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Maximizing the Benefits of Deduplication with EMC Data Domain and F5 ARX

As the amount of data under management continues to grow, companies are looking for new ways to control the increasing cost of storing and protecting that data. This joint solution from EMC and F5® Networks helps companies dramatically reduce storage-related costs and effectively manage their data growth.

EMC Data Domain is a market leader in deduplication storage solutions. The Data Domain system applies its proven inline data deduplication technology to the file storage infrastructure, resulting in significant capacity savings for data stored on the system. In addition, the Data Domain system provides savings in space, power, and cooling related to storing the data. As a result, the system's low cost characteristics make it ideally suited for long-term archive of file data. This classification of data can comprise the majority of customer data, translating into significant potential savings as it is moved to the Data Domain deduplication storage tier.

F5 ARX® solutions enable companies to maximize their potential cost savings from implementing Data Domain deduplication storage as an archival storage tier. With non-disruptive data migrations and automated management policies, ARX solutions seamlessly integrate Data Domain systems into existing storage infrastructures and reduce the cost and complexity of managing data across a multi-vendor, multi-platform tiered storage environment.

Key benefits

Dramatically Lower Costs

Automatically tier inactive or non-business critical files onto efficient Data Domain deduplicated storage systems.

Significantly Reduced Backup Times

Migrate inactive files off of primary storage to significantly reduce the size of your weekly backup data set.

Seamless Integration into Existing Environments

Deploy Data Domain systems into existing environments completely transparent to users or applications.

Challenges

Companies are faced with several fundamental storage-related challenges today:

- **Costs**
As more content is created and retained for longer periods of time, the amount of storage required has grown rapidly. As more and more storage devices are added, acquisition and management costs rise. Additional storage devices drive up power, space and cooling costs. Furthermore, growth means more data to backup which brings with it even more expenses.
- **Backup and Recovery**
More data lengthens already long backup times, while adversely affecting recovery time.
- **Inflexibility**
In traditional storage environments, users and applications are statically mapped to the physical file storage resources containing the data they need to access. In order to integrate new storage solutions, administrators have to break these static mappings, causing business disruption and requiring manual reconfiguration of user and application clients. This makes it challenging to take full advantage of the benefits offered by these new storage technologies.

Solution

Together, ARX file virtualization solutions and Data Domain deduplication storage systems provide a compelling new solution to address these challenges. ARX solutions automate the placement and movement of data between different tiers of storage, automatically classifying data according to business policy and placing it on appropriate storage devices. Data Domain systems provide a capacity-optimized, cost-effective repository for long-term archival of data.

Benefits and F5 value

Organizations that deploy ARX solutions with Data Domain storage systems can non-disruptively move appropriate data onto a deduplicated storage tier while continuing to present the data to users and applications as live data. This translates into several key benefits:

Dramatically lower storage costs

The automated tiering solution with ARX and Data Domain can help companies realize significant capital expenditure savings by automatically moving older, or non-business-critical, data off of expensive storage resources to more efficient, lower cost Data Domain systems. In addition to capital savings, this solution provides potential cost savings related to power, space and cooling.

Significantly reduce backup times and costs

The combined ARX–Data Domain solution also lowers costs related to backup. In most organizations the majority of data is rarely accessed. The automated tiering solution moves

this static data from expensive primary storage to a deduplicated secondary storage tier. This leaves only a small subset of the most active data on primary storage to be backed up regularly, while the data that has been moved to the deduplicated secondary tier can be backed up less frequently because it is not changing. This reduces the amount of data to be backed up, consequently lowering backup costs. In addition Data Domain deduplication storage eliminates redundancies for the most efficient use of available storage capacity. By reducing the amount of data that is backed up on a regular basis on primary storage, as well as the amount of data being backed up on secondary storage, backup times are significantly lowered.

Seamlessly Integrate into Existing Environments

ARX devices decouple user and application access to data from the physical location of the data. This allows companies to move data between heterogeneous storage devices without impacting users or applications. Consequently, companies can now integrate new storage technologies such as Data Domain deduplication storage into existing storage environments with minimal disruption and without affecting client access to data.

The combination of file virtualization and deduplication provides seamless access to efficient, cost-effective storage. Together, F5 and EMC offer organizations a compelling way to control storage related costs and cope with growth.

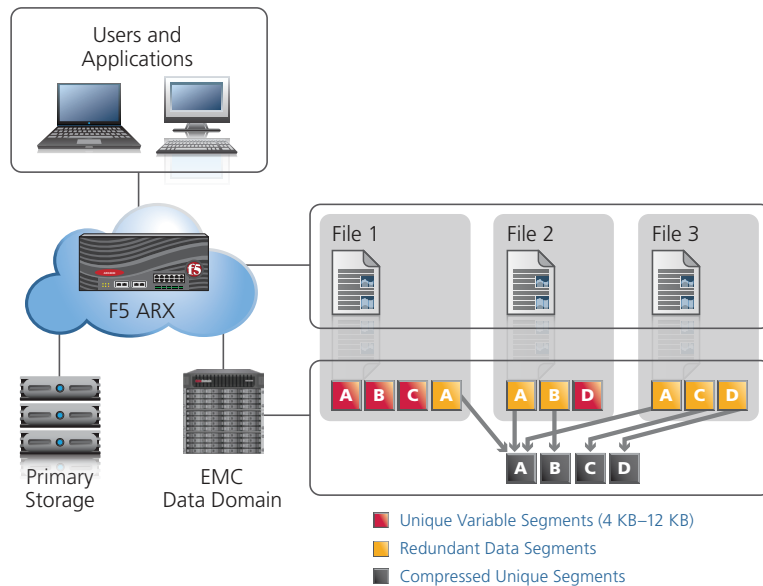


Figure 1: How Data Domain inline deduplication works

More Information

To learn more about F5 and EMC Data Domain, use the search function on F5.com to find these and other resources.

Deployment Guides

[Deploying the F5 ARX with the Data Domain Storage Systems](#)

Product Overviews

[ARX Series](#)

Datasheets

[ARX Series](#)

White Papers

[F5 ARX and Data Domain Deduplication Storage: Tiering Best Practices](#)

[Optimizing File Services with Deduplication and Virtualization](#)

Whiteboard Conversations

[Simplify Data Management with File Virtualization](#)

[Reduce Storage Costs through Automated Storage Tiering](#)

[Optimize Backups to Reduce Backup Windows and Costs](#)

[Maximize the Value of Existing Storage Assets](#)

[Hassle-free NAS Consolidation and Data Migration](#)

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