



# TOSHIBA

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Leon Roberge, Director, Information Systems, TAEC

## Toshiba America Electronic Components Completes Large-scale NAS Upgrade with F5 ARX

**Toshiba America Electronic Components (TAEC)** is an independent operating company owned by Toshiba America, Inc., a leader in advanced electronics. The San Jose, California division, which is responsible for the company’s semiconductor engineering, was facing significant challenges as it approached a lease-rollover necessitating a hardware upgrade of its NetApp™ Network-Attached Storage (NAS) environment as well as a major software upgrade. Toshiba needed a solution that would enable it to perform a complex migration of 70 terabytes of data without disruption to the critical design, verification, and test processes. By implementing F5 ARX® file virtualization, the company was able to complete the data migration without downtime. ARX has also enabled Toshiba’s IT staff to reduce operational expenditures and achieve greater flexibility in responding to changing business demands.

### Business Challenge

The development environment at Toshiba consisted of users distributed across multiple business units, as well as Sun and Linux compute nodes accessing data on multiple older NetApp devices. Toshiba wanted to move to newer NetApp devices, which required a data migration in excess of 70 terabytes (TB) in a 24x7 development environment with little tolerance for downtime.

In addition, a complex infrastructure with 10 different business units sharing many

volumes across several different filers made it disruptive to expand volumes and modify quotas as each individual business unit’s needs evolved. Toshiba wanted to move to the latest version of NetApp’s Data ONTAP™ software in order to leverage the FlexVol™ capability that would allow business units to expand capacity as necessary. This required a complex migration, consolidating data from multiple source volumes into discrete FlexVols on the new NAS devices.

### Overview

#### Industry

Technology manufacturing

#### Challenges

- Upgrade NAS infrastructure in a 24x7 environment without downtime
- Restructure data layout online
- Upgrade software with minimal disruptions

#### Solution

- Clustered ARX devices
- Automated data migration policies

#### Benefits

- NetApp platform upgraded and 70 TB of data migrated without disrupting access to data
- Greater flexibility to restructure data layout non-disruptively
- Cost savings through reduced management overhead, elimination of downtime, and automated migration

## Solution

After evaluating other solutions, the IT group selected F5 ARX intelligent file virtualization because of its unique ability to migrate huge volumes of data without disruption and in a way that ensured data integrity. Toshiba also required the unique flexibility of ARX file-level data migration policies to restructure data layout to better match the evolving needs of its business units.

Toshiba deployed a clustered pair of ARX devices to virtualize its NAS environment, ensuring that user and application access to data would not be disrupted during the migration to the new NAS infrastructure. This also ensured that the older series filers could be decommissioned without incurring downtime once the migration was complete.

## Benefit

Toshiba was able to perform a large-scale data migration and transition to a new NetApp platform in a fraction of the time it would have taken with other solutions. More importantly, the entire process was accomplished without impacting Toshiba's critical design, test and verification processes, enabling the IT organization to avoid service outages and to continue to meet the demands of its global organization.

"F5 ARX gives us capability to react to business unit requests without modifying the back-end systems—a significant operational and capital expenditure win for us," said Leon Roberge, Director, Information Systems, TAEC.

### Massive, non-disruptive online data migration

The ARX devices migrated more than 70 TB of data from multiple volumes on the source NAS devices to the FlexVol layout on the new devices, while maintaining

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uninterrupted access to the data throughout the sizeable migration.

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### Streamlined data layout, improved service to business units

ARX data migration policies provided online data migration and automated what would previously have been a manual task. In contrast to more rigid data migration utilities, ARX flexible migration policies enabled the IT staff to move to a new data layout as part of the migration process. And because the ARX devices performed online data migration, the critical development processes remained unaffected. This non-disruptive restructuring of the data layout enables the IT organization to better serve the needs of individual business units.

### Reduced operational expenditures and increased agility

Toshiba reduced management overhead by automating complex migration processes and eliminating the client reconfiguration associated with migration and decommissioning tasks. In addition, the new infrastructure

provides the company with the ability to respond to future business unit demands with greater agility, a critical benefit in an industry where meeting time-to-market objectives is essential to maintaining a leadership position.

F5 Networks, Inc. 401 Elliott Avenue West, Seattle, WA 98119 888-882-4447 [www.f5.com](http://www.f5.com)

F5 Networks, Inc.  
Corporate Headquarters  
[info@f5.com](mailto:info@f5.com)

F5 Networks  
Asia-Pacific  
[info.asia@f5.com](mailto:info.asia@f5.com)

F5 Networks Ltd.  
Europe/Middle-East/Africa  
[emeainfo@f5.com](mailto:emeainfo@f5.com)

F5 Networks  
Japan K.K.  
[f5j-info@f5.com](mailto:f5j-info@f5.com)

