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Tiering to the Cloud with NetApp StorageGRID and F5 ARX

For many organizations struggling to manage rapid storage growth, cloud storage offers an attractive list of benefits – no upfront costs for capacity, 100% utilization for billed capacity, and little to no data center costs. However, deploying a cloud storage solution such as NetApp® StorageGRID® comes with a set of new operational challenges, including the need to identify files that are appropriate to store in the cloud and then migrating them without disrupting user access.

F5® ARX® helps IT organizations deploy and seamlessly integrate StorageGRID into their existing storage environments. ARX solutions enable data mobility in the file storage infrastructure which enables organizations to migrate file data without disrupting users and applications. ARX also provides data management policies to automatically identify and migrate appropriate files to StorageGRID based on customizable criteria. With F5 ARX, organizations can maximize the benefits that they realize from StorageGRID with a true lower total cost of ownership.

Key benefits

Seamlessly Integrate Cloud Storage

Deploy StorageGRID into existing environments and alongside physical storage infrastructure, completely transparent to users or applications.

Enable True Data Mobility

Migrate files between different storage resources for any reason and at any time, without downtime or disruption.

Maximize Storage Utilization

Automatically migrate appropriate files to StorageGRID based on customizable criteria such as file age, type, size, and more.

Transparent Access to Data

Maintain online access to data transparent to users and applications, regardless of its location in the data center or the cloud.

Reduce your Data Center Footprint

Focus management on the most active data, reducing the requirements for local storage capacity, backups, migrations, etc.

Lower Total Cost of Ownership

Realize the cost benefits of cloud storage without having to manually identify and migrate appropriate data sets.

Challenges

The cloud has the potential to change the way organizations manage storage. StorageGRID and other cloud storage solutions offer the flexibility to infinitely scale capacity, grow capacity on-demand, and pay only for the amount of capacity utilized. In addition, these solutions offload the day-to-day operational costs of managing inactive data to a service provider. However, integrating any cloud solution is not an easy task. As with any migration, physically moving files to a cloud platform can disrupt user access, require scheduled downtime and involve client reconfiguration. In addition, the latency and bandwidth costs of accessing data stored in the cloud places additional importance on identifying and migrating only the most appropriate data, a continual burden that can reduce many of the operational cost savings.

Benefits and F5 value

F5's Application Ready Solution for NetApp StorageGRID provides the following benefits to organizations, and their end users.

Seamlessly Integrate Cloud Storage

ARX solutions allow organizations to seamlessly integrate StorageGRID into existing storage environments. ARX devices present a virtualization layer, commonly referred to as a Global Namespace, through which users and applications can access their data. With a Global Namespace, client systems map to virtual file systems comprised of capacity from any underlying physical storage resources. The ARX can virtualize the StorageGRID appliance and seamlessly add any allocated capacity to the Global Namespace. This allows organizations to easily incorporate new cloud-based storage capacity from StorageGRID without affecting users and applications.

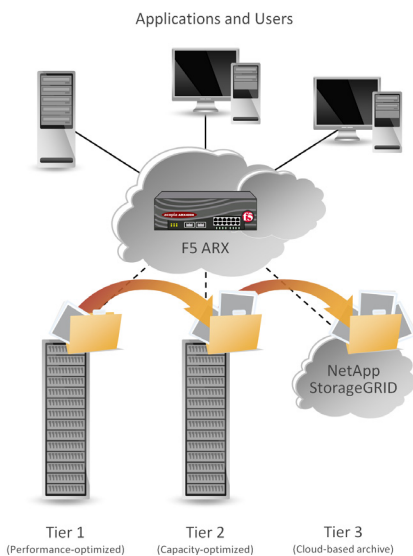
Enable True Data Mobility

After deploying StorageGRID, organizations still face the arduous task of having to migrate data to the cloud appliance from its existing locations in the data center. Data migrations using traditional tools and processes can be both time-consuming and labor-intensive as organizations manage the impact of disruption and business downtime. ARX solutions decouple the logical access to files from their physical locations to enable the transparent movement of file data between different types of storage. With ARX, data can be moved for any reason and at any time, without disruption to users and applications, to remove a major operational hurdle to deploying new storage systems and tiering to the cloud.

Migrate the Right Data to the Cloud

StorageGRID and other cloud storage solutions can dramatically reduce the costs of storing certain types of data. With inappropriate data, however, it can also dramatically increase the costs of accessing it. Data stored in the cloud must be accessed over the wide area network (WAN), which means that users and applications may experience additional latency when recalling files from the cloud to be read or written. In addition, accessing a large number of files stored in the cloud can consume unexpected amounts of bandwidth, with corresponding additional network costs.

ARX solutions can reduce the hidden costs of cloud storage by moving only appropriate types of data to the cloud. ARX devices provide automated storage tiering policies that can be customized according to each organization's business needs, based on flexible criteria such as file age (last modified or last accessed), file type, file size, etc. These policies can help ensure that only the most inactive data is tiered to the cloud.



Tiering to the Cloud with the F5 ARX and NetApp StorageGRID

Lower TCO

ARX solutions can help organizations further reduce the operational costs of tiering to the cloud through the combination of non-disruptive data movement and automated tiering policies

Transparent Access to Data

ARX solutions provide transparent access to all data, regardless of its physical location. The Global Namespace hides the physical details of underlying storage resources from users and applications, so client systems are not exposed to the physical location of their data. Whether in the data center or the cloud, users and applications continue to access their data in the same manner. Transparent access ensures that business is never disrupted, making it easier than ever to tier to the cloud.

Reduce Your Data center Footprint

By automatically migrating data that is rarely accessed or modified data to the cloud, ARX and StorageGRID greatly reduce the amount of data in the data center that has to be actively managed. This, in turn, not only reduces the requirements for storage capacity, which affects power, cooling, and floor space, but also the operational costs associated with day-to-day data management tasks, such as data migrations, capacity balancing, and storage provisioning. Organizations can focus staff on managing data that is in active use by the business, instead of lower-priority maintenance of aging and low-value data. In addition, using ARX to automatically tier inactive data to StorageGRID can also reduce the amount of data that needs to be backed up on a regular basis, shrinking backup windows and reducing consumption of backup media as well as associated backup costs.

Lower Total Cost of Ownership

While cloud storage can reduce the costs of managing storage for the majority of inactive data, there remains significant operational costs of manually identifying and physically migrating appropriate classes of data. ARX solutions can help organizations further reduce the operational costs of tiering to the cloud through the combination of non-disruptive data movement and automated tiering policies. And with ARX, users and applications can continue to access their data, whether it resides within the data center or in the cloud, without any additional IT overhead. Together, ARX and StorageGRID enable the tiering of file data to the cloud and lower the total cost of ownership for storage.

More Information

To learn more about F5 and NetApp StorageGRID, use the search function on F5.com to find these and other resources.

Deployment Guides

[Deploying the ARX with NetApp StorageGRID](#)

White Papers

[Intelligent File Virtualization with F5 ARX](#)

Analyst Reports

[Got files? Get Cloud!](#)

[File Virtualization: a Bridge to the Cloud](#)

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](#)

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