



D-Link System, Inc.™
xStack Storage DSN-2100, DSN-3200 & DSN-3400
V1.4.1 Release Notes

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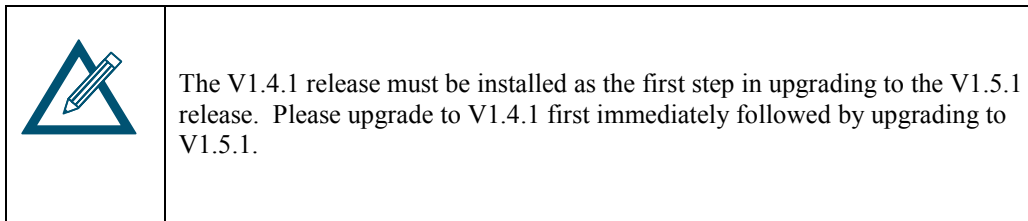
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1 Introduction

Note: For the remainder of this document, issues that pertain to the DSN-2100, DSN-3200 and DSN-3400 products will be identified as DSN-2100/3200/3400.

D-Link Systems, Inc.TM is releasing firmware version V1.4.1 for the DSN-2100/3200/3400 products as part of an upgrade process to V1.5.1. The V1.4.1 release notes identify what is included and what limitations have been identified as part of this release.



1.1 Purpose

The purpose of this document is to communicate the release of the DSN-2100/3200/3400 product firmware V1.4.1 release. This document will include what is identified as supported functionality, what was originally supported, but not part of this release and what errata and caveats that may effect the operation of the DSN-2100/3200/3400 products.

1.2 Scope

This document is a **release note** on the V1.4.1 release. It is not a product spec, nor does it specify the total functionality of the DSN-2100/3200/3400 products.

1.3 Related Documents

DLink XStack Storage User's Guide

1.4 Out of the Box – Update and or Installation

There has been an issue found with interaction of the DSN-2100/3200/3400 Management Console and Java J2SE Release 5. D-Link Systems continues to work through the issue and provide the most up to date operation and capability where possible.

This issue requires that the workstation accessing the DSN-2100/3200/3400 Management Console, under firmware V1.4.1 release, use **Java J2SE Release 1.4.2** (<http://java.sun.com/j2se/1.4.2/>). In other words, the 1.4.2 version of Java must be installed on the PC system that will attach to the management port of the DSN-2100/3200/3400 and host the management console. This should be done prior to the first connection to the DSN-2100/3200/3400 management port.

2 Product Feature Status

2.1 DSN-2100/3200/3400 Features

The following features are the new features included in the V1.4.1 release:

2.2 Major issues fixed in Release

The following items are part of the V1.4.1 release based on issues found in the field and or as part of D-Link's qualification testing. As identified, D-Link continues to work towards the highest quality and will implement fixes, updates and changes to insure proper capability that are critical to our customers.

- Linux Issue: Potential data corruption using a Linux O/S iSCSI initiator during sequential read operations. It has been determined that the Linux iSCSI initiator is violating the iSCSI standard by acknowledging iscsi data packets before they had been completely received. This had the effect of allowing the DSN-2100/3200/3400 to reuse data buffers while they were being transmitted, which would cause data corruption. A workaround has been implemented in the DSN-2100/3200/3400 to avoid this issue.
- Data corruption on a multi-extent RAID-5 volume. During sequential I/O or random I/O that was larger than the chunk size of the volume, if the I/O straddled two extents, then data corruption would occur. In default configurations, this situation does not occur.
- Enclosure Services with the Vitesse Controller used with the DSN-2100/3200/3400 products:
 - If redundant power was lost, there was no "Audible" alarm on the Power Supply assembly.
 - If two of the three fans were removed the Fault/Ready LED did not turn red and an email notification was not initiated.

2.3 Volumes

2.3.1 Data Reliability

All volume organizations are supported; all combinations of those organizations are supported, reduced volumes are supported.

2.3.2 Information

- Drive Insertion and Rebuild Behavior: Asynchronous Drive Insertions are handled as follows:
 - If the drive has no Metadata, it will be initialized and placed in the Available Pool.
 - If the drive has Metadata, and that Metadata indicates that the drive had been in the Available Pool when last installed in a DSN-2100/3200/3400, then the drive will be returned to the Available Pool.
 - If the drive has any other Metadata, it will be placed in the Unusable Collection. From there, the Administrator can initialize the drive, which will initialize the drive and move it to the Available Pool.
 - Whenever a Volume is reduced (when there is insufficient disk space available to start a rebuild), and a new drive appears in the Available Pool, a Rebuild will begin immediately. The Rebuild status will be: Running if resources are immediately available, or pending if either another Rebuild is Running targeting the same drive or too many tasks are currently in process.

2.3.3 Volumes Supported Features

- All Volume Organizations (RAID Levels) in all combinations
- Volumes can be created using the automatic method as well as the Manual Volume creation method (by clicking the Manual icon). (The Spare Count will be obeyed in limiting the number of drives that can be used for automatic volume creation.)
- Volumes can be deleted, so long as no host I/O is active in the DSN-2100/3200/3400 at the moment the Delete is processed. Should the Volume have any active Background Tasks, those tasks will be automatically aborted.
- Volumes persist and Background Tasks persist.
- Background Tasks are Volume Initialization, Rebuild, Micro Rebuild, Parity Scan, Reconfigure, and Media Scan.

- Background Tasks can be Suspended, Resumed, Cancelled (synonymous with aborted) and Deleted (i.e. an inactive task can be removed from the Management Console's display). A Task's priority can be changed.

2.3.4 Caveats

- Media Scan is not supported on Parity Volumes. The Management Console disallows these to be executed immediately, but currently allows the media scan to be scheduled for execution in the future.
- No Statistics are provided for Volumes or Drives with this release.
- Expand Volume:
 - The Management Console only allows certain values to be entered as the new size of a volume during Expand. The reconfigure volume feature can be used to pick any volume size.