Expanding Storage Capacity – A Primer
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The majority of IT professionals are familiar with basic RAID functions. These RAID functions include RAID 0 (striping) for enhanced disk I/O performance and RAID 1 (mirroring) for enhanced data protection. Then there’s RAID 5, which uses parity to provide redundancy. RAID 5 is recommended in enterprise storage environments since it accomplishes both techniques of RAID 0 and RAID 1.

Enterprise-class RAID features such as Online Capacity Expansion (OCE) and Online RAID Level Migration (ORLM), has been available only with high-end SCSI-based RAID controllers. These high-end features are now available in the HighPoint RocketRAID 2220 SATA II RAID Controller. Storage environments can utilize these enterprise class features of the RocketRAID 2220 to expand storage capacity while maintaining current investment.

Online Capacity Expansion (OCE)

Online Capacity Expansion (OCE) allows data to be expanded across new disks without taking the system offline. Storage can be added and introduced into the system through the HighPoint RAID management utility without the requirement to take down all of the storage to reconfigure the storage. Disk arrays can be upgraded without impacting existing applications by using the benefits of OCE technique. This can dramatically improve the uptime and availability of applications running on your data storage and helps to ease the pain associated with capacity expansion.

HighPoint RAID Management OCE toolbar

Online Capacity Expansion – Expanding existing RAID array

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HighPoint Technologies, Inc.
www.highpoint-tech.com
Online RAID Level Migration (ORLM)

Online RAID Level Migration (ORLM) allows the type of RAID array to be changed to a new type on the fly. With ORLM storage environments gain the ability to modify the storage system without interrupting operations. Business critical data could be protected with a simple RAID 0 array that stripes the data across three disks. But as the business grows it will need more disk capacity. In this scenario, RAID 5 is appealing since overall data capacity will be increased by adding a third disk. OCE and ORLM will be required to perform this task. Capacity expansion allows the existing RAID 0 array to be expanded to include the fourth disk and RAID level migration enables the transformation of the RAID 0 array to a RAID 5 array. All of this is performed in the background, invisible to each user, without losing a single business transaction.

HighPoint RAID Management ORLM toolbar

Online RAID Level Migration (ORLM) – Migrating existing RAID array

Summary

OCE/ORLM offers benefits to any storage environment. These benefits include:

- Increase storage capacities without losing current investment
- Enhance storage capabilities without downtime
- Non-disruptive RAID migration and capacity expansion