

Aspera FASPStream API

Send and receive data in memory using the high-speed Aspera FASPStream

AT A GLANCE

Key Features

- Transfer bulk data in the form of a byte-stream over wide area networks (WAN) at line speed, regardless of file size or distance, fully utilizing the available bandwidth using Aspera FASP™.
- Create custom sender and receiver applications with or without an Aspera Transfer Server as one of the end points.
- Implement Senders to transfer data into the byte-stream or Receivers to read from the byte-stream using the Aspera FASPStream API.
- Senders: use the Aspera FASPStream to transfer data directly from memory rather than reading the source from disk.
- Receivers: directly access data from the incoming Aspera FASPStream in memory instead of waiting for the transfer to complete and reading the file from disk.
- Utilize familiar file-I/O like interface to access the FASPStream to speed development.

Key Benefits

- Easily integrate Aspera high-speed transfer technology directly into your applications.
- Start processing the incoming data as soon as the first bytes are transferred, rather than waiting for the entire transfer to complete.
- Enable in-memory access to transfer data for faster processing and better decision-making.
- Initiate high-speed transfers of bulk data from your application memory space as the data is being captured or generated.
- Leverage Aspera FASP high-speed technology, which is efficient, stable, robust and predictable, even for the longest distances and networks with the worst conditions.
- Utilize Aspera security and management features when deployed in conjunction with an Aspera Server.

Aspera software is uniquely designed to transfer large files and data sets at maximum speed, fully utilizing the available bandwidth, regardless of file size, transfer distance or network conditions. At the heart of our solutions is our patented FASP™ transport technology – a breakthrough transfer protocol that leverages existing WAN infrastructure and commodity hardware to achieve speeds that are hundreds of times faster than FTP and HTTP, and delivers end-to-end security, 100% reliability and exceptional bandwidth control.

Until now, software developers that needed to integrate Aspera high-speed transfer capabilities into their software or services have done so using our file-based APIs to initiate, manage, and control high-speed transfers from one file system to another. To support the broader set of use cases where developers wish to bypass the file system and directly access the Aspera high-speed FASP “pipe” from their applications, we created the new Aspera FASPStream API.

Rather than starting a transfer by reading a file from disk and ending the transfer by writing to disk, the Aspera FASPStream API supports transfers to or from a custom process running in memory with another custom process running on a separate machine, or with a standard Aspera transfer server. The API uses the Aspera FASP protocol, so transfers achieve maximum speed over any distance, with security, efficiency, and bandwidth control.

With the new API, transfers are no longer limited to a file or file set. The

Aspera FASPStream API enables the transfer of any stream of bytes as they are being created or captured, and can allow access to portions of a file in memory during the transfer process rather than waiting for the entire file to be written to disk. Companies can easily access the FASPStream with familiar file-I/O like API's.

INTEGRATE INTO ANY DEPLOYMENT

Aspera FASPStream can be integrated into any type of application. The byte-stream can be implemented with two different approaches: namely integration without an Aspera Transfer Server or integration with an Aspera Transfer Server. In the first approach without an Aspera Server, the developer is required to build both sending and receiving endpoints, while Aspera FASP handles the transfer between the two custom applications. In the second approach, developers can create their own sender or receiver, and utilize the standard Aspera Transfer Server as the other endpoint to the transfers.

ASPERA FASPSTREAM EMBEDDED AT BOTH ENDPOINTS

Aspera FASPStream can be embedded within sender and receiver applications to provide in-memory to in-memory transfer. Because the Aspera byte-stream is embedded into both end points, the developer has complete control over all pre- and post-transfer processing from within their applications, and is additionally responsible for implementing security such as authentication and optional encryption.

Aspera FASPStream API

ABOUT ASPERA FASPSTREAM

Compatible servers

- Aspera Enterprise Server 3.4 +
- Aspera Connect Server 3.4+

Languages supported

- .NET
- Java
- C++

SAMPLE BUSINESS APPLICATIONS

Media processing and distribution

- **Inline transcoding:** the encoding process can begin while the transfer is still in progress, shortening the end-to-end processing time and accelerating the final delivery or play-out.
- **Inline file format validation:** format validation engines can inspect portions of the file looking for anomalies while the transfer is still in progress, and abort the transfer if the file format does not conform to the standard.

Remote imaging or data capture

- **Capture and distribute content from remote locations to improve targeted data acquisition.**
- **Initiate time-sensitive image processing analysis of large data files sooner to make faster business decisions.**

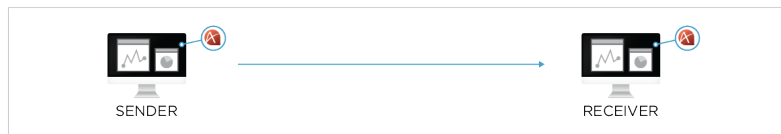
Improve healthcare decisions

- **Medical imaging:** Transfer high-resolution medical images, with speed, security and privacy, enabling diagnostic-quality viewing by healthcare practitioners in remote locations, to eliminate wait times and accelerate diagnosis.

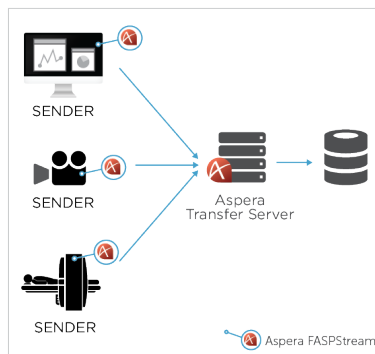
Enhance legal discovery

- **eDiscovery:** Accelerate the collection, indexing, processing, and analysis by embedding high-speed transfer into your e-Discovery platform.
- **Enable faster recovery and data analysis to view pertinent information relevant to a legal hold or case.**

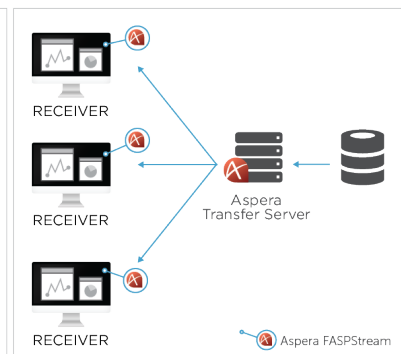
CUSTOM ENDPOINTS WITH ASPERA FASPStream EMBEDDED



CUSTOM SENDER WITH ASPERA TRANSFER SERVER



CUSTOM RECEIVER WITH ASPERA TRANSFER SERVER



UTILIZE THE ASPERA TRANSFER SERVER

Aspera Transfer Server can also be used to send byte-stream data or receive byte-stream data to or from custom applications. These applications can send or receive in-memory data, which can be utilized internally or can be offered to your customers and partners. Because the Aspera Server can act as a sender or receiver, developers can utilize the security provided by the Aspera software including encryption of the bytes in transit and at rest.

When the Aspera Server is acting as the receiver, it can receive files sent from in-memory applications running on a separate computer. This enables developers to design applications that can begin transferring bytes immediately while the data is being generated or captured. For example a camcorder can send the bytes during filming, rather than sending the bytes after the complete file has been written.

If the Aspera Server is acting as the sender, it can read files from disk and then send the byte-stream over to the application that is requesting the data. The application can then access the data in memory while it is being transferred, rather than waiting for a large file to be completely written to disk before being able to act on that file.

ROBUST IMPLEMENTATION OPTIONS

Aspera provides a complete SDK with reference guides and sample code to assist developers with integrating Aspera technology into their own applications. The Aspera FASPStream API is available in the following languages: .NET, Java, and C++.

For more information on the Aspera FASPStream API, contact your Aspera representative or visit www.asperasoft.com or developer.asperasoft.com.

About Aspera

The creator of next-generation transport technologies that move the world's data at maximum speed regardless of file size, transfer distance and network conditions. Based on its patented FASP™ protocol, Aspera software fully utilizes existing infrastructures to deliver the fastest, most predictable file-transfer experience. Aspera's core technology delivers unprecedented control over bandwidth, complete security and uncompromising reliability. Organizations across a variety of industries on six continents rely on Aspera software for the business-critical transport of their digital assets.

Learn more at www.asperasoft.com