

CONTINUOUS DATA PROTECTOR

AUTOMATED DISK BACKUP, REPLICATION, AND INSTANT DISASTER RECOVERY GIVE USERS FREEDOM FROM WORRYING ABOUT THEIR DATA

FalconStor® Continuous Data Protector (CDP) is a disk-based backup and recovery solution that provides comprehensive data protection functions such as mirroring, snapshots, journaling, remote replication, and automated disaster recovery (DR) from an application service perspective, freeing IT administrators to meet business protection demands in heterogeneous environments. availability of primary data for business continuity.

CHALLENGES OF TRADITIONAL BACKUP

Growing costs

- Hardware
- Software licensing fees
- Bandwidth (WANs)
- Networking (SANs)
- Labor

Exploding data growth

- Server proliferation
- Growing data volumes
- Stricter retention periods

Unreliable backups

- Restore business
- Maintain backup data integrity
- Need for data assurance
- Inability to meet RTO, RPO

Management complexity

- Backup job validation
- Time-consuming
- SAN restrictions
- Complex backup solutions
- Inefficient utilization

TODAY'S DATA PROTECTION ISSUES & CONCERNS

Business IT operations grow in size and complexity, while budgets shrink or remain stagnant, seemingly without regard to economic factors. Mixed IT assets such as servers, operating systems, applications, networking, and storage require multiple 'point' data protection solutions from various vendors, adding further complexity. Backup windows and bottlenecks are growing, compounded by limited reliability and confidence of recoverability, further straining already 'thin' organizations.

FREEDOM OF DATA PROTECTION

FalconStor CDP eliminates issues of complexity and reliability for business continuity. FalconStor CDP approaches data protection from the unique perspective of both application and service availability, resulting in comprehensive and automated recovery for all critical applications, business data, and services. FalconStor CDP enables organizations to define, meet, and even exceed IT SLAs, while backing up data with confidence.

Freedom of unified backup/recovery with instant availability

FalconStor CDP offers technical innovation centered on delivering tangible business benefits and resilient business operations and IT services. This all-inclusive, disk-based solution enables business

application protection and data assurance for even the most demanding environments. FalconStor CDP provides application-specific data protection for applications including Microsoft, Oracle, SAP, and others, along with non-disruptive backup, near-instant recovery, remote replication, and disaster recovery automation.

Freedom to scale to meet data growth needs

As data volumes grow, demands on the supporting infrastructure place increased strain on equipment and staff budgets. FalconStor CDP supports growing data volumes, supporting LUN sizes of up to 64TB. An advanced multi-threaded architecture enables fast, simultaneous compute operations such as replication, compression, and encryption.

FALCONSTOR CDP PROVIDES...

BACKUP WINDOW ELIMINATION

FalconStor CDP eliminates the disruptive nature of traditional backup operations. FalconStor CDP provides disk-based backup on secondary storage volumes; offering as many as 1,000 snapshots per LUN. This eliminates any loading or disruption to production applications and volumes.

HOW IT WORKS

Centralized backup can be performed off of secondary FalconStor CDP snapshot volumes. This out-of-band configuration isolates all backup-related loads from physical or virtual production servers. Archive requirements can be addressed with the FalconStor® HyperTrac™ Backup Accelerator option, which automates the selection and mounting of FalconStor CDP snapshot volumes to backup media servers. When this is combined with the replication feature of FalconStor CDP, remote offices can replicate data to a central location for consolidated backup operations. HyperTrac automatically mounts snapshots from FalconStor CDP to a backup server in order to back up data to physical tape or to a virtual tape library such as the FalconStor® Optimized Backup and Deduplication solution. Because backup occurs directly from the secondary storage, critical applications are not impacted.

NEAR-ZERO RTO

Recovery of email, files, database objects, or entire servers is the essential objective of any data protection strategy. FalconStor CDP delivers comprehensive local and remote data recovery, with fast and straightforward access to recovery data.

HOW IT WORKS

The innovative architecture of FalconStor CDP enables local data recovery in as little as five minutes for files or objects, and as little as ten minutes for bare-metal server recovery. Remote recovery of data or servers is equally fast and intuitive, with complete site recovery in as little as 30 minutes.

APPLICATION-CONSISTENT SNAPSHOTS

Critical and valuable data is most often derived from a particular business application, such as a database, ERP, CRM, or financial/accounting system. Without application awareness, protection and recovery of these data volumes can be crash-consistent, resulting in data loss or corruption. FalconStor CDP provides application aware snapshot agents for most popular business applications. Up to 1,000 snapshots are available per protection volume, for the most flexible and comprehensive up-to-the-moment recovery points.

HOW IT WORKS

Snapshots can be instantly mounted in an application consistent state for recovery of individual files and database objects, or for entire volumes. FalconStor CDP offers up to 1,000 snapshots per volume, enabling true disk-to-disk (D2D) backup. Intelligent snapshot scheduling and retention policies provide instant backup functionality for weeks or months. Larger environments can simplify multiple snapshot operations by leveraging a consistency group feature, which allows multiple data protection operations to be performed simultaneously.

VIRTUAL SERVER PROTECTION

As more businesses realize the productivity gains associated with server virtualization, it becomes increasingly important for them to protect those hypervisor host servers, along with their associated virtual machines (VMs) and data. FalconStor CDP provides comprehensive data protection for physical and virtual servers, including hypervisors from VMware, Microsoft, Oracle, and Citrix.

HOW IT WORKS

Just as traditional agent-based backup operations impose severe CPU and system loads on individual servers, multiple virtual servers residing on a single physical host greatly amplify loads and often cripple CPU and I/O performance. FalconStor CDP does not impact virtual or physical server resources for data protection; rather it protects, replicates, and backs up virtual and physical server data directly from FalconStor CDP secondary protection volumes. The result is near linear protection, without disruption, for dense VM deployments.

HETEROGENEOUS, WAN-OPTIMIZED REPLICATION

As organizations grow organically or via merger or acquisition activities, they often amass disparate hardware and networking resources. In addition, monthly bandwidth costs increase significantly with each higher telecommunication link (T1, T3, OC3, OC12, and others). FalconStor CDP enables efficient and robust replication between data centers, leveraging storage from any vendor at any office location. To minimize bandwidth requirements, FalconStor CDP provides WAN-optimized replication with compression for improved bandwidth efficiency and data encryption (at rest or in-flight) for optimal security.

HOW IT WORKS

MicroScan™, a patented FalconStor technology, minimizes the amount of data transmitted by eliminating redundancy at the application and file system layers. Rather than arbitrarily transmitting entire blocks or pages (as is typical of other replication solutions), MicroScan technology maps, identifies, and transmits only unique disk drive sectors (512 bytes), reducing network traffic

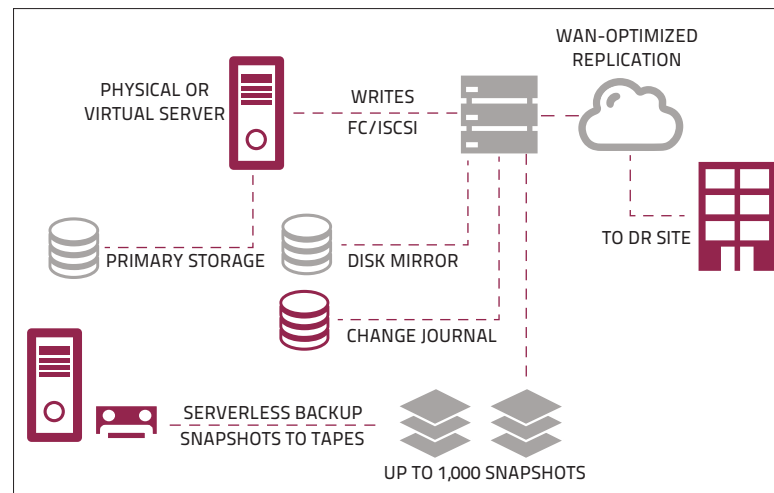
FalconStor®

and bandwidth requirements by as much as 95%. Meanwhile, adaptive replication automatically switches between continuous and periodic data transmission in the event of a temporary bandwidth link outage or throughput degradation. Periodic replication queues data for subsequent transmission, while preserving write-order fidelity.

DR AUTOMATION FOR FAST, SIMPLE RECOVERY

When a disaster or failure strikes, there are a number of complex procedures required in order to fully recover IT business operations. FalconStor CDP provides a unique tool, RecoverTrac™, which automates complex and error-prone manual disaster recovery operations, allowing

FALCONSTOR CDP PROVIDES BACKUP, RESTORE, & AUTOMATED RECOVERY



FLEXIBLE DEPLOYMENT OPTIONS

Designed with an organization's unique needs in mind, FalconStor CDP is available in several form factors, each including expansion units for additional scalability:

- Software Only: Provides the flexibility to choose the hardware and configuration appropriate for the level of protection and recovery required.
- CDP Virtual Appliance for ROBO: For virtualized remote/branch office (ROBO) environments leveraging VMware technology.
- CDP Storage Appliance for ROBO & Midmarket: All-in-one appliances for ROBO environments and midmarket organizations.
- CDP Gateway for Midmarket & Enterprise: Gateways that integrate with the existing third-party storage of midmarket and enterprise organizations.
- FalconStor CDP VS Series Appliance for Midmarket and Enterprise: HA appliances for the highest levels of availability and performance in heterogeneous midmarket and enterprise.

all associated applications and services to be brought back online remotely as quickly as possible. In addition, RecoverTrac technology facilitates nonintrusive disaster recovery testing, allowing organizations to identify potential recovery issues before actual disasters occur.

HOW IT WORKS

RecoverTrac technology maps the logical relationships between applications, servers, and associated data volumes at a primary site with corresponding applications, servers, and data volumes at a recovery site. A broad range of capabilities includes dependencies such as 'order of start,' which ensure proper resumption of business operations at the remote site.