPSA image: 16.05-SP1-593-116 SN package: 16.05-SP1-593-116	Maintenance release
March 2017	9	VPSA image: 16.05-SP1-593-117 SN package: 16.05-SP1-593-117	Maintenance release
May 2017	10	VPSA image: 16.05-SP1-593-120 SN package: 16.05-SP1-593-120	Maintenance release
September 2017	11	VPSA image: 16.05-SP1-593-128 SN package: 16.05-SP1-593-128	Maintenance release

3. New Functionality and change list

Release 16.05-SP1 is an enhancement to 16.05 with some security, performance and usability improvements, as well as fixes to issues that were found in 16.05.

What's New in Zadara Storage Cloud

Demo ZIOS
Zadara Intelligent Object Store (ZIOS) Demo is now available on the public cloud.
Its purpose is for customrs that want to try out ZIOS functionality, and don't have enough resources to do it in their own private cloud. **Not to be used in production.**
Demo ZIOS characteristics:
- 2 storage+proxy VCs
- 4 drives ONLY (same type),
- "Demo" watermark
- Add storage\proxy-vc from e-commerce is blocked
- All ZIOS capabilities are supported

Upgrade from Demo ZIOS to official ZIOS is NOT supported

For more information on ZIOS Object Storage see here

Baby OPaaS
Small cloud configurations are now supported with 2 Storage Nodes connected back to back without switches.
- Hosts can be connected via the customer network switches
- When this configuration is expanded with additional SN's, switches must be added. This upgrade requires no down time.
- VPSA's must be 16.05 or later

What's New in VPSA

Server status
Server status was added
- **Active** - if all Paths (iSCSI or Fibre Channel) are connected
- **Degraded** - if one or more Paths (iSCSI or Fibre Channel) are disconnected. Disconnected Paths can be deleted.
- **Disconnected** - when all Paths are disconnected

Russian Translation
VPSA and Provisioning Portal now support Russian GUI

Servers
SPARC/x86 Solaris was added to the interoperability list of supported servers for FC block volumes.

Major Changes & Bug Fixes in Build 128

#	Component	Description
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)

Major Changes & Bug Fixes in Build 120

#	Component	Description
10272	VPSA	Raise a support ticket if RAID rebuild failed
10342	Storage Node	Fix for a regression issue with Storage Node failover. The node that is taking over is not able to shut down the other node.
10397	VPSA	Fix samba vulnerability CVE-2017-7494

Major Changes & Bug Fixes in Build 117

#	Component	Description
9637	VPSA	Fixed an issue of the standby VC not taking over after shutting down the active VC in some condition
9544	VPSA	Fixed a problem of very busy VC is considered dead, by giving the heartbeat top priority

Major Changes & Bug Fixes in Build 116

#	Component	Description
10110	VPSA	Fixed a stability issue of large SMB shares
10135	VPSA	Fixed a problem when VPSA joins AD
10144	Cloud Controller	Fix an issue of running VPSAs on an SN that was upgraded from 15.07 to 16.05-SP1-593-113

Major Changes & Bug Fixes in Build 113

#	Component	Description
10011	Storage Node	Old 15.07 VPSAs can now run on storage nodes running 16.05 (or higher) with Intel XEON E5-2630 v4 CPUs. **Note**: VPSAs older than 15.07 are not supported on this platform
10101	VPSA	Improved VPSA (with large files share) failover time in some rare cases

Major Changes & Bug Fixes in Build 110

#	Component	Description
7024	ZIOS	Add support for Private/Public container access, to allow anonymous access to specific containers
9835	VPSA	Pre-allocate memory to avoid high CPU spikes during massive writes
9840	Command center	Fixed a problem of certificate lost after Commend Center
9869	VPSA	Limit the write bandwidth on cache and metadata device to avoid high CPU spikes during massive writes
9879	VPSA	Fixed an issue of upgrades from old versions where the setup drives was built on 3 way RAID
9895	Cloud Controller	Increased S3 Object Listing timeout to handle slow S3 connectivity when displaying Bucket listing for restoring a Volume
9949	VPSA	Avoid printing encryption password to access log

Major Changes & Bug Fixes in Build 100

#	Component	Description
8995	VPSA, ZIOS, Storage Node	A fix for an HA situation where one VC crashes and the other does not take over
9585	VPSA	A fix for a rare case of a race condition of several parallel writes on the same 1mb chunk that might lead to VC crash
9745	VPSA	Fixed a rare case in which Docker Container creation with a NAS share mounted fails
9777	Cloud Controller	A new Wildcard TLS Certificate for CCVM (expires on 31.01.2019)

Major Changes & Bug Fixes in Build 91

IO Engines Specification
A new Engine was introduced **as of build 16.05-SP1-593-91**.
It was designed for intensive workloads that require powerful computing and lots of memory
The following table describes the IO Engines:

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

Major Changes & Bug Fixes in Build 88

#	Component	Description
8959	VPSA	Added the option to set and edit advanced options (dns_lookup_realm, dns_lookup_kdc and kdc_servers) through "Join Active Directory Server" dialog
9288	ZIOS	Fixed a problem in VC evacuation from an offline SN
9295	Command Center	Fix an issue in which VPSA GUI gets stuck with an hourglass when its opened via Command Center
9331	VPSA	Fix a rare case in which /proc/fs/nfsd is not mounted following to VC failover (triggered by vc-ha) which cause a VC reboot.
9333	VPSA	A fix for an issue of high CPU consumption when VPSA is joined to a forest Active Directory
9350	VPSA	Fix an issue in which VC freezes once the max open files limit is reached. A support ticket is opened when 50%, 70% and 90% of the max limit is reached & reboot the VC when 100% of the max limit is reached
9366	Command Center	Fixed the unlock link sent by email to command-center users
9369	Storage Node	Fix an issue in which a drive with product id string length > 16 and is not behind a MR is being removed from the drives inventory following to cloud upgrade from 15.07/16.05 versions to 16.05-SP1
9384	Command Center Cloud Controller	A new option in Command Center to upload a custom SSL certificate for an outgoing traffic of ZSNAPs and Zendesk tickets

#	Component	Description
9395	VPSA	Removed the Active Directory password that was visible in the VPSA GUI Access Log
9410	Storage Node	Baby-OPaaS cloud can now support FC host connectivity.
9423	VPSA	VPSA GUI now showing the correct capacities of mirror destination volumes
9426	Installer	Fix a rare case in which drive stays in an Absent state following to drive pull/push as a result of bad lvm configuration
9427	Command Center	Added a SN shutdown button in Command Center
9433	ZIOS	Fix an issue in which Aspera client could not access ZIOS using a Member credential
9455	VPSA	Fix an issue in which failure of a drive during drive replacement process may result with a single drive in a RAID1 Raid Group that has Normal state
9481	eCommerce	Fixed the "create ZIOS" REST API
9502	VPSA	Fix a rare memory leak that may cause spontaneous VC crash
9509	Storage Node	Fix a VC panic in FC driver. **SN reboot is required** following upgrade to build 16.-5-sp1-593-88

Major Changes & Bug Fixes in Build 53

#	Component	Description
9223	VPSA	A fix for a regression problem caused by this ticket in upgrade of VPSA without FC connectivity from 15.07 to 16.05-sp1
9272	ZIOS	ZIOS upgrade will no longer fail if there are more VCs in ZIOS than SNs in the cloud
9285	Cloud Controller	Properly handle Cache Group that does not have the default name (related to clouds installed with version <14.07)
9321	Storage Node	Fixed a problem of drives not available after upgrade from 15.07 to 16.05-SP1

Major Changes & Bug Fixes in 16.05 - SP1

#	Component	Description
1987	Command Center	A New option to replace the SSL certificate for all existing VPSA's on the cloud. This feature can be used once all VPSA's of this cloud are 16.05-SP1 or later
5049	VPSA	Throttling mechanism was added to control the transfer rate of Remote Mirroring and Backup to object storage (B2S3)
6151	VPSA	Use SHA-3 (instead of SHA-1) for hashing the user encryption password
6557	Provisioning Portal	Support for HTTPS only mode was added
6655	VPSA	Expedite Metadata load to shorten failover time
6772 8951	VPSA	An option to select LUN ID when attaching block volume to server
7025	ZIOS	A button was added to ZIOS Console to make a container public or private
7107	VPSA	Improved mirroring performance over slow networks
7699	VPSA	Disconnected block volume paths are now shown as Failed/Absent and an event was added to VPSA Event Log and Command Center Central Log
7799	Command Center	Solved a case of Command Center pointing to wrong IP addresses in emails sent to users
8020	VPSA	Improved failover time for VPSA with large number of volumes/shares
8171	Command Center	Correct error message when logging in with wrong/disabled password
8203	VPSA	Solved a security issue of password exposed in support tickets

8252	Command Center	API with token related to an expired password, will be rejected
8259	Command Center	Improved detailed information in Access Log
8288	All	Penetration testing: All Zadara components rated as SSL Labs Grade A
8353	VPSA	Expedite failover time
8459	VPSA	Fixed an issue of VPSA not recognizing new added drives
8491	Provisioning Portal	Billing report was generated on Safari with wrong file name extension
8532	VPSA	Improved performance of VMware VAAI XCOPY command
8593 8811	VPSA	UDP/111 is now allowed on VPSA front end
8646	ZIOS	Demo ZIOS is now supported for trials
8648	VPSA	Change in VSS provide to allow taking snapshots of a large set of volumes at once
8656	VPSA	Fixed a bug that caused creation of migration job to fail on a very loaded system
8732	Provisioning Portal	Fixed an issue that might cause large extended cache allocation to fail
8807	Command Center	Wrong display of the SN memory capacity was fixed
8848	Storage Node	Fix for an issue in which Rsyslog stops working after SN failover
8910	Storage Node	Install/Upgrade also updates the MegaRaid card FW
8930	Provisioning Portal	Register user dialog now has a state/region as mandatory field (for American addresses)
9013	VPSA/ZIOS	A fix for a sporadic issue of VPSA/ZIOS GUI fail to load right after VPSA/ZIOS creation, with error message like: "We're sorry, but something when wrong"
9015	Command Center	Solved a problem with HTTPS requests that were redirected as HTTP
9027	Command Center	Command Center setting that were under the gear icon on the top right corner moved to administration/settings
9117	VPSA	A fix for kernel panic situation when VMware ESX host triggers many frequent 'abort task' commands
9160	VPSA	Encryption password is no longer lost after both VCs reboot
9178	ZIOS	Capacity alerts for metadata policy are now properly sent
9185	Command Center	Wrong display of cache drive capacity was fixed
9143	VPSA	Fixed a wrong error message in VPSA GUI when trying to mirror from two different VPSAs to the same destination VPSA, while the mirror job names are identical
9147	Provisioning Portal	The option to add capacity to ZIOS metadata policy was removed. Capacity can be added by the cloud admin
9179	Command Center	Users with role that allows public IP change, can do it now
9223	VPSA	A fix for an issue of service interruption for FC connected server during VPSA upgrade
9228	Command Center	New option for command center roles: modify ZIOS public IP

4. Known Issues and Limitations

#	Component	Description
455	VPSA	VPSA GUI is not support on IE-8
542	VPSA	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	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	Enabling IPSec may affect IO throughput in some Windows machines
1186	VPSA	The option to replace a drive in a 'rebuild' state is blocked Workaround: Replace the drive once rebuild completed
1257	VPSA	"Server Connect" requires open-iscsi initiator on Linux-based Servers
1614	VPSA	Servers behind a NAT are not supported (for NFS or iSCSI connectivity).
1795	VPSA	For a proper NFS functionality, need to run Server Connect after NFS client is installed on the Server
2048	VPSA	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	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	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	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	VPSA GUI is presenting wrong metering values for controller's cache and system if Read or Write chart are disabled
3350	VPSA	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	SN	Disk is not removed from SN drives list upon ejection if previously it was moved between different slots
5639	VPSA	VC failover may fail if HB network is down
5851	VPSA	IOs from Containers are not counted in Volume's performance metering
6501	ZIOS	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	ZIOS	It takes few minutes for ZIOS account capacity to update
7067	ZIOS	When a ZIOS 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	ZIOS	SSL Certificate trust warning when using Public IP for ZIOS. Customers are advised to bring their
7616	ZIOS	Account is created with no permissions when untrusted custom SSL certificate is used
7795	ZIOS	Setting ZIOS container permissions via S3 browser is partially supported
7806	VPSA	Can't mirror encrypted volumes from 16.05 VPSA to a remote VPSA running 15.07 or earlier versions
8104	VPSA	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	NAS Quota Limitations: - 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	ZIOS	Some ZIOS GUI functions do not work if GUI was opened via Commend Center: ZIOS Console, Account Permissions tab
8423	VPSA	Explicit ALUA mode is not supported in FC host connectivity
8496	ZIOS	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	ZIOS	If ZIOS account is created during the first minutes after ZIOS creation (while policies are in "Not Ready" state) it will have no permissions set. Permissions will have to be set later
8540	ZIOS	When uploading a custom certificate, ZIOS is using it for objects operations (REST API) however GUI keeps using the default certificate
8789	ZIOS	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 ZIOS 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	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	ZIOS	In ZIOS Policy metering that is wrong display of GET operations
8941	VPSA	User may get a warning message which says that Destination share has newer data than source following to break and reconnect

9087	VPSA	File system quotas: Import of quota CSV file does not work
9089	VPSA	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	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	ZIOS	Policy/Account metering shows wrong units (B instead of TB)
9249	ZIOS	There is a 30 GB difference between the "used capacity" displayed in ZIOS policy and ZIOS account
9288	ZIOS	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	A Block volume cannot be attached to iSCSI and FC servers at the same time
9759	VPSA	SMB client will continue to have access to a share after it was detached if this share is attached to other SMB clients
9959	ZIOS	It takes 5 minutes to the new container\account permissions to take effect
10075	VPSA	Cannot select a primary SMB group on NAS user creation when NFS & SMB option are checked