

FALCONSTOR®



Be the Master of Your Data Estate

FalconStor delivers holistic storage orchestration with a 100%-agnostic platform

Behavioral studies have shown that the desire to achieve mastery is a fundamental, intrinsic human motivation. So natural is the desire for mastery, in fact, that people even tend to solve complex problems more effectively when there is *no promise of an external reward*.¹ You and other IT decision makers understand this deep motivation toward mastery all too well, as you face a fast-accumulating stash of data that threatens to become unmanageable. To succumb to this data sprawl isn't an option. You want to control it and tame it. You intrinsically want to rise to the challenge and advance on your path toward IT grandmaster status.

Mastery might be its own reward for the IT manager, but mastery of data also delivers enormous benefits to organizations, especially to those with large, complex IT environments who view data as a precious asset. If protected and managed properly, data can help unlock competitive advantage, whether by providing a better understanding of customers; uncovering ways to improve operations; inspiring new products, services, and business models; or otherwise reshaping core business activities.

DATA SPRAWL CHALLENGES IT

Let's face it: mastering data is especially difficult today, and not only because of the startling rate at which organizations are acquiring it. To keep up with the storage demands stemming from all this data creation, IDC forecasts that over 22 ZB of storage capacity will ship across all media types from 2018 to 2025, with nearly 59% of that capacity supplied from the HDD industry.²

One of the most frustrating aspects of managing IT is the heterogeneous nature of today's data stores, with many different fragments of siloed storage solutions hindering any kind of universal orchestration. Switching from management console to management console makes administrative work unnecessarily complex and time-consuming, and the inability to manage storage solutions comprehensively can prevent an organization's total storage capacity from being used efficiently. Even team resources cannot be allocated efficiently because different people have to be assigned to manage each system in which they have gained expertise. Over time, as a result of these obstacles, IT decision makers often find themselves getting locked into a single vendor to improve efficiency in the short term, a move that can inhibit flexibility and agility for IT in the long term.

The annoyingly fragmented nature of storage solutions is just one of the many hurdles that face today's data environments. Another significant challenge is the difficulty of recovering from data loss in such a complex environment, with the threat constantly looming of operational downtime, the loss of business, and the loss of credibility in the market and with customers.

Other major storage headaches include:

- The difficulty of planning for or predicting capacity needs, which in turn can lead to sudden shortages that send IT teams scrambling for a solution
- The lack of overall data control, including the inability to move data to and from different sources, such as from on-premise to cloud, or from old to new solutions to keep costs down
- The constant pressure of keeping data available to the organization, including meeting 99.999% uptime for service-level agreements (SLAs)

All of these complications can hinder your organization's ability to harness its data as a tailwind and reach its goal of becoming data-driven.

Industry longevity

Conducting the validation and engineering required to create a data mastery solution that works across all storage environments takes time. FalconStor invented software-defined storage (SDS) and has been in the storage and data management software business for nearly two decades, which is something few others in this space can say. It's the reason FalconStor is the only vendor-agnostic solution for storage orchestration.

FALCONSTOR CLEARS THE WAY TOWARD UNIVERSAL DATA MASTERY

FalconStor empowers IT leaders to maximize the value of their organizations' precious data assets. The FalconStor flagship solution, FalconStor® Data Mastery Platform (FDMP), is a modern and comprehensive software platform built for the full spectrum of data management use cases in complex environments. Through its unifying management console FalconStor Management Server (FMS), FDMP allows you to break down storage silos, increase organizational agility, optimize workloads, reduce your storage footprint, and gain control of your storage environment.

Data mastery involves more than just meeting a checklist of data management requirements. Data mastery calls for a deep understanding and application of best-practice principles in the specific context of each organization's unique business needs and IT landscape. FalconStor understands that data mastery requires a holistic view of an enterprise's entire data environment in order to protect, optimize, recover, locate, analyze, and scale resources across the enterprise's systems.

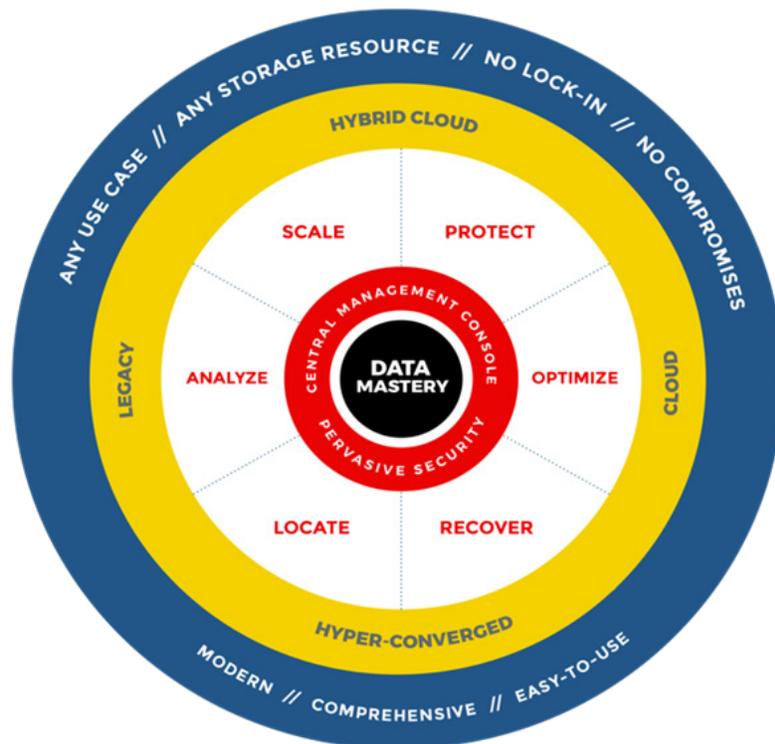


Figure 1. FalconStor Data Mastery Platform (FDMP) is a modern, comprehensive, and easy-to-use platform that enables storage IT departments to protect, optimize, recover, locate, analyze, and scale storage resources across physical, virtual, and cloud environments with no lock-in.

AGNOSTIC AND COMPREHENSIVE STORAGE ORCHESTRATION

With FalconStor, you can make use of your existing IT investments and gain a holistic and empowering view of your heterogeneous storage environment through a central management console that includes embedded, pervasive security. This universal orchestration is possible because FalconStor solutions are vendor-agnostic, and for this reason, mastering your data won't mean starting over, compromising, or spending a fortune. FDMP is designed to work with what you've got, which means no lock-in and no need to rip-and-replace.

Success stories

FalconStor has a huge impact on a wide variety of organizations by enabling them to master their data environments:



The German utility service provider [Stadtwerke Saarbrücken](#) chooses FalconStor to underpin its vision of a fully software-defined data center and become more flexible to choose any data destination.

Sunrise

FDMP enables Swiss telecom provider [Sunrise](#) to move, store, protect, and manage data in a flexible, “pay-for-what-is-used” pricing model.



The MSP [Egenera](#) relies successfully on FDMP to deliver flexible solutions to customers that help them meet demanding requirements to move, store, protect, and manage data.



With FalconStor technology, [Discovery Solutions](#) was able to modernize its IBM® i environment, reduce its backup window with a deduplication ratio of 70-to-1, eliminate the need for physical tape, and improve storage efficiencies.

Whether operating in a legacy data center environment, a modern hyper-converged infrastructure, or a hybrid of the two, FDMP provides complete and independent control. With support for physical, virtual, and cloud across all storage platforms and media types, FalconStor’s hardware- and software-agnostic approach sets data free from the confines of the storage infrastructure, enabling you to modernize without lock-in, rip-and-replace, or compromise on sub-par software that is integrated into expensive new hardware.

DISASTER-RECOVERY ORCHESTRATION

FDMP enables disaster recovery across a variety of client and storage types with a single, unifying solution. To promote data mastery and support mission-critical IT operations, FDMP offers a centralized high-availability solution that includes many unique and patented technologies:

- [RecoverTrac™](#) delivers one-click automated and non-disruptive recovery of critical business application servers and data volumes in seconds, not hours or days.
- [Synchronous mirroring](#) technology provides block-level data mirroring across any disk system regardless of vendor, disk type, or connectivity. Data can easily be synchronized to a second storage device independent of the servers involved, and there is no need for system-specific host-based tools.
- [Application-aware snapshot agents](#) provide complete data protection for active databases such as Microsoft® SQL Server®, Oracle®, SAP® ASE, and IBM® Db2®, in addition to messaging applications such as Microsoft® Exchange and Lotus Notes®. These agents ensure that snapshots are taken with full transactional integrity, saving hours of valuable recovery time in the event of a disaster.
- [DiskSafe™](#) is a host-based replication software agent that dramatically increases the granularity of data protection. Instead of being protected once a day or once a week, application data can be protected continuously across the same broad base of software and hardware platforms. DiskSafe is used to provide side-band, non-disruptive data protection to help ensure that you achieve zero recovery-point objectives (RPOs) in the event of a disaster.

A BACKUP AND ARCHIVE ORCHESTRATOR

FalconStor Virtual Tape Library (VTL) with Deduplication is a disk-based solution that emulates physical tape drives and libraries to modernize back up environments, reduce storage costs, meet increasingly narrow backup windows, and leverage the cloud for long-term data retention and recovery. With VTL, you’ll reap the benefits of capacity reduction, longer data retention, improved restore times, pervasive security, low-cost cloud storage, and increased data reliability through the elimination of tape shipments.

As a vital tool in your data-mastery arsenal, VTL allows you to:

- **Meet your backup window.** With VTL, you can achieve single-node aggregate backup speeds of up to 40 TB per hour to meet your single biggest issue in backup, with no impact to operations, and at 3X-6X better price/performance of competing solutions.
- **Save up to 95% on data capacity needs.** VTL eliminates redundant data and reduces up to 95% of business data stored for data protection purposes, while selecting the deduplication policy that best aligns performance to business requirements.
- **Scale as needed to meet data-growth needs.** VTL is the only solution that can independently scale high-availability backup nodes from cluster-deduplication nodes to handle large datasets and extremely demanding backup windows.
- **Export tapes to the cloud.** Achieve a low-cost tape archive that is encrypted for protection and managed by the local VTL software, and migrate virtual tapes to public cloud object storage for archive purposes in the cloud.

PREDICTIVE ANALYTICS

FDMP enables true mastery by allowing you to predict and manage storage capacity, performance, and availability across your complex, heterogeneous IT environment through the same single management console.

With real-time actionable analytics, FDMP can help you realize more economic value out of your existing investments.

- **Increase agility and continually improve.** Analyze global storage across the physical, virtual, and cloud pool and clients to provision, orchestrate, and manage capacity and data services from a single management console. Predict capacity utilization to plan for growth, and easily identify hotspots and bottlenecks to optimize performance and availability across all storage resources.
- **Reduce costs.** Unlock the capacity, performance, and availability insights needed to take action to proactively deploy rightsized storage investments based on the price/performance needed to drive down costs.
- **Eliminate risk and embrace the freedom to focus and scale.** Set real-time and reactive alerts so you can free up valuable time and resources to concentrate on strategic initiatives that accelerate becoming a data-driven organization.

HOW IT WORKS

Without FalconStor, an organization's data estate tends to become difficult to manage, characterized by data-storage silos, subpar capacity utilization, and limited storage agility.

FalconStor gives you control over your data environment by centralizing management through a unifying, comprehensive solution that eliminates the threat of vendor lock-in, breaks down data-storage silos, and improves storage agility and capacity planning.

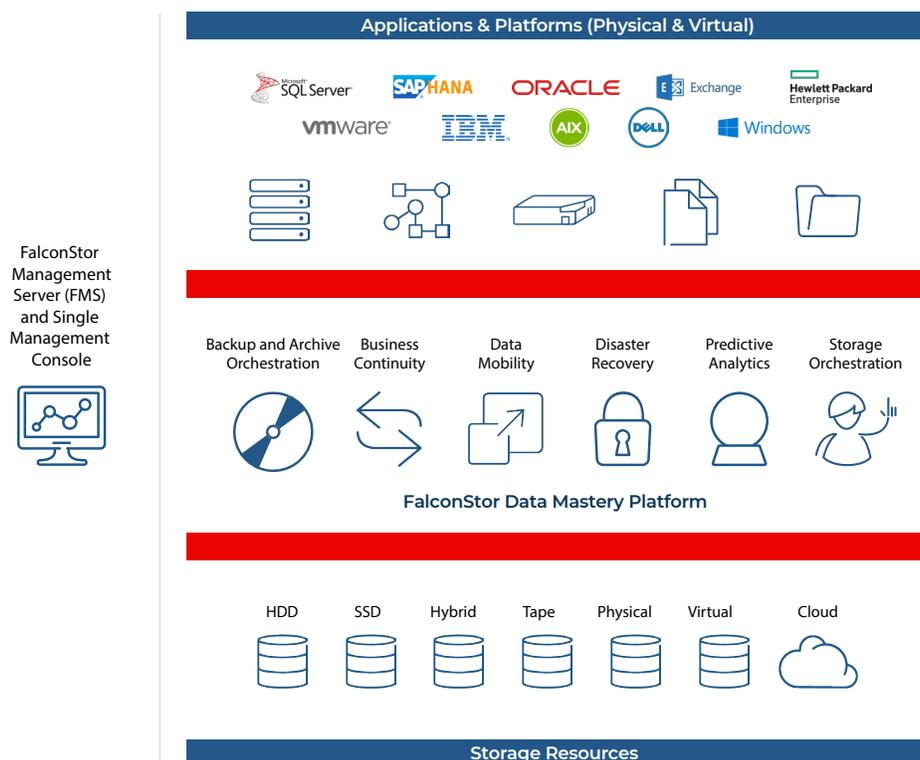


Figure 2. FalconStor Data Mastery Platform agnostic architecture

MASTER YOUR DATA AND BECOME AN IT HERO

FalconStor solutions deliver a modern, comprehensive, and easy-to-use platform that enables customers to master their data with a holistic view of their environment through a central management console. No other data management vendor can comprehensively help you achieve data mastery without creating lock-in, further propagating silos, compromising on data protection and recovery, or requiring rip-and-replace. With FalconStor, you can take back control of your data estate and glean actionable information on all your storage resources across the enterprise, enabling your organization to harness data for a competitive advantage.

For more information, contact a sales representative at salesinfo@falconstor.com.

1. Dan Ariely, Uri Gneezy, George Loewenstein, and Nina Mazar, "[Large Stakes and Big Mistakes](#)" Working Papers of the Federal Reserve Bank of Boston, 2005.
2. Datanami. "[Data Growth Rate in U.S. Predicted to Slow](#)." February 2019.

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