

SnapScale RAINcloudOS Version 4.1 Release Announcement

October 2014

Preface

This Product Information Bulletin announces the release of RAINcloudOS[®] (ROS) version 4.1 for all SnapScale[®] clusters.

Models Affected

RAINcloudOS Version 4.1 is supported as an upgrade for SnapScale clusters running ROS 4.0.089 or higher. This version replaces the released RAINcloudOS version 4.0.089.

Upgrade Considerations

All systems running RAINcloudOS 4.0.089 or higher can be upgraded to RAINcloudOS 4.1. It is recommended that a system backup be completed prior to performing the upgrade.

Downgrades are Not Supported

RAINcloudOS release downgrades are not supported.

RAINcloudOS 4.1 New Features

The SnapScale 4.1 release provides a significant upgrade to the Raincloud OS. It has several significant new features along with a number of bug fixes. This software release supports both the X2 and X4 hardware node platforms.

- **Rolling Upgrades** – This release of RAINcloudOS introduces an Online/Rolling Update feature, which allows you to optionally update the RAINcloudOS while leaving the SnapScale cluster online and active. The upgrade code works sequentially through each node in the cluster—taking the node off line, applying the new release, rejoining the node to the cluster and updating its peer set members. The cluster remains fully functional for reads and writes during the rolling upgrade. Rolling upgrades can be performed from RAINcloudOS 4.1 to future supported OS versions when the cluster is in a healthy state.
- **Performance Monitor** – Completely redesigned with a new interface and functionality including the ability to keep more than just one hour of data enabling the user to review network performance information going back several weeks or months.

- **High-Performance Snapshots** – The file system snapshot capability has been enhanced to eliminate Copy-On-Write (COW) to the snapshot pool for blocks not yet allocated by the file system. Under optimal conditions, this significantly improves write performance on volumes with snapshots present to approach performance of volumes without snapshots. Snapshots are now limited to a maximum of 512.
- **Windows Security Model** – Volumes can now be configured with a security model that permits only Windows personality file system permissions (ACLs).
- **NFSv4 Support** – In addition to NFSv3 default support, the option now exists to enable NFSv4.
- **LDAP Integration** – Lightweight Directory Access Protocol (LDAP) can be used to look up user/group names and UIDs/GIDs for quota assignment, ID mapping, and home directories.
- **BitTorrent Sync** – RAINcloudOS 4.1 now includes a new SnapExtension, BitTorrent Sync. This application can be installed and enabled from the Web Management Interface, and can be used to replicate data between SnapServers and other servers or workstations.

Files and directories replicated to a Unix or Windows/Unix security model on another SnapServer will be owned by root and have 644 or 755 permissions. For greater control, configure btsync targets to replicate to directories on a Windows security model and configure directory ACLs as appropriate to provide desired user access.

NOTE: Files replicated via BitTorrent Sync do not retain any Windows or Unix permissions or owner information. Details on BitTorrent Sync configuration and security issues can be found on the [BitTorrent web site](#).

Previous RAINcloudOS 4.0 Changes and Enhancements

The previous releases of RAINcloudOS upgraded critical software components and included several new features:

- **Microsoft Office Documents** – Fixed an issue that prevented the saving of Microsoft Office documents to the SnapScale if SMB2 was enabled.
- **Snapshots** – Fixed an issue where a newly created Snapshot may be deleted by the system.
- **Split Bond Mode** – RAINcloudOS now provides a procedure that allows the client side network bond to be split such that the server will support two IP addresses, each on their own network interface. This feature provides the ability to support VMware multipath failover configurations. For details, refer to the *SnapScale RAINcloudOS 4.0 Split-Bond Configuration for VMware* technical bulletin available on the Overland Storage SnapScale support website.
- **iSCSI Support** – ROS 4.0 now offers block level storage with support for iSCSI. iSCSI support in ROS has the capacity to serve up any iSCSI target from any node in the cluster. Each target will be served from only one node in the cluster with the target following the IP address of that node in case of failover. ROS iSCSI provides the following sub-features and compatibilities:
 - **iSNS Support** – ROS can register iSCSI targets with an iSNS server.
 - **MPIO** – Support for multiple access paths via the bonded interface on the node.
 - **COW Snapshots** – Snapshots can be dynamically created and deleted using VSS/VDS.
- **User and Group Quotas** – User and group quotas are supported in ROS as of the 4.0 release. We support a number of different types of quota restrictions including user and group limits on a per volume basis. Group quotas are only tracked and enforced for NIS groups. We also support a file count limit again on a per volume basis. The default quota is unlimited. A default quota can be defined for each volume for users, groups or file counts.
- **SMB 2.0 and 2.1** – As of ROS 4.0 the Samba protocol stack has been upgraded to support SMB 2.0 and 2.1.

- **SNMP** – ROS 4.0 now offers the same level of SNMP support as SnapServer, with support for the Host Resources MIB (RFC 2790) and MIB-II (RFC 1213).
- **FTP/FTPS support** – ROS now supports access to the cluster file system using the FTP protocol.
- **File System Data Striping** – This version of ROS distributes large files across multiple peer sets, which spreads the data evenly across multiple hard drives. Since large files no longer land on a single peer set (drive), ROS 4.0 has eliminated the previous file size limitation. Distributing file data across multiple hard drives removes the single hard drive speed limitation resulting in improved performance.

Downloads

RAINcloudOS 4.1.103 is available for download for supported SnapScale users with active software entitlement agreements. Go to the Overland Storage Customer Support Portal by navigating to the Manage Products page.

<http://docs.overlandstorage.com/snapscale>

Additional documentation on how to operate, configure, and support your SnapScale is also available on this site.