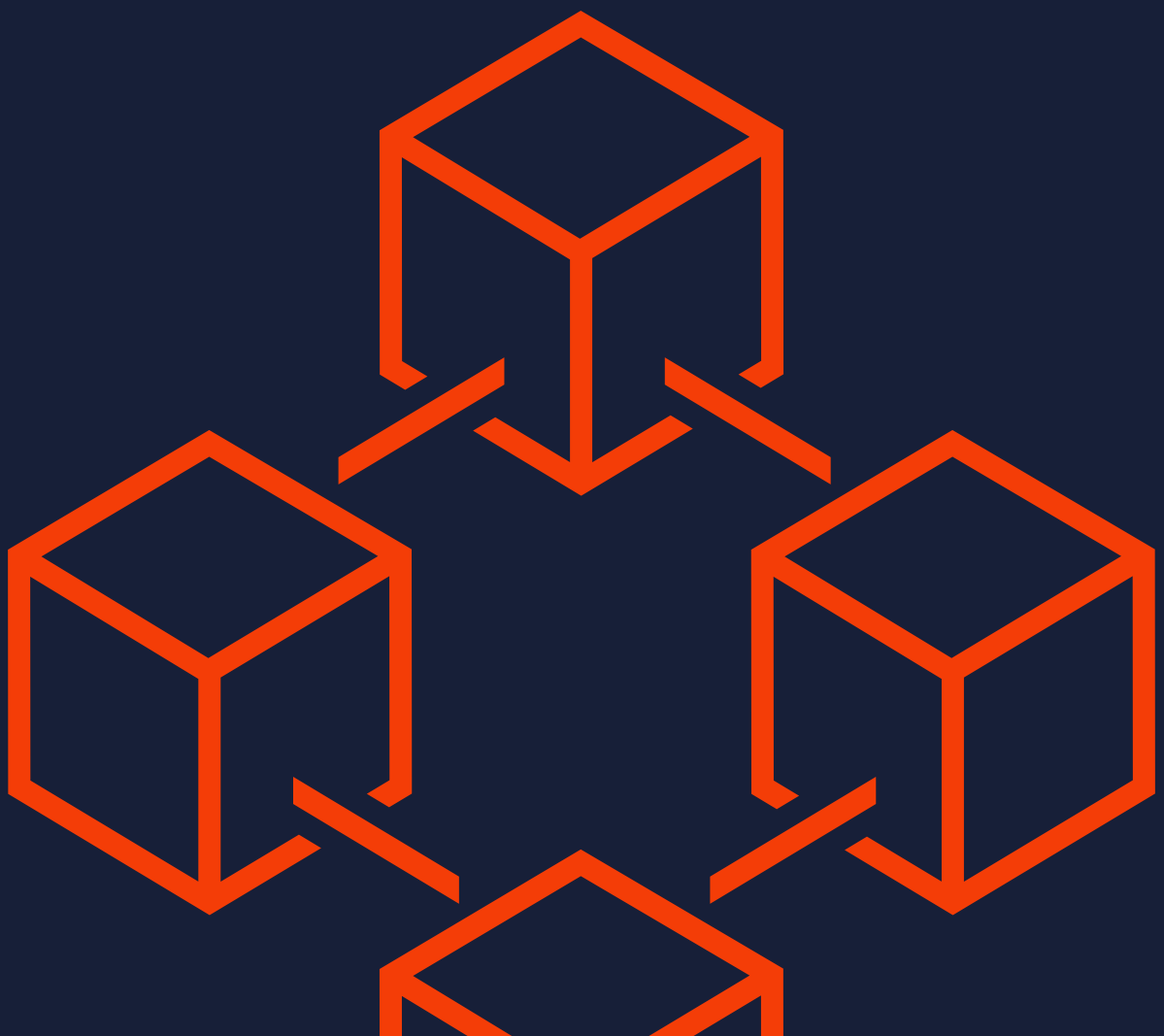
myota™

# Myota Methodology

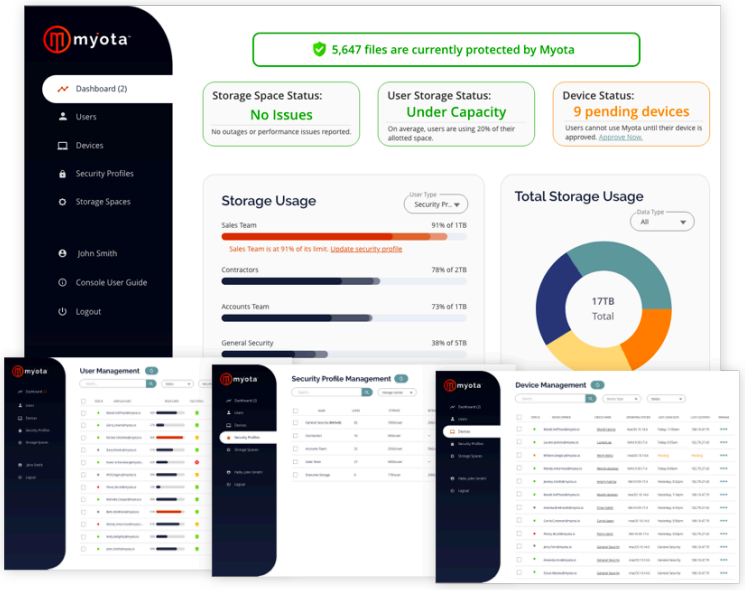


# Why Myota?

In a world of assumed compromise, new approaches and innovative cybersecurity technologies must emerge to continue to combat the growing proliferation and sophistication of cyberattacks. As traditional security tools have focused on detection, prevention, & visibility, these solutions routinely fall short in terms of resiliency - leaving sensitive and valuable data vulnerable when the inevitable mishandling or loss of data occurs. Not surprisingly, enterprise information security stakeholders are intensifying their focus upon what matters most – their valuable data assets. When the "perimeter security" layer is matched with a "data security" layer, the enterprise is better equipped to mitigate operational risk and protect against data loss, while enabling faster and total data recovery from an adverse event or cyberattack.

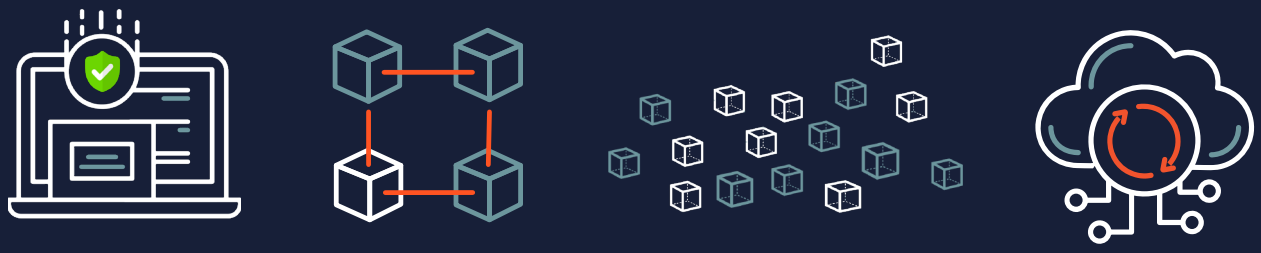
**Myota's Converged Data Security Platform transforms unstructured data into immutable files to withstand attacks, outages, and unauthorized access while ensuring continuous availability to the file owner.**

Myota's sleek management console enables enterprise IT and information security teams to maintain fine-grain control of Myota secured files, including flexibility to customize data dispersion & storage locations. Myota is the next-generation data protection and cyber resilience solution – designed and developed to address a diverse range of high-impact cyber threats.



# How it Works: Shred & Spread

Myota renders stored information unusable to attackers, safeguarding sensitive information and protecting productivity. Using advanced "Shred and Spread" methodologies, Myota delivers exponential information protection. The diagram below illustrates Myota's unique data protection.



**Step 1**

The file is added to Myota

**Step 2**

The file is chunked and encrypted

**Step 3**

The file is transformed into encrypted data shards

**Step 4**

The encrypted data shards are stored securely in repositories

## Why Does Myota Spread the Shards?

Chunking data files yields multiple information security benefits. Data duplication is a challenge for many organizations to manage, track, secure and store. Myota's Converged DSP (Converged Data Security Platform) organically facilitates data deduplication as a first step in our data transformation process - helping customers to eliminate data replication while ensuring compatibility with object storage locations.

## Why Does Myota Encrypt Chunked Files?

Myota is designed with a Zero Trust framework at every level. Encrypting each chunk ensures continuous confidentiality and privacy in the event of an attack or compromise.

## Why Does Myota Shred the Encrypted Chunks?

By breaking down the chunks into data shards, Myota produces an incremental level of information security while eliminating the need for centralized encryption key management. The unique Myota methodology individually encodes each shard to guarantee end-to-end protection, resiliency, and high availability through a process that is completely transparent to users.

# Why Does Myota Spread the Shards?

Dispersion of the encrypted meta and content data occurs through using two distinct algorithms. Myota's signature "shred and spread" method ensure that there is no single point of failure while assuring protection from quantum and brute force attacks. The original data can only be reconstructed by using a minimum number of shares, which provides resiliency against attacks such as ransomware.

### To illustrate, let's imagine a group of Byzantine Generals

All share a single gold fortress filled with coins. This gold fortress has a single key that all the Generals co-own. Because there is a single key, any of the Generals can use that key to spend all the gold coins.

The Generals have a problem:
If they each keep a copy, then only one of their copies
needs to be compromised to have all the coins stolen.
If only one of them keeps the key, then that person may lose it or decide
to double-cross the other Generals.

Luckily, one of the Generals is also a cryptographer. Instead of naively sharing the original key, they use SSS (Shamir's Secret Sharing). The Generals create four new shares and sets a threshold of three shares on the door of the gold fortress, with the first key as the original secret. Now, their plan has the following properties:

They have not stored the fortress keys in a single place which makes it exponentially more difficult to steal.

The Generals need to cooperate to spend the gold coins, one General can't betray the others.

If a General dies or loses their key, the other three Generals can still reconstruct the key to the gold fortress.

As well as being beneficiaries of Byzantine fault tolerant, Myota customers can also leverage the ability to designate their storage environments and can fully configure the asset distribution via policy settings.

# Summary

Myota delivers simplified operational data security that allows organizations to simultaneously withstand attacks against their data and overcome cybersecurity events. Built on a platform that converges the tenants of data encryption & dispersion, secure data sharing, data retention & restoration and access rights enforcement, Myota moves data protection resources from static, network-based perimeters to focus on users, assets, and resources, keeping your data safe from attacks, even when other security fails.