



**NetApp™**  
Go further, faster

Software

# Data ONTAP 7G Operating System

Streamline your enterprise data management with our flexible, scalable operating system



## KEY BENEFITS

### Adapt to change

Maximize service levels to your business and technical applications with flexible provisioning that enables you to adapt your storage to fit your evolving requirements.

### Enhance data availability

We help protect your mission-critical data while keeping it instantly available throughout your organization.

### Save storage, power, and space

Store more information on less disk space, saving power, cooling costs, and space.

### Increase productivity

Maximize staff productivity and get to market faster with our operating environment, which is optimized for virtualization.

### Lower TCO

Lower your total cost of ownership through simplified deployment, administration, and management.

## THE CHALLENGE

### Managing growth and change

In today's rapidly changing business climate, your enterprise demands cost-effective, flexible data management solutions that can handle the unpredictable and explosive growth of storage in your heterogeneous environment. As your business expands, you need your data to work for you. You're looking for efficiency. You want data management that's able to grow with you as your storage needs explode. It's got to be flexible enough to adapt to and protect your diverse business environment. You want a system that allows you to effectively manage your resources, something simple—and something you can afford.

## THE SOLUTION

### Implement our scalable, flexible Data ONTAP 7G operating system

NetApp storage solutions help you manage data in your enterprise environment with a scalable and flexible operating system we call Data ONTAP® 7G.

Data ONTAP 7G provides:

- More efficient storage
- High availability
- Business continuance
- Quality of service
- Reduced storage management complexity

## MEET DIVERSE NEEDS

Our innovative Data ONTAP 7G architecture works together with our storage systems to meet your needs, from small workgroups to enterprise data centers. Our software integrates seamlessly with UNIX, Windows, and Web environments. You get scalable performance and a flexible storage environment with solutions that store and serve your applications, consolidate your data, and provide reliable data access throughout your enterprise.

The Data ONTAP 7G operating system simplifies your management and optimizes storage utilization by combining our patented file-system technology and a microkernel design, giving you the following benefits.

### Adapt to change quickly and easily

Flexible volumes don't require repartitioning. Now you can more easily tailor the data to fit your needs. And even better, you can do it more quickly with a smaller overhead. A quicker response means a more nimble business.

### Improve quality of service

With FlexShare™, you can consolidate disparate applications, prioritize specific data sets, and dynamically adjust priorities as the needs arise. You can use FlexShare to host multiple workloads on a single NetApp system and then assign individual priorities to each.



### **Reduce costs**

Now you can store more data in less disk space because we integrated data deduplication and thin provisioning into Data ONTAP 7G. FlexVol® technology ensures that you use your storage systems at maximum efficiency, thus reducing the hardware investment to a minimum. Not only do you reduce the amount of physical storage, but you also see significant savings in power, cooling, and data center real estate costs.

### **Buy less storage**

You can consolidate hundreds of terabytes on a single storage system because our operating system is so adept at taking advantage of multiple processors. It's the perfect fit for any business or technical application.

### **Share heterogeneous data throughout your company**

With Data ONTAP 7G, you have seamless access to data using block- and file-level protocols on a single storage system. We provide block-level data access over a Fibre Channel SAN fabric using FCP and over an IP-based network using iSCSI. Our SecureShare® cross-protocol locking technology helps ensure that you won't compromise security, compatibility, or performance when sharing heterogeneous data.

### **ENHANCE DATA AVAILABILITY**

We also help you reduce costly downtime and maximize access to your mission-critical data. Field tests reveal that Data ONTAP 7G with its optional software capabilities delivers 99.999% availability.

Data ONTAP 7G standard features and optional capabilities that contribute to this high level of data availability include:

- WAFL® (Write Anywhere File Layout) file system
- Snapshot™
- FlexClone®
- Multipath high availability
- Active-active controller failover
- RAID-DP®
- SyncMirror®
- Patent-pending block-level checksum capability

### **Ensure business continuance and compliance**

We understand that lengthy disruptions to information access and noncompliance with records retention regulations are simply not options in your business. Data ONTAP 7G includes innovative, disaster-tolerant data protection and recovery features. You get business continuance and disk-based data permanence features for regulated and reference data.

### **Extend data protection**

With NetApp Snapshot technology you can provide near-instantaneous file-level or full

data set recovery. You get up to 255 data-in-place, point-in-time images per volume. Unlike snapshot implementations from other vendors, NetApp Snapshot copies are nearly instantaneous, and they require minimal disk space overhead. They are uniquely suited for protecting your production data.

Integrated RAID provides you with cost-effective protection against multiple disk failures and errors. Our double-parity RAID-DP (our high-performance RAID 6 application) helps you protect against disruption of service to users.

### **Lower TCO**

Data ONTAP 7G enables greater efficiency and productivity in your business by simplifying the deployment, administration, and management of your storage infrastructure.

### **Deploy quickly and easily**

You can quickly configure and install our operating system using our setup wizard. Because we use standard naming and authentication services, you'll find our software easy to deploy as it seamlessly integrates into your existing UNIX and Windows environments.

### **Manage with ease**

Using NetApp Operations Manager, you can centrally manage multiple systems throughout your enterprise. We make it easy: wizards guide you through common management operations.

SOFTWARE/FEATURE	FUNCTION	BENEFIT
<b>NetApp Deduplication</b>	General-purpose deduplication for removal of redundant data objects	Reduces the amount of storage you need to purchase and maintain
<b>FlexCache™</b>	Caches NFS volumes for accelerated file access in remote offices and for server compute farms	Improves your system's performance, response times, and data availability
<b>FlexClone</b>	Instantaneously creates file, LUN and volume clones without requiring additional storage	Saves you time in testing and development and increases your storage capacity
<b>FlexShare</b>	Prioritizes storage resource allocation to highest value workloads on a heavily loaded system	Provides you with better performance from designated high-priority applications
<b>FlexVol</b>	Creates flexibly sized LUNs and volumes across a large pool of disks and one or more RAID groups	Ensures that your storage systems are used at maximum efficiency and reduces your hardware investment
<b>LockVault™</b>	Creates WORM-protected archives for unstructured files by combining SnapLock® and SnapVault®	Assures that you comply with record retention regulations, thus avoiding lengthy disruptions to your business
<b>MetroCluster</b>	An integrated high-availability/disaster recovery solution for campus and metro-area deployments	Assures you of immediate data availability if a site fails
<b>MultiStore®</b>	Securely partitions a storage system into multiple virtual storage appliances	Allows you to consolidate multiple domains and file servers
<b>Operations Manager</b>	Manages multiple NetApp systems from a single administrative console	Simplifies your NetApp deployment and allows you to consolidate management of multiple NetApp systems
<b>Protection Manager</b>	Backup and replication management software for NetApp disk-to-disk environments	Lets you automate data protection, ensuring that you have mistake-free backup
<b>SnapDrive®</b>	Provides host-based data management of NetApp storage from Windows, UNIX, and Linux® servers	Allows you to initiate error-free system restores should servers ever fail
<b>SnapLock</b>	Write-protects structured application data files within a volume to provide WORM disk storage	Provides you with worry-free compliance with records retention regulations
<b>SnapManager®</b>	Provides host-based data management of NetApp storage for databases and business applications	Lets you automate error-free data restores and provides you application-aware disaster recovery
<b>SnapMirror®</b>	Enables automatic, incremental data replication between systems: synchronous or asynchronous	Provides you with flexibility and efficiency when mirroring for data distribution and disaster recovery
<b>SnapMover®</b>	Enables rapid reassignment of disks between controllers within a system, without disruption	Lets you load balance an active-active controller system with no disruption to data flow
<b>SnapRestore®</b>	Rapidly restores single files, directories, or entire LUNs and volumes from any Snapshot backup	Instantaneously recovers your files, databases, and complete volumes from your backup
<b>Snapshot</b>	Makes incremental, data-in-place, point-in-time copies of a LUN or volume with minimal performance impact	Enables you to create frequent, space-efficient backups with no disruption to data traffic
<b>SnapValidator®</b>	Maximizes data integrity for Oracle® Databases	Allows you to enhance the resiliency of Oracle Databases so they comply with Oracle HARD initiative
<b>SnapVault</b>	Exports Snapshot copies to another NetApp system, providing an incremental block-level backup solution	Provides you with cost-effective, long-term backups of disk-based data
<b>SyncMirror</b>	Maintains two online copies of data with RAID-DP protection on each side of the mirror	Protects your system from all types of hardware outages, including triple disk failure
<b>System Manager</b>	Provides setup, provisioning and configuration management of a Data ONTAP storage system	Simplifies out-of-box setup and device management using an intuitive Windows based interface



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NetApp creates innovative storage and data management solutions that help you accelerate business breakthroughs and achieve outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at [NetApp.com](http://NetApp.com).

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