Deduplication backup target appliances have played an instrumental role in reducing or eliminating tape for backup. This research will help storage professionals shortlist 11 vendors that offer such appliances.

**Strategic Planning Assumption**

By 2018, 50% of applications with high change rates will be backed up directly to deduplication target appliances, bypassing the backup server, up from 10% today.

**Market Definition/Description**

The deduplication backup target appliance market is defined as a group of disk appliances that are built as backup targets for heterogeneous backup software applications. Such an appliance is defined as one that is optimized for the backup workload, has native deduplication and often compression capabilities, and acts as a disk target for external backup servers or application-native backup engines. The native deduplication and compression capability does not come from a commercial backup software solution.
Vendor Strengths and Cautions

Dell

Although late to the market, Dell has started to ramp up the sales and marketing of its deduplication backup target appliances, leveraging its server and storage presence in small or midsize businesses.
(SMBs), and, increasingly, its stand-alone backup/recovery solutions, together with its NetVault software. The DR4000 series delivers decent in-line deduplication ratios, often with more affordable pricing than the competition. Dell recently launched the DR6000 series with larger capacity and a virtual appliance. Besides tight integration with Dell’s NetVault, the DR series also has solid support for Symantec's backup applications, as well as for CommVault and Veeam.

**Strengths**

- Dell has good integration between its DR series and its backup software, such as support for Rapid Data Access.
- Its DR series supports most commonly seen backup applications and utilities used by SMBs.
- Dell offers the innovative Rapid Network File System (NFS) and Rapid Common Internet File System (CIFS) functions, which provide source-side deduplication for NFS and CIFS backup.

**Cautions**

- Dell’s DR series lacks large enterprise functions, such as large capacity, Fibre Channel and NDMP support.
- The DR series has weak functions to replace remote tape vaulting services, because it doesn’t support encryption at rest or public cloud storage.
- Some references desire better reporting capabilities.

**EMC**

EMC has achieved strong commercial success with its Data Domain deduplication backup appliances. The Data Domain series offers a wide variety of configurations, and competitive deduplication capabilities and ingest speeds. It stands out with the broadest ecosystem of backup and enterprise application support, including deeper integration with EMC’s Avamar and NetWorker via Data Domain Boost. Customers often comment favorably on Data Domain’s reliability, functionality and ease of use. Although it lacks a scale-out architecture, Data Domain does offer data-in-place upgrades via swapping controllers.

**Strengths**

- EMC’s Data Domain has become the overall benchmark for deduplication backup appliances, because of its strong adoption and functionality.
- Data Domain has wide support and integration with backup software and enterprise applications, allowing application owners to manage their own backup/recovery.
- Many customers have used Data Domain to replace tape completely in their backup infrastructure.
Cautions

- Most customer complaints about Data Domain are about its pricing being expensive.
- Data Domain lacks a scale-out architecture for easy upgrades and migration, and customers can’t scale performance and capacity separately.
- Data Domain cannot turn off deduplication to support a nondeduplicated disk shelf, as some customers would prefer.

ExaGrid Systems

ExaGrid Systems is successful in the midmarket and in small enterprises, with its focus on product reliability, simplicity, performance, affordability and customer support. Unlike many competing products that apply in-line deduplication, the EX product line does postprocess deduplication after a full copy of backup data is stored in a landing zone within the appliance. This architecture eliminates the need to rehydrate data before restore, when mounted for instant virtual machine recovery, and when making a tape copy. It offers more predictable back-end storage at somewhat of a compromise in back-end storage efficiency. ExaGrid’s products also tout a grid architecture that can scale out to 14 nodes (as of August 2014) for parallel processing, load balancing and easy upgrades. ExaGrid assigns a dedicated technician for each account, resulting in high customer satisfaction.

Strengths

- ExaGrid has shown a good product track record, and the company is profitable and cash positive.
- The vendor’s grid architecture offers the pay-as-you-grow benefit of increasing ingest rate and capacity, and offers the same restore throughput as ingest throughput.
- ExaGrid supports a wide range of backup applications and utilities, and has deeper integration with Veeam than many competitors.

Cautions

- ExaGrid has limited adoption and support capabilities in regions outside North America.
- Currently, the largest configuration is below 500TB, limiting ExaGrid’s appeal to large enterprises.
- The vendor has very limited cloud support.

FalconStor

FalconStor was one of the earliest product providers in the backup appliance market. The vendor has been through many difficulties since 2009, but recent improvements in finance, R&D, and product management and execution, along with a joint development project with Violin Memory, suggest the new management team may possibly turn FalconStor around. The vendor is refocusing
on enterprise clients and rebalancing between OEM and branded businesses. The recently announced FalconStor Optimized Backup and Deduplication Solution 8.0 combines its Virtual Tape Library (VTL) and its File-interface Deduplication System (FDS) into one solution with a single repository.

**Strengths**

- FalconStor’s solution offers good availability and performance with its scale-out, redundant architecture.
- The solution offers options of in-line, postprocess and concurrent deduplication. Users can change between deduplication methods on the fly, without restarting the backup job.
- FalconStor’s solution provides rich integration features with a tape environment, such as tape consolidation, multitape export, autotape caching and autoarchive.

**Cautions**

- The vendor’s deduplication backup target appliances lack integration with database-native backup utilities, such as Oracle Recovery Manager (RMAN) and Microsoft SQL dump solutions.
- Some customers report that the administrative console and reporting capabilities are challenging to navigate.
- Changes across the executive team, changing visions and recent past financial challenges have raised concerns for some customers as FalconStor refocuses itself.

**Fujitsu**

Fujitsu offers two deduplication backup target appliance products, Eternus CS800 and CS8000. The CS800 is a point deduplication product focusing on SMBs, while the CS8000 (known in Japan as Eternus VT600) is a high-end solution with outstanding scalability in performance and capacity, making it a consolidation disk target for various backup and archiving applications. The CS8000 is mainly used in large enterprises with a mixed computing (mainframe, Unix and x86) and storage (backup and archive, disk and tape) environment. Although the CS8000 has been mainly used as a VTL, other non-VTL use cases are increasing. Both the CS800 and CS8000 use the deduplication algorithm from Quantum, but the CS8000 has distinct hardware and management capabilities in the market. Fujitsu’s major presence is in EMEA and Japan.

**Strengths**

- The CS8000 enables users to consolidate all backup and archive targets (both tapes and disks, with or without tape virtualization) into one unified platform. It delivers a heterogeneous storage pool for different host (mainframe, Unix and x86) and storage applications.
- The CS8000 offers separate scale in compute and storage, and supports both deduplicated and nondeduplicated storage for different workloads.
The CS8000’s self-healing and tape refresh features improve storage reliability. Its synchronous mirror function offers the high availability desired by some customers.

Cautions

- The CS800 lacks differentiation in the low-end market.
- The CS8000 is mostly adopted in upper midrange and large environments with a tape and/or mainframe footprint. It typically does not participate in the lower end of the market.
- Some reference customers desire more integration with backup software.

HP

HP was relatively late to market with its StoreOnce appliances (powered by deduplication technology developed by HP Labs). However, HP has been able to quickly ramp up market awareness and adoption via initiatives such as a data reduction guarantee program and the bundling with its 3PAR StoreServ storage array. Offering a wide range of configurations — from a virtual appliance to high-end, high-availability pairs with a global namespace — the StoreOnce series has competitive ingest speed and easy management. HP is developing a library of data formats of various backup applications so that its deduplication algorithm can automatically detect the format and adapt. The new StoreOnce Federated Catalyst offers global deduplication in a single storage pool across multiple nodes. The latest release, in June 2014, supports nondeduplicating network-attached storage (NAS) shares for archiving.

Strengths

- HP has invested heavily in developing and selling StoreOnce, and it is likely to continue such efforts.
- The high-end StoreOnce models support high availability, with automatic restart of failed jobs and global deduplication across nodes.
- StoreOnce has strong integration with a few backup applications, including HP’s Data Protector and Symantec OpenStorage Technology (OST)-based applications.

Cautions

- HP’s entry and midrange models do not have scale-out and failover high-availability capabilities.
- The StoreOnce Catalyst has limited support for backup applications and utilities, compared to the market leader.
- Some reference customers desire deeper reporting functions and support of mixed disk drives.
IBM

IBM’s ProtecTIER solution is available as a gateway and as an integrated solution. Gartner typically sees the solution deployed using the System Storage TS7650G ProtecTIER Deduplication Gateway along with an IBM disk array, such as the XIV or Storewize V7000. Additional storage options are also supported. When IBM came to market with ProtecTIER many years ago, it was one of the fastest and most scalable solutions in the industry; however, over the years, this differentiation has faded. IBM has often been late adding features (e.g., replication options, support for more than the VTL interface, native encryption and shredding, etc.). ProtecTIER is still usually attached via the VTL protocol, but CIFS, NFS and Symantec OST are supported. IBM claims linear performance as capacity increases. Gartner sees fewer customer bids and inquiries regarding ProtecTIER as of late 2013 and thus far in 2014, compared to prior years.

Strengths

- The data restore functionality performs faster than the backup capability.
- There is good product integration and a price advantage when combined with IBM’s Tivoli Storage Manager backup application.
- The gateway option allows for legacy or new IBM storage to be utilized, potentially saving on implementation costs.

Cautions

- Customers have raised viability concerns regarding IBM’s continued product plans in this market.
- There is a need to purchase the deduplication license by the terabyte (TB), separately from the ProtecTIER engine.
- ProtecTIER is lacking some advanced features, such as data shredding and OST Auto Image Replication (AIR) support.

NEC

NEC’s HYDRAstor is available in a variety of configurations that range from a single Hybrid Node to up to a mix of 165 Hybrid Nodes for throughput and capacity, and Storage Nodes for capacity. Nodes can be added or retired, and automatically load balanced and defragmented, with up to three generations of technology being supported concurrently. The solution features a number of unique and highly engineered capabilities, such as the use of erasure coding for data availability, along with its DataRedux in-line global deduplication. HYDRAstor is attached via file or OST protocols, with CIFS being the most common, but with petabyte (PB)-sized implementations favoring NEC’s expansive OST support. The majority of sales are by NEC’s direct sales force in Japan, and worldwide traction in the media and entertainment vertical, in particular, has been strong.
Strengths

- The scalable grid architecture design, with a mix of up to 165 nodes, allows for the largest theoretical expansion of all the solutions reviewed.
- Customers consistently cite ease of installation, configuration and ongoing management enabling a "set and forget" management approach.
- HYDRAstor has many unique features, such as configurable resiliency and availability via erasure coding, data shredding and very broad encryption and locking capabilities.

Cautions

- HYDRAstor is focused on the high-end enterprise market, and may not be a fit for smaller environments.
- The vendor has limited sales outside of Japan; however, the largest installations are in the United States.
- There is no VTL interface offered.

Quantum

Thanks to its well-established tape library business, Quantum has good brand awareness and a large installed base in the backup and recovery market. Quantum delivers a tiered solution that integrates deduplication appliances and physical tape libraries. Quantum’s DXi appliance has a wide range of configurations, including virtual appliances to address backup requirements from SMBs to large enterprises. Quantum has been most successful with its midrange products, but recent sales strategic initiatives indicate the company is focusing more on large enterprises.

Strengths

- Tape integration is Quantum's top differentiation, compared with its competitors. The vendor provides a management console with rich features to manage both tape and disk.
- Quantum’s "pay-as-you-grow" hardware licensing and all-inclusive software licensing model gives users better flexibility and affordability.
- A patented variable-length in-line deduplication algorithm provides a good deduplication ratio.

Cautions

- Quantum's quieter marketing and smaller sales resources, compared to market leaders, have resulted in less-than-stellar growth in user adoption and track record.
- Quantum DXi’s Accent deduplication distribution software only supports Symantec NetBackup and Backup Exec.
- Quantum doesn’t support application-native backup tools (e.g., Oracle RMAN).
Riverbed

Riverbed’s SteelStore (formerly Whitewater) appliances aim to replace tape backup and vaulting by leveraging public cloud storage and the company’s flagship WAN optimization and deduplication. Offered as physical and virtual appliances and Amazon Elastic Compute Cloud (EC2) instances, the appliances have increased scalability over the years to support midsize production environments and widened support of backup applications and utilities, like Oracle RMAN and SQL dump. Security measures include encryption for data in-flight and at rest, as well as role-based rotation access. A few customers, including mainframe customers, have sent hundreds of TBs to PBs of data to Amazon Glacier using Amazon Web Services Direct Connect (10Gb links). Reference customers have mixed views about the cost-effectiveness of the solution.

Strengths

■ Riverbed’s vision of replacing tape backup and vaulting with local disk cache and public cloud storage is in line with many customers’ interest, despite the immature stage of public cloud storage.
■ The SteelStore appliances support a good number of public cloud storage providers and common backup applications and utilities.
■ Customers praise SteelStore’s easy, fast setup and informative dashboard, as well as its overall reliability.

Cautions

■ As a networking company, Riverbed has had a limited track record and success in selling its SteelStore backup appliance.
■ The vast majority of customers are protecting relatively small environments with under 100TB of production data.
■ Initial seeding of backup data to the cloud could be very slow and may require traditional local backup in parallel during the seeding process. Recovery from the cloud could be very slow as well.

Sepaton

Sepaton is a private company that has been offering backup target appliances since 2004. The vendor targets very large enterprises with its S2100 VTL. The S2100 offers content-aware postprocessing DeltaStor deduplication, and has a grid architecture that can expand with nodes that add capacity and performance. Historically, much of Sepaton’s business was derived from an OEM arrangement with HP; however, in the last few years, HP has favored its own solution and Sepaton has cultivated a close joint partnership with Hitachi Data Systems for expanded sales. In addition to an integrated appliance, Sepaton has expanded its offering to include a gateway solution that is certified with a range of Hitachi Data Systems storage arrays. The vendor is in transition, working on delivering its new VirtuoSO object-based, scale-out platform that will offer...
NAS interfaces as well as on-the-fly hybrid (in-line and postprocess) deduplication (targeted for availability at the end of 2014).

**Strengths**

- Sepaton's S2100 is highly scalable, ranging from 27TB to 3.1PB of usable disk capacity from a single appliance grid.
- The vendor was early to market with advanced features, such as automatic load balancing across nodes, fast space reclamation, secure erasure, integrated systemwide encryption, robust OST support and deep reporting via a cloud-based repository.
- The DBeXstream feature deduplicates large Oracle, SQL Server and SAP databases over multiple parallel backup streams and across multiplexed data volumes for faster backups.

**Cautions**

- Delivery of the new VirtuoSO architecture for file interface (including OST) and hybrid (in-line and postprocess) deduplication support is late to market.
- Today, only VTL and OST protocols are supported.
- With an entry capacity of 27TB, midsize and smaller companies may find the S2100 too large and costly for consideration.

**Vendors Added and Dropped**

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor’s appearance in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

**Added**

No vendors were added; this is a new Magic Quadrant.

**Dropped**

No vendors were dropped; this is a new Magic Quadrant.

**Inclusion and Exclusion Criteria**

The following inclusion criteria are used to determine which vendors will be covered in this Magic Quadrant research:
The appliance must be able to serve as a disk-based target for heterogeneous backup software applications and/or application-native backup utilities, such as Oracle RMAN.

The appliance must be available for purchase for on-premises deployment with a customer-owned license.

The vendor must achieve more than $5 million in annual revenue in the past calendar year.

The appliance must be commercially available for at least six months, with at least 10 active production customer references.

The vendor must actively market the appliance in at least two major geographic regions.

The following products are excluded from this research:

- Integrated backup appliances, which are all-in-one appliances, such as EMC Avamar and Symantec NetBackup Appliances, that have backup software on board and are evaluated together with backup software in "Magic Quadrant for Enterprise Backup Software and Integrated Appliances."

- Deduplication backup target appliances that are built for specific vendor applications, such as Oracle ZFS backup appliances, which only support Oracle applications.

- Cloud gateways or appliances that were built to replace on-premises primary arrays, such as those from Ctera Networks, Nasuni, Panzura and TwinStrata (recently acquired by EMC), are not included, although some of them may function as an on-premises backup target as one of their use cases.

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT provider performance to be competitive, efficient and effective, and to positively impact revenue, retention and reputation. Ultimately, technology providers are judged on their ability and success in capitalizing on their vision.

The seven criteria each vendor is measured on with regard to Ability to Execute are weighted based on their direct impact on user experiences with the product. They include:

- **Product or Service:** This is an assessment of the core goods offered by the technology provider that compete in and/or serve the specific market. This includes current product capabilities, quality, feature sets, skills etc., whether offered natively or through OEM agreements/partnerships, as defined in the market definition and detailed in the subcriteria.

- **Overall Viability:** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual
business unit to continue to invest in the product, continue offering the product and advance the state of the art within the organization’s portfolio of products.

- **Sales Execution/Pricing:** This is an assessment of the technology providers’ capabilities in all presales activities and the structure that supports them. This includes deal management, pricing transparency and negotiation, presales support, and the overall effectiveness of the sales channel.

- **Market Responsiveness and Track Record:** This criterion includes the ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the provider’s history of responsiveness, and heavily considers the most recent three years.

- **Marketing Execution:** This is an assessment of the clarity, quality, creativity and efficacy of programs designed to deliver the organization’s message in order to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This mind share can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

- **Customer Experience:** This criterion assesses relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements, etc.

- **Operations:** This criterion assesses the ability of the vendor to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.
Table 1. Ability to Execute Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Product or Service</td>
<td>High</td>
</tr>
<tr>
<td>Overall Viability</td>
<td>Medium</td>
</tr>
<tr>
<td>Sales Execution/Pricing</td>
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<tr>
<td>Market Responsiveness/Record</td>
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<td>Marketing Execution</td>
<td>Medium</td>
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<tr>
<td>Customer Experience</td>
<td>High</td>
</tr>
<tr>
<td>Operations</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Gartner (July 2014)

Completeness of Vision

Gartner analysts evaluate technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs, and competitive forces and how well they map to the Gartner position on the future of backup and recovery. Ultimately, technology providers are rated on how impactful their products and their visions are, and whether they have helped shape new user behaviors and new trends in the market. While near-term (12-month) future visions and innovations are considered, long-term visions and plans carry very little weight in our evaluation, because plans do change.

The seven criteria each vendor is measured on with regard to Completeness of Vision are weighted based on their direct impact on user experiences with the product. They include:

- **Market Understanding**: This criterion includes the ability of the technology provider to understand buyers’ needs and translate those needs into products and services. Vendors that show the highest degree of vision not only listen and understand buyers’ wants and needs, but also shape or enhance those wants with their added vision.

- **Marketing Strategy**: This is an assessment of whether a vendor provides a clear, differentiated set of messages, consistently communicated throughout the organization and externalized through its website, advertising, customer programs and positioning statements.

- **Sales Strategy**: This criterion assesses the ability of the sales team to effectively and clearly communicate current capabilities, along with the future vision and road map, while also positively differentiating the offering(s) from the competition and alternative approaches.

- **Offering (Product) Strategy**: This is an assessment of a technology provider’s approach to product development and delivery that emphasizes differentiation, functionality and feature set
as they map to current and future requirements. Products are evaluated on functionality, reliability, usability and scalability.

- **Innovation**: This criterion assesses innovative or unique functions that resonate well with customers. This area evaluates overall product innovations, focusing on the areas that differentiate it from competitors.

- **Vertical/Industry Strategy**: This is an assessment of the technology provider’s strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including verticals.

- **Geographic Strategy**: This criterion assesses the technology provider’s strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the home or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market.

### Table 2. Completeness of Vision Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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</thead>
<tbody>
<tr>
<td>Market Understanding</td>
<td>Medium</td>
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<tr>
<td>Marketing Strategy</td>
<td>Medium</td>
</tr>
<tr>
<td>Sales Strategy</td>
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<tr>
<td>Offering (Product) Strategy</td>
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<tr>
<td>Vertical/Industry Strategy</td>
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<tr>
<td>Innovation</td>
<td>High</td>
</tr>
<tr>
<td>Geographic Strategy</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Gartner (July 2014)

### Quadrant Descriptions

#### Leaders

Leaders have the highest combined measures of Ability to Execute and Completeness of Vision. On the execution side, Leaders’ products have demonstrated innovation, reliability, broad platform support, scalability and ease of use. Leaders tend to have the market share, credibility, and marketing and sales capabilities needed to drive the acceptance of new technologies. They have a proven track record of financial performance for the product being evaluated and an established,
strong market presence. On the vision side, Leaders are perceived in the industry as thought leaders, and their products are used as benchmarks to compete against.

**Challengers**

Challengers demonstrated solid execution on the product being evaluated, but they have a more limited vision than Leaders, as they are not trendsetters. They have capable products and can perform well for many enterprises. These vendors have the financial resources to sustain continued growth. A Challenger may have a robust product, but has been slower to articulate how it will address future requirements. These vendors may not devote sufficient development resources to deliver products with broad market appeal and leadership features in a timely manner.

**Visionaries**

Visionaries deliver innovative products with capabilities that are often ahead of the mainstream in the market. However, they have not achieved solution completeness and the broad sales, marketing and mind share success required to give them the high visibility of Leaders. Some vendors move out of the Visionaries quadrant and into the Niche Players quadrant because their technology is no longer visionary (the competition caught up to them), and they have not been able to establish a market presence that justifies moving up to the Challengers quadrant.

**Niche Players**

Niche Players are often specifically and consciously focused on a subsegment of the overall market, such as SMBs, large enterprises or select geographies. As a consequence, they lack the broad capabilities for customers of all sizes and global support for all major geographies. Niche Players could be small vendors that have fallen behind in innovation and fail to generate strong revenue streams. They could also be large vendors for which the products being evaluated are niche products among their wide portfolios, and don’t generate enough internal investment and support to grow their presence in the market.

**Context**

Migrating from tape backup to disk backup has been a major component of backup infrastructure modernization for the past decade. Many organizations want to reduce or eliminate the operational complexities and costs associated with tape backup, and leverage disk-based technologies to improve their recovery time objectives (RTOs) and recovery point objectives (RPOs). When users evaluate disk-based backup solutions, deduplication backup target appliances are often on their shortlists, as they can drastically improve backup storage efficiency compared to tape. With their native replication to remote sites, these appliances have been widely deployed to reduce or replace the tape footprint in the backup infrastructure.
Market Overview

Deduplication is considered to be a transformational technology by Gartner, because this technology is instrumental in modernizing traditional tape backup. Due to the high duplicated nature of traditional backup jobs, which are often implemented as daily incremental backups with a weekly full backup, deduplication backup target appliances can often achieve 10-times to 30-times the storage capacity reduction ratio. The early hype about these appliances has quieted down, as reality set in and users began to recognize some limitations. For example, deduplication ratios often fell short of user expectations, because not all workloads are deduplication-friendly. Deduplication backup appliances with robust designs and proven records tend to come at a cost premium, and when multiple appliances are needed in a large environment, it is usually not a small investment. Moreover, there may be compatibility issues between the target appliance and customers’ existing backup software, as some advanced features of backup software may not be supported. Meanwhile, many backup software applications have implemented native deduplication capabilities, claiming "good enough" deduplication functionality.

Despite these obstacles, deduplication backup target appliances have developed into a sizable market with healthy revenue growth. Gartner estimates that these appliances generated $1.74 billion in revenue in 2013, growing 18% over 2012. While EMC continues to claim the lion’s share of the market, late-comer HP is making good progress, and Fujitsu reported some large-scale adoption in Europe and Japan. Quantum remains a solid contender, whereas Dell is ramping up its DR series appliances for SMBs. ExaGrid and Sepaton are positioned as Visionary vendors due to their innovative architectures. As more users want to leverage native disk-based functions, the high-end appliances with a strong focus on VTL functionality have started to see their business declining. To meet some vertical industries’ requirements that certain backup data needs to be retained for multiple years, some deduplication backup target appliances have developed a lower-cost, long-term retention tier. Public cloud storage integration is not present with most appliances, which were designed for on-premises deployments. Only one appliance (from Riverbed) is sending the bulk of backup to the public cloud storage, such as Amazon Simple Storage Service (S3).

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"How Markets and Vendors Are Evaluated in Gartner Magic Quadrants"

"Magic Quadrant for Enterprise Backup Software and Integrated Appliances"

Evidence

Gartner increasingly hears from user clients that they want to significantly reduce or even completely replace tape backup in their data center infrastructure. The user polling at our U.S. Data Center Conference in December 2013 showed that only 17% of the 236 respondents back up directly to tape. While 51% of the respondents back up to disk or VTL first and then to tape, 23% have eliminated tape completely in their backup environment. These results are not surprising, as
deduplication backup target appliances have been the enabling technology that drives this paradigm shift.

Evaluation Criteria Definitions

Ability to Execute

**Product/Service:** Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability:** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

**Sales Execution/Pricing:** The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness/Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization’s message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This “mind share” can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.
Completeness of Vision

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor's underlying business proposition.

**Vertical/Industry Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.