



## BrickStor Release Notes

Version 23.6



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# Table of Contents

- Welcome to Version 23.6 ..... 3
  - About the Release Notes ..... 3
  - Upgrading to BrickStor SP 23.6 ..... 3
- Improvements and Functionality ..... 4
  - 23.6.0 ..... 4
  - 23.4.11 ..... 5
  - 23.4.10 ..... 5
  - 23.4.8 ..... 5
  - 23.4.7 ..... 5
  - 23.4.6 ..... 6
  - 23.4.5 ..... 6
  - 23.4.4 ..... 6
  - 23.4.3 ..... 6
  - 23.4.2 ..... 6
  - 23.4.1 ..... 6
  - 23.4 ..... 7
  - 23.3 ..... 8
  - 23.2 ..... 9
  - 23.0.0 ..... 11
  - 22.2.0 ..... 12
  - 22.1.1 ..... 12
  - 22.1.0 ..... 12
  - 22.0.2 ..... 13
  - 22.0.0 ..... 14
- For Assistance ..... 16
  - Online Resources ..... 16
  - Contact RackTop ..... 16

## Welcome to Version 23.6

Thank you for choosing BrickStor SP. The RackTop team is pleased to announce the availability of BrickStor SP 23.6.

## About the Release Notes

The release notes provide critical and release-specific information for BrickStor SP 23.6, including upgrade instructions and behavior changes.

## Upgrading to BrickStor SP 23.6

It is recommended to upgrade sequentially through BrickStor SP versions chronologically.

If you are upgrading from a version prior to 23.2, you may receive an error preventing installation. It is recommended to first upgrade to 23.2.0.54, then to 23.2.1.55.

Contact RackTop Support for additional assistance.

Please refer to the Upgrading section of the User Guide for detailed upgrade instructions. It is always recommended to notify support of your intention to upgrade so that any special use cases can be addressed and an engineer can be available to assist.

# Improvements and Functionality

## 23.6.0

### Active Security

- ImmutaVault cyber vaulting feature
- UB dynamic congestion control for SMB
- Added configurable file path ignore patterns to ub-analyze
- Improved ub store backlog performance and resource utilization
- Added ub-store support for querying activity by status code
- Performance improvements to 'ubadm store records' when retrieving non-truncated data

### SMB

- Improved efficiency of several SMB meta-data operations
- Added file name to SMB opportunistic lock (oplock) break timeout messages
- Improved taskq backlog efficiency
- Improvements to SMB command-line management utilities

### HA

- Hiavadm extended to support all HA management functions
- Improved HA performance when a node or auto-failover is disabled

### SP-L

- Improved hwd support for SP-L systems

### OS

- The default admin user is now 'bsradmin'
- Functionality improvements and updates to TDM stability and performance
- Services default to structured JSON logging
- Improved log viewing and management with logjam(8)
- Added logjam CLI to support the updated logging framework
- Structure summary added to pool display layout
- Improvements to confd performance and stability
- Improvements to logging/support bundle stability and performance
- Licensing fix for disks that use TiB format

- Fixed bug resulting in Pools showing modify properties after migrating to new OS or moving a Pool
- Fixed a bug resulting in modify/repair AD appearing in HA setup/repair

## BrickStor SP Manager

- Streamlined user experience when initiating a shutdown/restart from the BrickStor SP Manager
- Can now configure implicit owner rights for a given dataset
- Added a health alert reminding users to backup their keys

## Hub

- The Hub Local management platform for BrickStor SP devices is now available

## 23.4.11

- Fixed race condition with SMB close and oplock lease break
- Fixed race condition with SMB cancel and SMB request
- Fixed race condition with SMB read and SMB truncate
- Improved SMB performance and reliability

## 23.4.10

- Improved SMB metadata lookup performance
- Added file name to SMB opportunistic lock (oplock) break timeout messages
- hiavd and confd services now run at a higher priority
- Improved SMB taskq backlog efficiency

## 23.4.8

- Added support for Dell iDRAC interfaces
- Resolved issue with incorrect cache file setting for HA pool
- Improved stability when cloning encrypted datasets
- Fixed secadm issue exporting all keys from command line
- Improvements to SMB performance

## 23.4.7

- Improved hwd support for SP-L systems
- Added HA administration to CLI
- Improvements to stability and performance of SMB

- Fixed a bug resulting in IP address validation error
- Hardened systems to better support DNS outage

## 23.4.6

- Added support for SMB RPC sealing (MS KB5021130)
- Improved resource group failover when using i40e network adapters
- Improved hwd support for SP-L systems

## 23.4.5

- Resolved buffer overflow with network device link
- Improved performance for user behavior backlog processing

## 23.4.4

- Resolved I/O error when deleting VMware snapshots
- Resolved SMB sharing violation with zombie open file
- Resolved issue with Linux SMB client causing an overflow on a virtual BrickStor SP

## 23.4.3

- Resolved issue where HA auto-failover disabled flag could be ignored if peer node become unresponsive
- Resolved specific 23.4 issue where an unresponsive HA node using a pool cache file could trigger an erroneous import
- Resolved issue where kernel module unload during early boot could cause a device tree deadlock when failing hardware is present

## 23.4.2

### HA

- Resolved a "VNIC has alternate setting error" causing HA fault
- Resolved unexpected transition when using cache files

### SMB

Resolved SMB server issues regarding data imports involving HyperV

## 23.4.1

## Resolved Issues

### HA

- Resolved a "VNIC has alternate setting" error

### SMB

- Resolved SMB server issues regarding data imports involving Hyper-V

### Licensing

- Fixed an issue causing license capacity check failure on TiB formatted disks

## 23.4

## Active Defense

- Open Incident report improvements
- Now displays Open Security and Unusual Activity incidents
- Displays a summary of Closed incidents within the reporting period
- Incident notification improvements
- Threat and Impacted Data now listed in Incident notifications
- Split Security and Unusual Access incidents into separate webhook notifications
- Red Alerts will only trigger for Security Incidents
- Administrators subscribed only to Security notifications will no longer receive Unusual Activity notifications

## Replication

- Extraneous snapshots now automatically removed between source and destination
- Fixed a bug causing incompatible embedded data stream when replicating to a destination
- Fixed a bug resulting in properties not set on replicas after successful snapshot transfer

## Confd

- HA Clustered nodes now auto-join the confd cluster
- Client and Peer IP addresses are now dynamically set by the confd service
- Joining a witness to a cluster no longer requires setting the peer IP address
- Joining a witness to a cluster is now wizard driven (confadm join)
- All confd nodes now maintains state of each node within the cluster (confadm member state)



## SMB

- Large MTU support (max 256K)
- NULL DACL support
- Fixed Invalid MAC issue with Win2012R2 and 256Bit Encryption

## HA

- i40e virtual NIC creation times improved

## Installer

- Improvements to Installer performance and stability on multiple browser interfaces.

## HA

- HA failover performance improvements

## BrickStor SP Manager

- Fixed a bug hindering SID resolution on the UI

## 23.3

## BrickStor SP

### Active Defense

#### *Bulk Restore*

- Added ability to bulk restore files from an incident
- Scheduled reports are no longer truncated

## SMB

- Handled out of memory conditions in idmap and smbd
- Reduced log noise from SMB services
- Improved SMB directory listing performance
- Improved SMB large read/write performance
- Improved security of SMB admonition feature

## OS

- Snapd performance improvements in systems with a high number of Snapshots.
- Pool export performance and speed improvements:

- Export services are more cooperative
- Scrub and resilver no longer cause excessive delays
- Improved performance time when unmounting datasets
- Added support for phobos FIPS validation
- Implemented update to installer user experience

## 23.2

### BrickStor SP

#### New Improvements and Functionality Updates

##### Active Defense

- User behavior resource utilization, detection and performance improvements
- Incidents are created for excessive SMB access denied activity
- Improved detection sensitivity
- Observation mode
- Security rules support AD groups
- User configurable rules and exception handling
- SMB 1.0 triggers alerts

##### SMB

- SMB locking improvements for highly concurrent workloads
- Support for 256 bit ciphers
- Improved resource utilization

##### NFS

- Improved support for NFS 4.1 HA with VMware

##### HA

- Stability and sensor detection improvements
- Improved failover times with large pools

##### Snapshots and Indexing

- New indexing engine improves resource utilization when indexing snapshots

## Identity Services

- Supports queries while AD caching is in progress
- Service caches AD metadata by default
- Supports case-insensitive lookups
- Clustered systems now join AD concurrently as part of cluster creation
- AD join supports alternate OU containers

## Configuration Database

- Confd supports multiple instances when running on Windows witness

## Health Services

- Improved healthd resource utilization and performance
- Improved readability of health alerts
- Alerts now auto-pruned when no longer relevant
- Added sensor for confd
- Added sensor for drive IO latencies
- Added filtering by component status
- Improved detection algorithms to improve false positive reporting
- Added health history report

## TDM

- Improved worker threading for better resource utilization
- Improved dataset destruction handling
- Support for delaying transfer based on configurable modification time

## OS

- Added sesadm utility for enclosure diagnosis and troubleshooting
- Added driver support for esas5hba
- Removed support for ATTO Virtual SES
- Improved SCSI polling and timeouts
- Improved system stability with multiple failing disk devices
- Added support for HPE EL8000
- Dataset encryption uses AES-GCM by default (improved performance)
- Support for Intel Scalable v3
- Improved and standardized default NDMP configuration
- Webhooks support common public certificate CAs

## 23.0.0

### New Improvements and Functionality Updates

#### Active Defense

- Enhanced active protections from ransomware, malware, and unusual activity
- Detect and stop unusual data access patterns
- Detect and alert on malicious administrators
- Incident response engine with workflow and easy remediation

#### Rolling Snapshots

- Optimize recovery by continuously recording up-to-the-minute data changes within a rolling window

#### Health Engine

- Expanded health monitoring with integrated reporting
- Third party notification integrations with Pagerduty, Microsoft Teams, Pushover, and Slack
- Custom alerting via webhooks

#### Reporting Engine

- Customize and subscribe to various system, service and compliance reports in HTML, PDF, CSV or JSON format

#### OUBE

- Improved out-of-box experience with graphical console support
- Official Support for EC2 and Azure
  - This release is officially supported to run in Amazon EC2 and Microsoft Azure clouds

### Changes & Updates to Existing Features

- SMB now supports Hyper-V
- OpenSSH updated to 8.4p1
- SMB bug fixes for macOS Big Sur
- Configurable API timeouts
- Support for RES3FV288 enclosures

## Deprecated Features

- MongoDB has been removed and is no longer supported

## 22.2.0

## New Improvements and Functionality Updates

- SMB 3.1.1
- AES-GCM support
- Pre-Auth Integrity support

## Improvements & Fixes

- Improved resource utilization and performance of ubcollectd & indexd at scale
- Initial setup menu allows NTP to be configured to use AD servers
- Extended license management from myRack Manager
- Reseating a cxgbe transceiver properly returns to up state
- Support for FE Series (2021 Model) Chassis
- Addresses NBMAND issues for NFS 4.x clients

## Changes to Existing Features

- AFP was removed in 22.1.1.67. If you have not yet installed that version be aware it is no longer in the OS.
- RackTop call home for updates switched from <https://api.myracktop.com> to <https://myracktop.com> in 21.1.1.67. If applicable, check any outbound firewall policies to allow TCP port 443 to myracktop.com from the BrickStor SP appliances.
- A new database format for Data Protection and Replication logs was introduced in version 22. Existing logs are automatically migrated. If you are missing legacy log entries, contact RackTop Support for assistance.
- Python was removed in 22.1.1.67 and is no longer supported.

## 22.1.1

- Minor patch release addressing CVE-2020-1472 advisory.

## 22.1.0

## New Improvements and Functionality Updates

### *UEFI boot*

BrickStor SP installation now supports UEFI booting! This only applies to the new installations using 22.1 or newer version. Previously installed systems using Legacy mode will remain in Legacy mode.

### *Hardware support*

- Intel R2000WFXXX chassis (Big Horn Peak)
- Intel x722 network adapters (i40)
- Atto Host Bust Adapters
- Emulex Fibre Channel adapters (initiator mode)
- HPE 3Par (iSCSI/FC)
- HPE Primera (iSCSI/FC)
- HPE XP8 (FC)
- HPE Nimble (iSCSI/FC)
- HPE Synergy

### *Console loader and login screens*

We are happy to introduce redesigned loader and login screens. Both are simplified to improve usability and out of the box experience.

For newly installed systems the console login will present an initial configuration wizard. The wizard will assist in setting up network configuration for the management interface and step through the BrickStor SP registration.

### *Software registration*

22.1 brings in enhanced registration process. The systems can now be licensed via myRackTop portal <https://myracktop.com>.

## Changes to Existing Features

AFP is no longer part of the product. Be sure to migrate any existing AFP shares to SMB prior to upgrading to this version.

RackTop call home for updates switched from <https://api.myracktop.com> to <https://myracktop.com>. If applicable, check any outbound firewall policies to allow TCP port 443 to myracktop.com from the BrickStor SP appliances.

A new database format for Data Protection and Replication logs was introduced in version 22. Existing logs are automatically migrated. If you are missing legacy log entries, contact [RackTop Support](#) for assistance.

Python was removed from this release and is no longer supported.

Some other features received bug fixes: Replication, TDM, HA (pool import/export), Rack View, Mellanox driver. See [Resolved Issues](#) section for details.

## 22.0.2

## New Improvements and Functionality Updates

This is a minor patch release. No new features.

## 22.0.0

# New Improvements and Functionality Updates New & Notable Features

### *Transparent Data Movement (TDM)*

Transparent Data Movement (TDM) enables the seamless movement of data between tiers of storage within a BrickStor SP to external storage tiers including other BrickStor SP nodes, third party NFS capable storage and S3 compliant object storage. TDM is an advanced hierarchical storage management feature of the BrickStor SP operating system that enables policy-based security and compliance to be applied to data stored in the cloud or on third party storage systems. Policies can be applied to the dataset to determine which target the data should tier to when policy dictates it should be moved to a more economical tier of storage. Users continue to access data through the same client protocols using the original file path and do not need to change their workflow. All data is compressed and encrypted before leaving the BrickStor SP, which means that data on untrusted 3rd party systems is safe.

All BrickStor SP operating systems version 22 and greater come with a 5TB TDM license. Additional capacity can be purchased from your sales team.

### *BrickStor SP Manager*

The management interface previously known as myRack Manager has a new look, and many many functionality improvements, including:

- Improved warnings and feedback
- Numerous connection and connection management improvements
- Key Manager auto backup and status reporting support
- Permissions management improvements
- New HA and Peering management options
- Support for Replication updates
- Support for new TDM feature
- Improvements to User Behavior

### *Replication 2.0*

The data replication engine was completely redesigned and is brand new in this version. New capabilities were introduced to include parallel transfers, an on-demand and efficient queueing mechanism, and a high-speed WAN optimized transport which improves data transfers on high latency links.

Improvements include:

- Configurable number of parallel streams per destination.
- Ability to cancel the sending of a snapshot.
- Ability to temporarily raise or lower a dataset's priority.
- Bandwidth limitations per source/destination pair.
- Further refinement of bandwidth during configurable peak hours.

- Proprietary high-speed transfer/Improved WAN Optimization. (licensed feature)
- Ability to skip over a snapshot.

#### *BrickStor SP Branding*

BrickStor SP is now known as “BrickStor Security Platform”, and myRack Manager is now known as “BrickStor SP Manager”. New color schemes and usability features have been introduced and improved, including:

- Improved warnings and feedback
- Numerous connection and connection management improvements
- Key Manager auto backup and status reporting support
- Permissions management improvements
- New HA and Peering management options
- Support for Replication updates
- Support for new TDM feature
- Improvements to User Behavior

## Changes to Existing Features

This is a minor patch release. No changed features.

## Deprecated Features

#### *Apple Filing Protocol*

AFP has been deprecated in this version. RackTop and Apple recommend using SMB instead.



## For Assistance

- [Online Resources](#)
- [Contact RackTop](#)

## Online Resources

RackTop provides online resources to access documentation, software, and to open service requests. Use these resources to install and configure BrickStor software and to troubleshoot and resolve technical issues.

- RackTop Support site: <https://support.racktopsystems.com>
- Maintenance, Warranty and Policy Information: <https://www.racktopsystems.com/about-us/warranty-and-maintenance/>

## Contact RackTop

If you cannot resolve an issue using the online resources listed above, contact RackTop Support:

- Email RackTop Support: [support@racktopsystems.com](mailto:support@racktopsystems.com)
- Call RackTop Support: 1-888-472-2586