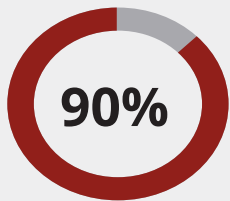


# Solve Enterprise Data Storage Challenges

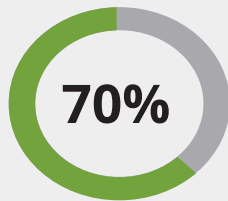
Talon provides an unparalleled data centralization strategy for global enterprises. Our software allows organizations to centralize and consolidate IT storage infrastructure while delivering fast and secure access to data for users by leveraging a software fabric that caches 'active data' sets to distributed offices globally. As a result, business users are guaranteed transparent data access, real-time centralization, and optimal performance for application data on a global scale.

## Challenges around Distributed Storage

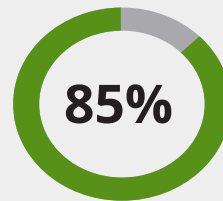
- Are you managing "Islands of Data" in your branch offices?
- Are your users struggling with poor performance accessing their files?
- Do you need to modernize storage by separating active from archive data?
- Does the business require you to move your unstructured data into a hybrid or public cloud?



of data represents unstructured data—accessed and stored across multiple environments, in different formats, all across the world.



of storage costs are eliminated by implementing centralization strategies leveraging FAST™ Intelligent File Caching software for distributed locations.



of enterprises that have consolidated data into on-premise storage or a hybrid / public cloud report better efficiency, control, and application performance.

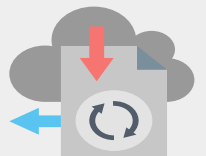
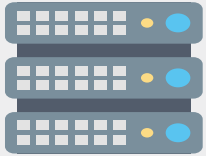
**What if** you could have the governance, control, and cost advantages of centralizing unstructured data without sacrificing edge performance?

**What if** you could combine better operational controls and lower infrastructure costs with an incredible collaboration experience at the edge?



## Take the Next Step in Data Management

With Talon FAST™ Intelligent File Caching software you can do more than just control your data. You can revolutionize the way your company manages unstructured data in daily operations. With over 85% of companies adopting a centralized cloud or hybrid storage strategy, it's clear that centralized storage is the key to a successful enterprise. The Talon solution approach allows for a scalable, flexible, and cost-effective solution strategy by addressing all layers of the enterprise—end users, branch offices, data centers, and cloud infrastructure.



### Centralize Unstructured Data

Create a single set of data using FAST™ to extend your file-sharing infrastructure to all your remote sites and branch locations. Store your single data set on-premise, in a hybrid cloud environment, or in a public cloud data center. FAST™ gives you maximum flexibility.

### Consolidate Distributed IT

FAST™ is a storage-agnostic solution that works with any SMB/CIFS infrastructure, so you can adapt your storage solutions as your needs change. In almost any environment and alongside almost any storage solution you can cut storage costs by as much as 70 percent.

### Streamline Distributed IT & Eliminate Branch Office Backups

Rely on a self-sustaining, self-managing cache, and completely eliminate local backups. Intelligent File Cache ensures only the active data your team members need is stored locally and the cache is automatically purged over time.

### Launch a Cloud-First Strategy

Enjoy all the benefits of cloud — demand elasticity, financial control, and reduced physical infrastructure costs — while still delivering a file-sharing experience so good it will feel as though employees are working in the same room, no matter where they are in the world.

## A Flexible, Scalable Solution







A storage solution needs to not only solve current problems, but be flexible enough to handle a constantly growing enterprise. Since FAST™ operates on a Core to Edge format, each edge instance creates an Intelligent File Cache, stored and automatically managed on an NTFS volume, which keeps active datasets close to users, purges inactive data when it's no longer needed, and makes it easy to manage and scale the cache as distributed locations expand.

The benefit to this format is that data is streamed and compressed from the edge locations to the core instance using basic network connectivity formats like MPLS, Azure ExpressRoute, Site-to-Site/Point-to-Site VPN, or Public Internet (SSL). Talon's delta differencing mechanism means that incremental updates are made to the central data set, which drastically reduces the total amount of data transmitted over the WAN.

## Ensuring your Data Security

You will always have complete control of what your data resides on, where it resides, and how it's backed up, archived, and secured to meet your organizations specific needs for RTO/RPOs, SLAs, BCDR strategies, etc. Since the solution sits transparently on top of the Microsoft Windows Server Operating System, all existing ACL's, permissions, AD authentication, and any environmental controls are passed on from the central data center to all branch offices, even in locations that are challenged with low bandwidth or high latency.

## The FAST™ Software Fabric

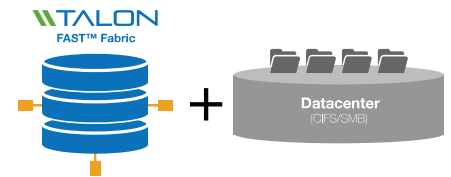
 <p><b>FLEXIBLE &amp; SCALABLE</b> STORAGE AGNOSTIC, WORKS WITH ANY CIFS/SMB INFRASTRUCTURE</p>	 <p><b>INTELLIGENT</b> CACHES ONLY WHAT'S NEEDED AT THE BRANCH (ACTIVE DATASET)</p>	 <p><b>ZERO-TOUCH</b> AUTOMATICALLY PURGES 'STALE' CACHED FILES OVER TIME (LRU)</p>
 <p><b>TRANSPARENT</b> ACCESS DATA THROUGH A GLOBAL DFS NAMESPACE, HONORS ALL SMB/CIFS PRINCIPLES (LOCKING)</p>	 <p><b>PERFORMANT</b> CACHES UNSTRUCTURED DATA, COMPRESSES, STREAMS, AND REDUCES DATA OVER THE WAN</p>	 <p><b>COMMODITY HARDWARE</b> LEVERAGE EXISTING HARDWARE OR VM INFRASTRUCTURE FOR FAST™ CORE AND EDGE SOFTWARE ROLES</p>

## The FAST™ Fabric Building Blocks

Talon FAST™ software is deployed at both data center and branch office locations. The FAST™ software extends your (cloud) storage platform through the FAST™ fabric and creates an intelligent file caching software appliance at each location, running on Microsoft Windows Server. The software overlays the Microsoft Windows File Sharing mechanism, fully integrating with the Microsoft security principles like Active Directory, ACLs, and NTFS permissions, and allows it to work at a global scale.

### FAST™ Core Instance

The FAST™ fabric originates with a core instance deployed in your data center, either as a software installation package or as a virtual appliance template, which mounts to your (existing) backend storage platform(s) of choice. Depending on your requirements, you can deploy one or more core instances to create the FAST™ fabric.



### FAST™ Edge Instance(s)

In addition to this core instance, you deploy FAST™ configured as an edge instance in your branch offices, either as a software installation package or as a virtual appliance template. These edge instances connect directly to the core instance, which streams and compresses data flows to overcome latency and bandwidth issues.



### FAST™ Virtual File Share & Intelligent File Cache

Once integrated into the FAST™ fabric, edge instances create virtualized file shares that transparently present centralized file storage to the branch. Each edge instance also creates an Intelligent File Cache, stored and automatically managed on an NTFS volume, keeping active datasets close to users, purging inactive data when it's no longer needed, and making it easy to manage and scale the cache as distributed locations expand.

### FAST™ Global File Locking

Global file locking ensures that only one user at a time can make changes to the authoritative file copy. The FAST™ fabric updates the branch office cache and only streams changes to the data center. Unmanageable numbers of file versions, performance bottlenecks, and corrupt files become a thing of the past.

## Features

### Caching

- Intelligent File Caching
- Flexible Cache Management (i.e. Office A: 500GB, Office B: 2TB)
- Automated Cache Purging (Least Recently Used algorithm)

### Virtual File Share

- Presented at each branch office that is associated with the FAST™ fabric (core instance)
- \\Edge\FASTData\[datacenter]\[fileservers]\[share][folder][file]

### File Locking

- Distributed File Locking (Central)
- Native Microsoft Windows File Sharing (SMB) Locking

### Optimization

- Data streaming
- Compression
- Delta-differencing

### Advanced Features

- License Management Server Services (site-based licensing service)
- Auto-Configuration
- Global Exclusion List
- Server Exclusion List
- Remote Inclusion List
- Selectable File Handling
- Pre-population of (META) data
- User Throttling
- Customized Cache Purging
- Web Access Portal
- Statistics & Analytics UI
- PowerShell Integration (CLI/cmdlets)

### User Access

- DFS Namespace Integration
- Drive Mappings

## Software Specifications

### Operating System

- Microsoft Windows Server 2016 Standard/Datacenter (Core)
- Microsoft Windows Server 2012 R2 (Core)

### Supported Hypervisor Platforms

- VMware vSphere 6.5+
- Microsoft Hyper-V 2016
- Microsoft Hyper-V 2012 R2

### Supported Cloud Platforms

- Microsoft Azure
- Amazon Web Services (AWS)
- Google Cloud Platform (GCP)

### Storage Platforms

- Amazon Web Services EC2/EBS/Storage Gateway
- Dell/EMC
- HPE
- Microsoft Azure Disk / Files / StorSimple Hybrid Cloud
- Microsoft Windows Server (Cluster)
- Nutanix
- NetApp A-Series / FAS Hybrid Storage Series
- NetApp Cloud Volumes ONTAP / Cloud Volumes Services

*Contact us for more options*

### Storage Protocols

- CIFS
- SMB v1
- SMB v2.x
- SMB v3.x (including Azure Files)
- iSCSI (Direct-Attached Storage)

### Network Connectivity

- MPLS
- Azure ExpressRoute
- Site-to-Site/Point-to-Site VPN
- Public Internet (SSL)

### Security

- Active Directory Integration (Kerberos/NTLM)
- Multi-domain support
- ACL/NTFS Permissions
- SSL Encryption (SHA256)
- BitLocker Drive Encryption

### FAST™ Form Factor / Software Availability

- Virtual Appliance Template (.ova / .vhdx)
- Software Installation Package (.exe)

### FAST™ Roles

- Core Instance, deployed at (cloud) datacenter
- Edge Instance(s), deployed at each branch location

### FAST™ Edge Cache Volume

- NTFS File System (D:)
- Minimum Size: 100GB
- Maximum Size: 16TB (4K cluster size)/256TB (64K cluster size)