

# AWS products: S3, SQS, SNS, MediaConvert

AWS offers a suite of integrated products for cloud storage, messaging, and media processing. The services mentioned are:

**Amazon S3 (Simple Storage Service):** A scalable and durable **object storage** service for storing and retrieving any amount of data from anywhere on the web. It is commonly used as the primary storage for input and output files for other AWS services like MediaConvert.

**Amazon SQS (Simple Queue Service):** A fully managed **message queuing** service that enables you to decouple and scale microservices, distributed systems, and serverless applications. It uses a polling model where consumers retrieve messages from the queue.

**Amazon SNS (Simple Notification Service):** A fully managed **pub/sub messaging** service that provides high-throughput, push-based delivery of messages to multiple subscribers (including SQS queues, Lambda functions, HTTP endpoints, and email addresses) simultaneously.

**AWS Elemental MediaConvert:** A file-based **video transcoding** service that allows you to convert video files into formats optimized for broadcast and multi-screen delivery (e.g., adaptive bitrate streaming for web/mobile) without managing any underlying infrastructure.

## Common Use Case Scenario


These services often work together in decoupled, event-driven architectures (see figure below for a conceptual flow):

A user uploads a raw video file to an **Amazon S3** input bucket.

An S3 event notification triggers an **Amazon SNS** topic or directly invokes an AWS Lambda function when a new object is created.

The SNS topic (or Lambda function) initiates a transcoding job in **AWS Elemental MediaConvert**, providing the S3 input and output locations.

MediaConvert processes the file, and its job status changes (e.g., "job complete") trigger **Amazon CloudWatch** events.

These CloudWatch events can be routed to an **Amazon SQS** queue, where a downstream application can asynchronously poll for job completion status and perform post-processing tasks, such as updating a database or generating a thumbnail from the transcoded output. 

For more detailed information on each service, you can visit the official AWS documentation

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