



FlexDM™ Data Migration Services

Non-disruptive, no-outage migration services

KEY FEATURES AND BENEFITS

No-outage Data Migration, Online or Offline

With FlexDM services, keep your applications online as migration is performed in the background. Or, migrate data at high speed during offline maintenance periods. FlexDM migration hardware installs online, without changes to systems or SANs.

Proven in Large-Scale Enterprise Environments

FlexDM block-virtualization appliances deliver proven interoperability in large-scale heterogeneous and legacy environments. Appliances migrate data independently over the SAN without affecting CPU performance.

Simple, Automated, Reliable

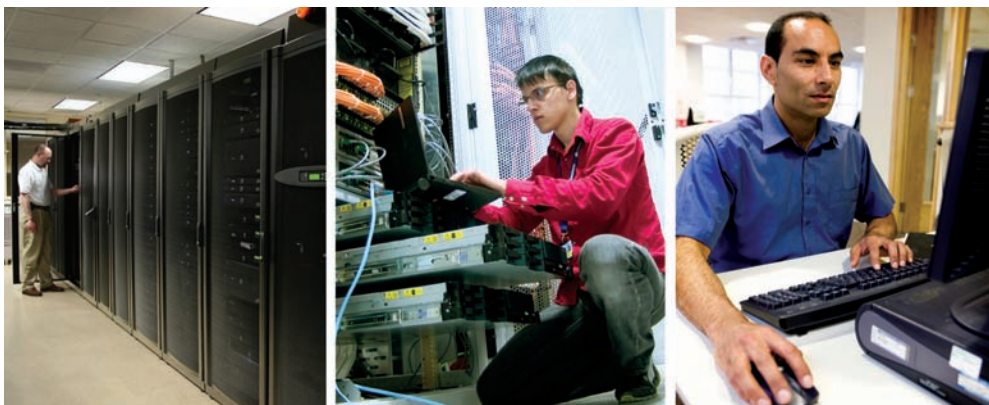
FlexDM migrations eliminate errors and labor associated with migration setup and management. Traditionally manual processes are replaced with automated discovery, planning, and management tools.

Flexible Migration Options

Whether you choose turnkey migration or a migration assist option, FlexDM services are designed to meet enterprise needs from large to small. A Vicom migration specialist manages and supports each migration, from start to finish.

Cost-Effective

Purpose-built tools, automation and specialized expertise combine for faster, more reliable, and more economical migration of large data stores than achievable with in-house projects. Turnkey migrations are backed by a money-back guarantee of on-time delivery.



In today's enterprise, never-ending data growth means more frequent data migrations. Whether you're consolidating resources at a new data center, re-purposing legacy systems, or performing a "technology refresh," migrations consume a disproportionate share of budgets, staff, and management resources. They also reduce uptime. And this doesn't include project risk: more than half of all in-house migration projects incur delays, cost overruns, or staff overtime.

New Answers for a Growing Challenge

Introducing FlexDM Data Migration Services from Vicom Systems. Built on Vicom's proven success in hundreds of enterprise migrations, FlexDM services take enterprise data migration to a new level: non-disruptive and no-outage data migration, made available in flexible service offerings from turnkey project delivery to migration assistance for major migrations. Choose the type and level of service based on your operating, resource, and budgeting needs. Service options include:

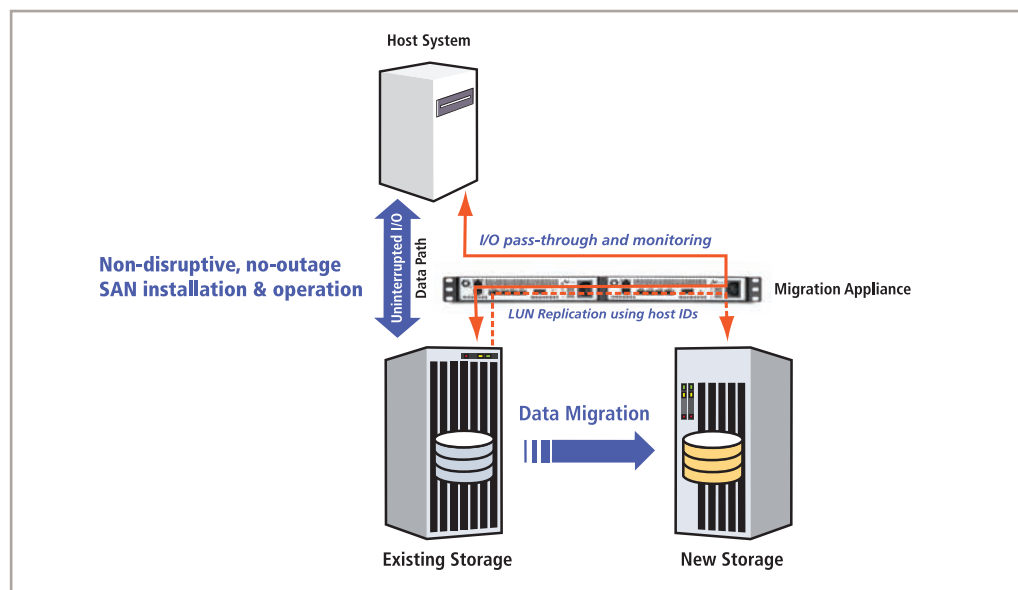
- **Online or Offline Migration.** Keep your applications up and running as Vicom migrates data over several weeks in the background. Or, have Vicom migrate the data at high speed and complete the migration offline during a few weekend maintenance periods. Or choose a combination of both methods to keep business-critical applications running while reducing overall migration time.
- **Turnkey Migration Service.** A Vicom specialist will plan the migration, migrate the data (online or offline), assist in remediating your servers, and document the process. Vicom assumes project responsibility and backs it with an on-time guarantee. This service is ideal for small to midsize migrations with tight deadlines and/or limited internal resources.
- **Migration Assistance.** With FlexDM Data Center Migration Services, you can customize migration services from Vicom as circumstances require. Designed for mid-size to large migrations, a Vicom specialist will manage the following services to meet your requirements:
 - *Plan and migrate data for SAN and NAS storage systems.* Depending on budget and operating requirements, the migration may be managed onsite or remotely.
 - *Special migration services.* Migration services for clustered servers, Windows LUN re-alignment, Secure erasure of migrated data and boot LUNs. Additional services are available under a custom Statement of Work.
 - *Server Remediation.* A Vicom specialist will assist in remediating designated servers.



FlexDM Technology

Compared to the limitations of conventional migration tools and methods, FlexDM's ability to handle complex migrations is made possible by patented, SAN appliance technology. Embedded hardware design and block-level virtualization form the core technology that enables seamless, high-speed connection of server and storage systems in heterogeneous and legacy environments.

New enhancements such as In-band Port Virtualization™ and SAN Monitoring make it possible to install the appliance and migrate data with no system outage. For the FlexDM customer, this means migrations can be performed while systems and applications remain online and without changes to servers, storage or SAN.



FlexDM No-Outage Migration

Easier Setup, Less Complexity, Faster Migrations

Block-level SAN virtualization technology enables the appliance to serve as a transparent “SAN connection platform” to enable migration among any host or storage systems, including legacy systems. Transparent connection also eliminates time-consuming configuration by enabling migration between any host and storage system, without modifying host OS, drivers, Fibre Channel switch, or connection interface. Operation is simple, and once the migration appliance is installed, Vicom can manage the entire migration remotely. The Vicom appliance moves data independent of servers and storage online at 100 GB/hr to 200 GB/hr per storage and offline at 500 GB/hr to 1.2 TB/hr per storage system.

Time and Labor-Saving Automation

The high-speed, any-to-any connection capability of the FlexDM appliance is complemented by SAN discovery and migration automation software. These software tools have been designed to deliver problem-free migrations in heterogeneous enterprise environments with only a few hours of setup and preparation by a Vicom migration specialist.

Discovery software first maps the SAN infrastructure in a matter of minutes, verifying the SAN topology before the migration is started. Next, the SAN map is downloaded into the appliance, enabling connections and migration logic to be tested, ensuring problem-free migrations. These pre-checks eliminate human errors, reducing total project time by weeks or even months.

Migration Process

Developed and refined through delivery of enterprise migrations, Vicom uses a four-step migration process to simplify migration management and facilitate organizational communication and coordination. These processes include discovery, planning, preparation, and data migration.



Under FlexDM turnkey services, Vicom assumes responsibility for all process steps. Under the migration assistance options of FlexDM Data Center Migration Services, process steps are handled either by Vicom or the customer, depending on service specifications.

- **Discovery.** Site survey software automatically gathers SAN configuration information including number of drives, drive size, drive ID.
- **Planning.** Discovery information is used to create a Migration Plan and reference document for the migration that receives approval by participants before the migration proceeds. Migration planning includes action item assignment, key contacts, source-to-destination mapping and a setup diagram. The Migration Plan also covers potential risk factors and contingencies such as shutdown, bring-up, and fallback implementation.
- **Preparation.** To verify physical and logical migration feasibility, the migration plan is tested against the physical configuration and connections.
- **Migration.** Data is migrated to new storage system automatically according to the migration plan. Upon completion of the migration, data migration logs and LUNs are tested for successful migration. The migration appliance is removed from the SAN.

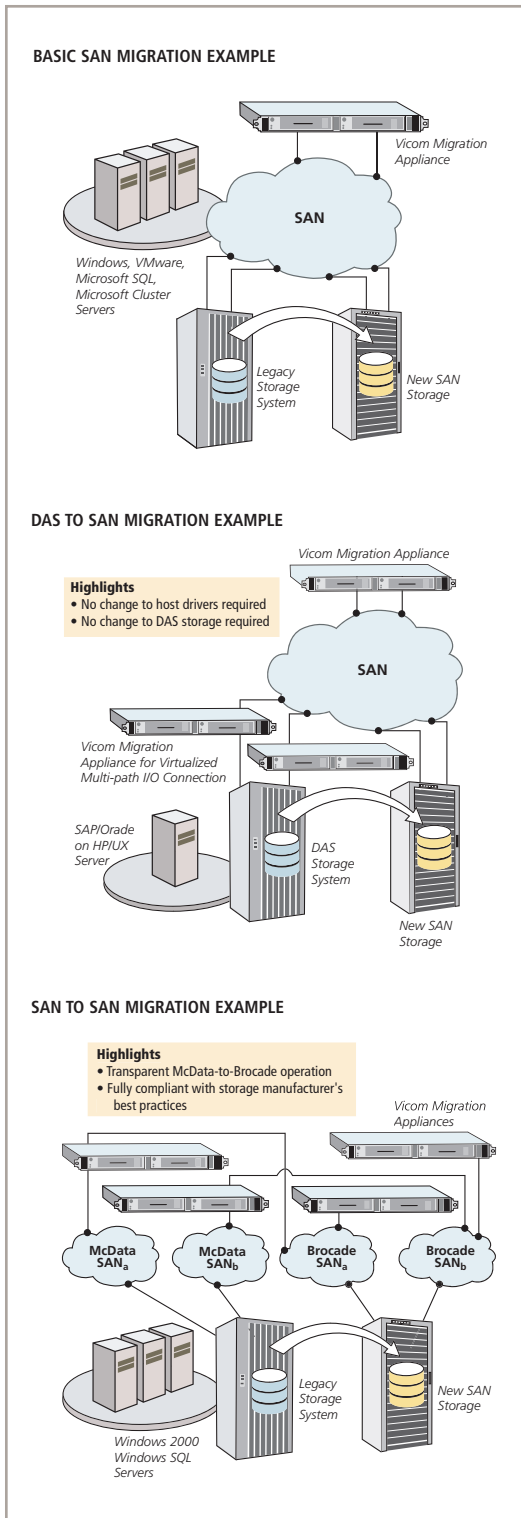
Once this process is completed, servers are remediated to the new storage by either Vicom or customer. A migration completion report is then sent to all migration participants.

Management by Experienced Migration Team

While the FlexDM technology and software provide a powerful foundation for complex data migrations, every migration is unique. A key strength of FlexDM services are the company's migration specialists who manage, deliver and support each migration. Vicom specialists have managed hundreds of enterprise migrations under a wide range of configurations and conditions. These include SAN-to-SAN migrations, legacy storage/server data migrations, and migration of entire data centers between remote sites.

Call for a Quote Today

Call your Vicom migration specialist today at 1-888-397-1181 or e-mail sales@vicom.com for a quote on your specific migration requirements.



The Diagrams Above Depict Examples of Actual DMS Migrations

FlexDM Migration Appliance Specifications*

Migration modes	Offline or online
Data migration speed	Up to 7 TB/hr per appliance (maximum rated) based on I/O capabilities of storage system. Offline: 500GB/hr – 1,200GB/hr per storage, typical. Online: 100GB/hr – 200GB/hr per storage, typical.
Operating system support	Windows (NT/2000/2003/2008), Sun Solaris, HP/UX, IBM AIX, Linux, VMWARE, Novell Netware, OpenVMS, Mac OS X
Middleware support	Windows Cluster, IBM HACMP, IBM VIO, HP Service Guard, VERITAS Cluster, Novell Cluster, VERITAS Volume Manager, Power Path Volume Manager
Multipath driver support	NetApp Snap Drive (MPIO), EMC Power Path, IBM SDD, LSI RDAC, Hitachi HDLM, Sun MPxIO, HP PVLINKS, QLogic QDirect
HBA	Emulex, JNI, IBM, HP, SUN, QLogic, ATTO, Brocade
SAN Boot LUN Migration	Windows (2000, 2003), Solaris, AIX, Open VMS, Linux, and Novell
Storage systems	NetApp FAS Series, EMC DMX/Symmetrix/Clariion, Hitachi, IBM DS Series/ESS/FAST, HP EVA, HDS, Sun StorEdge/STK, LSI, Pillar Data, 3PAR, Xiotech, Compellent
Fabric	Brocade, McData, Cisco (VSAN supported), QLogic.
Fabric type	Fabric-attached and SAN to SAN
DAS	FC-AL, SCSI or SSA-attached
Migration self-checks	Automated LUN by LUN verification of migration plan vs. actual configuration information such as WWN, drive ID, drive capacity, LUN source/destination membership, and whether destination LUN contains data or not.

* Specifications are subject to change. Check with your Vicom representative on the support of your specific configuration.



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Vicom Systems

Vicom Systems is a privately held company located in Santa Clara, California. Vicom specializes in the delivery of transparent, wire speed data services for systems and storage. Vicom delivers on the long-standing promise of SANs: seamless consolidation, any-to-any connection, simplified management, and high availability. Vicom's customers include Deutsche Bank, Wells Fargo, Bloomberg, Caterpillar Tractor, Comcast, NFL Films, and Korean Broadcasting.