Application Note

# On-Demand Replication with IPStor®

*Facilitating cost-effective, non-intrusive disaster recovery planning*

## Introduction

This document describes an alternative rapid-deployment method of IPStor that facilitates **on-demand remote replication** of data. It is ideal for those storage administrators who would like to take advantage of IPStor software's ability to perform remote replication to cost-effective disk storage, such as StorageTek BladeStore, for disaster recovery purposes while maintaining the direct data path between application servers and storage at the primary site and leveraging the native internal snapshot capability of their existing high-end storage arrays.

## Benefits of IPStor-powered On-Demand Replication

- Maintains direct data path between application servers and primary volumes
- Performs data replication without touching current production infrastructure
- Cost-effective disaster recovery solution
- Rapid deployment
- Rapid recovery from disaster
- Leverages current application server/storage environment and administrator expertise
- Leverages existing snapshot functionality (e.g., SANtricity)
- Can deploy IPStor for replication only, with non-intrusive implementation
- Replication can be on-demand or automatically scheduled
- Small footprint
- Provides opportunity to take advantage of other advanced IPStor storage services at remote site (TimeMark™, ZeroImpact™ Backup, VirtualTape Library™, etc.)

## Fact

On-demand replication using IPStor software facilitates cost-effective disaster recovery while leveraging existing investments in storage, snapshot capability, and expertise as well as maintaining the direct path between application servers and storage at the primary site.

## Disaster Protection in Four Simple Steps

The IPStor on-demand remote replication solution consists of two side-band IPStor-powered replication appliances which are simply plugged into the SAN, enabling administrators to quickly and efficiently implement a disaster recovery solution that replicates data from their primary storage to secondary, cost-effective storage at a remote location, with no overt intrusion to their existing storage environment.

The IPStor on-demand remote replication process is simple:

❶ Application servers continually write data to the primary disk, as usual. The direct data path between application servers and their primary storage remains intact, exactly as it was originally.

❷ A full snapshot or a snapshot update is taken of the primary disk. The snapshot process is driven by the existing snapshot engine native to the high-end storage array and occurs internally within the array.

❸ The IPStor-powered replication appliance at the primary site sees the snapshot LUN – which has been zoned to it via LUN masking at the storage array console – and replicates the snapshot (or the changes that have occurred) to the IPStor-powered replication appliance located at the disaster recovery site. The remote IPStor-powered appliance then deposits a replica of the snapshot on the cost-effective disk storage located at the remote site.

❹ The snapshot replica can then be directly promoted (via the IPStor-powered appliance) to alternate application servers located at the remote site for reliable, rapid disaster recovery.