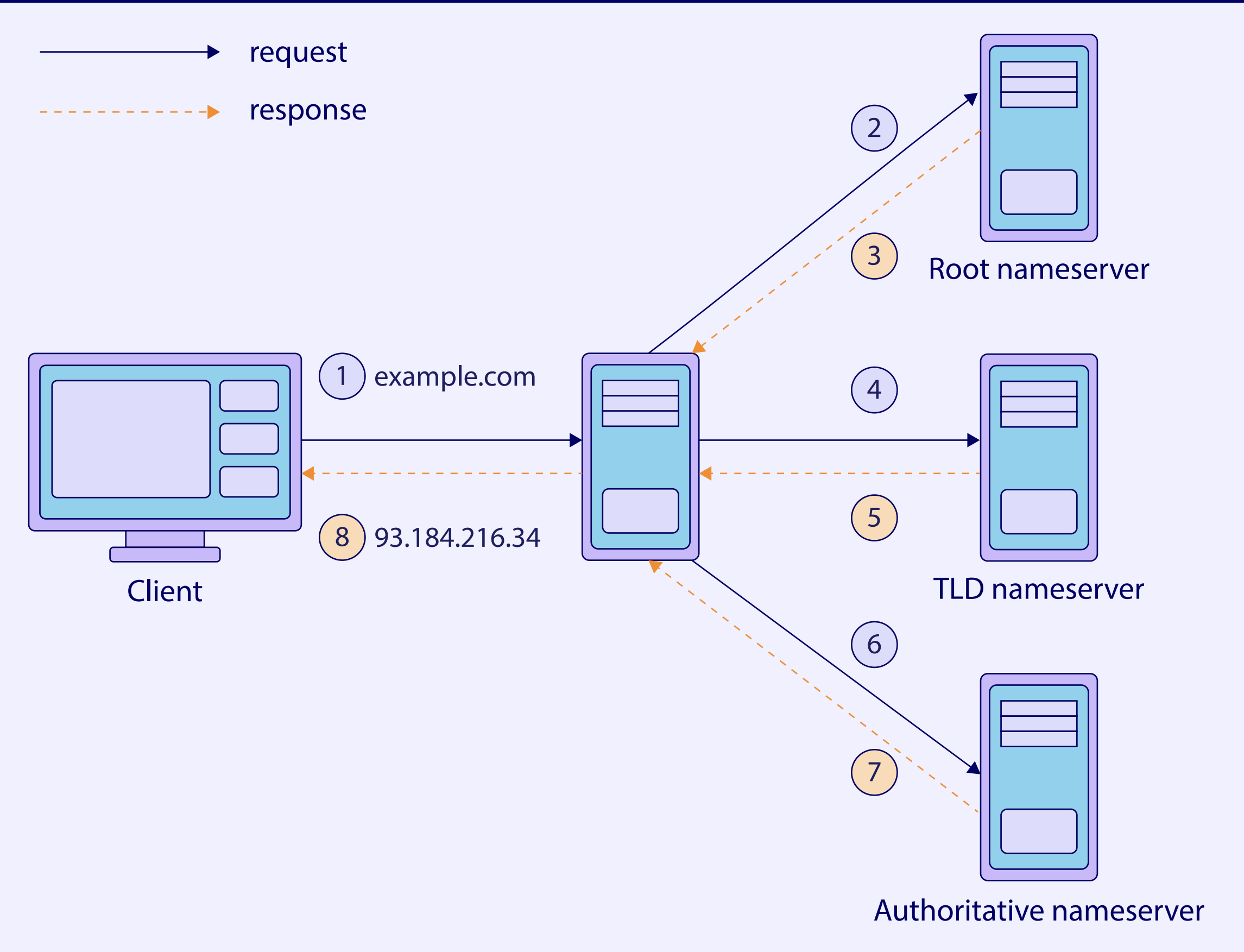


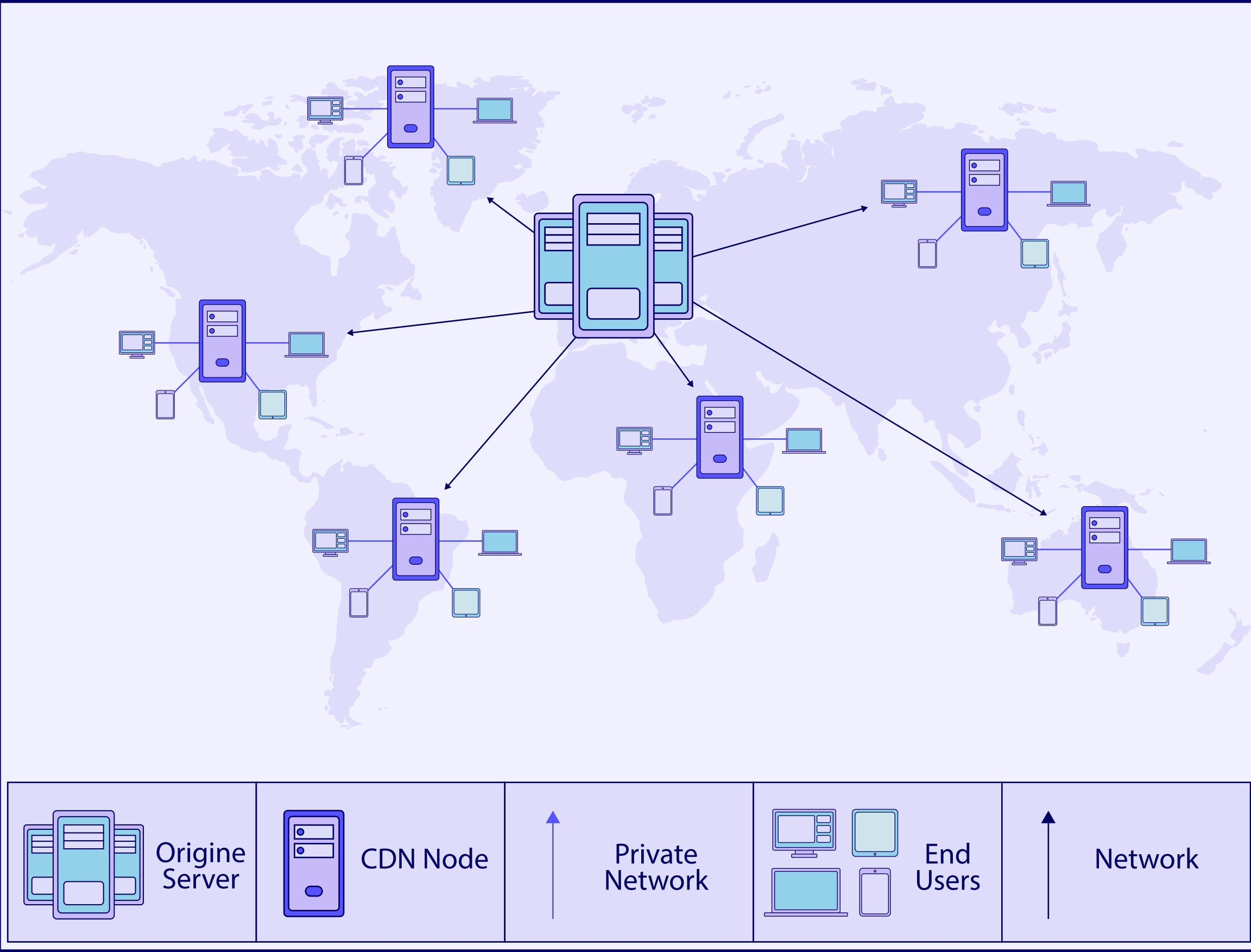
DNS (Domain Name System):

Translates domain names into IP addresses, allowing us to access websites without memorizing numerical addresses.



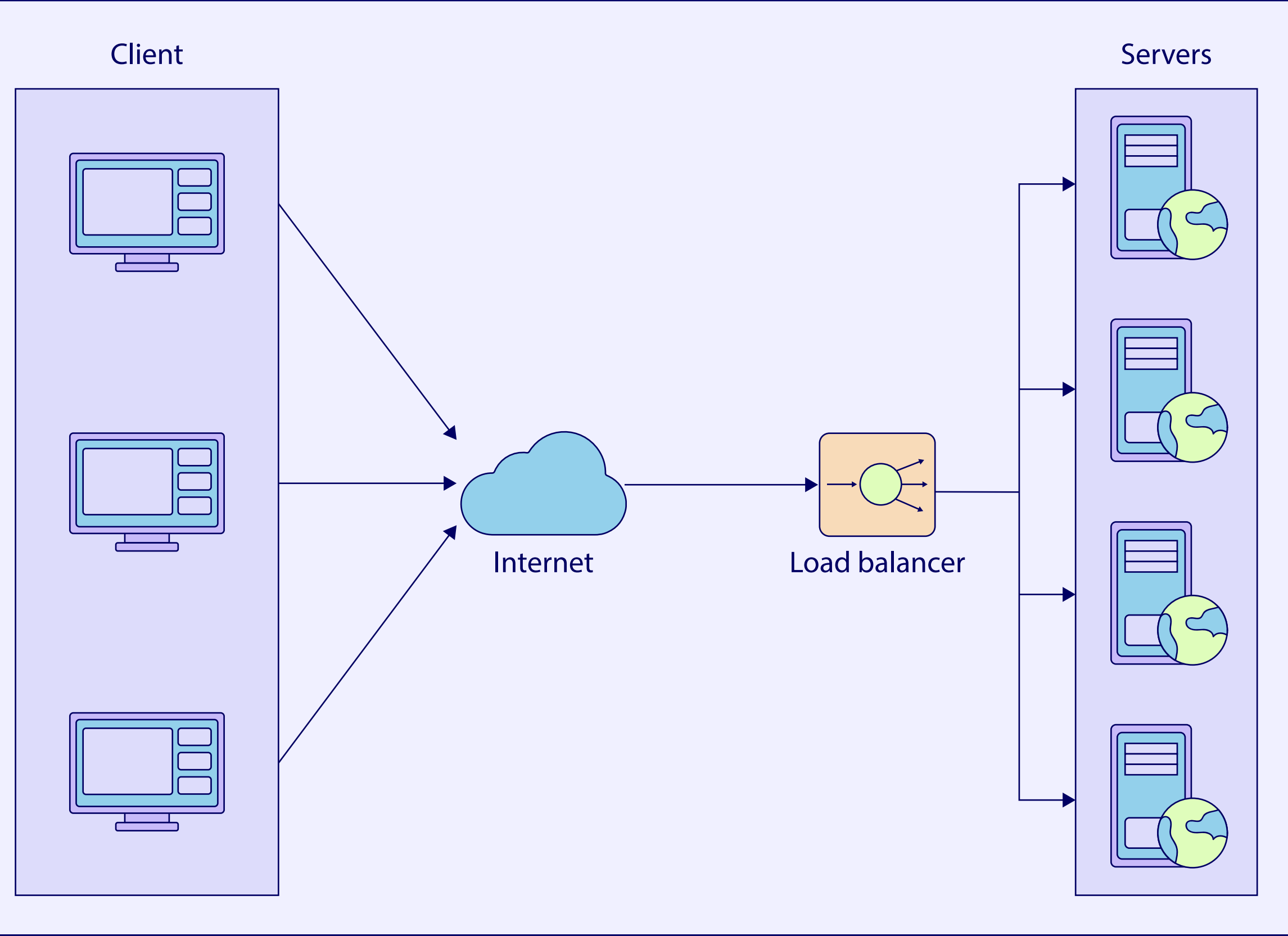
CDN (content delivery network):

Distributes website content globally to reduce latency, ensuring faster loading times for users around the world.



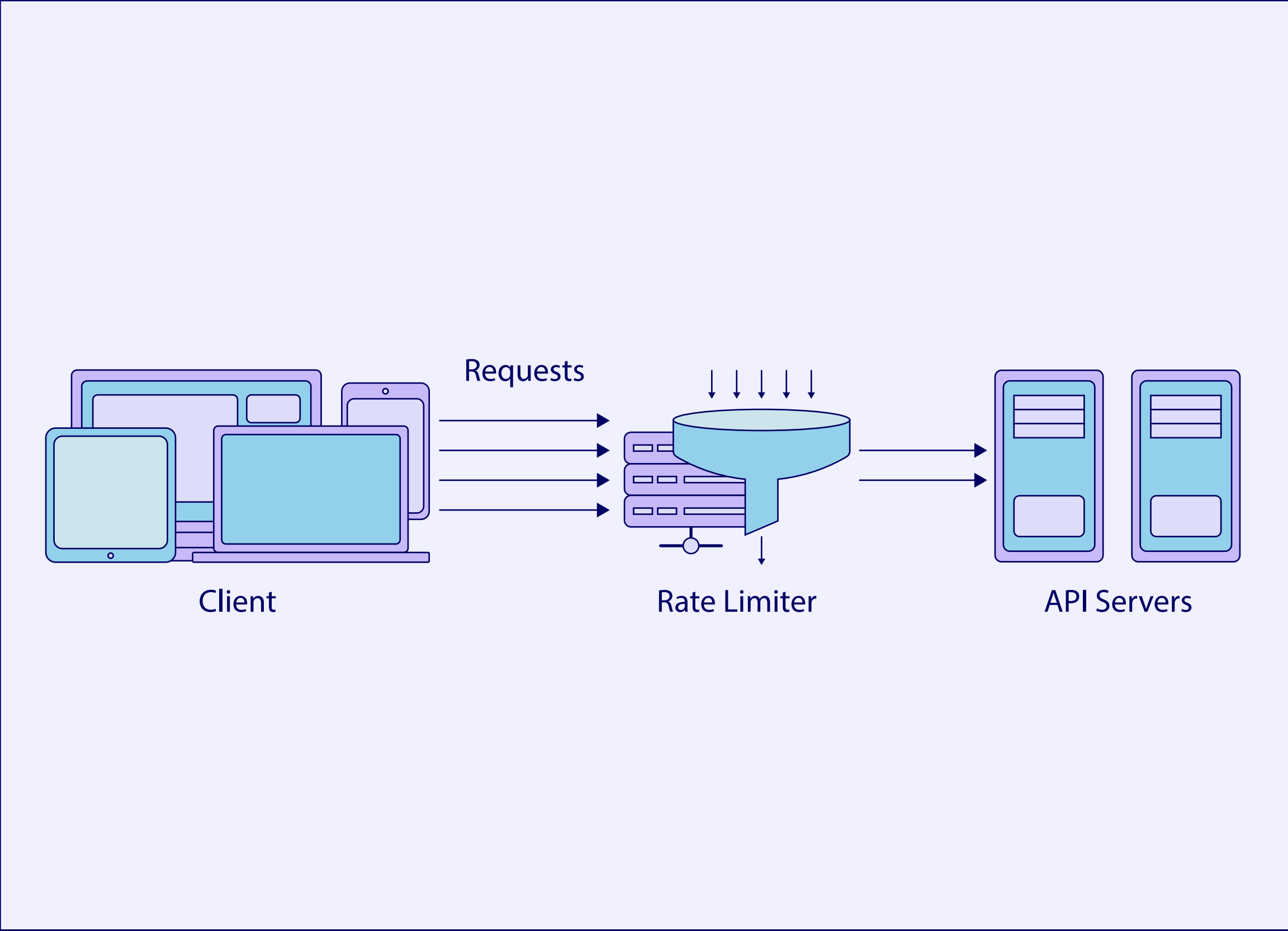
Load Balancer:

Distributes incoming web traffic among multiple servers to ensure no single server is overwhelmed, optimizing performance and preventing downtime.



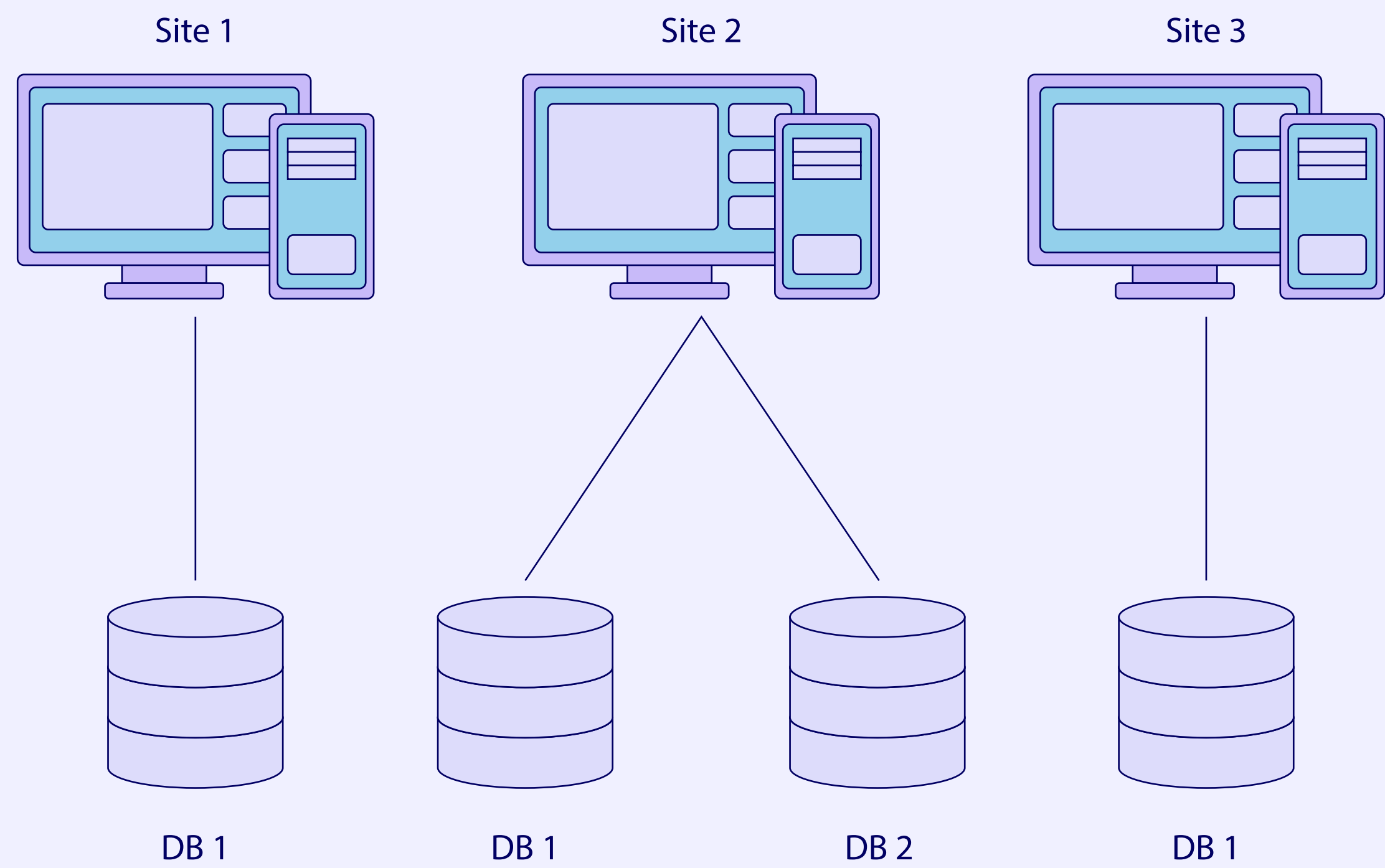
Rate Limiter:

Controls the rate of requests to prevent system overload, ensuring stability and fair resource usage.



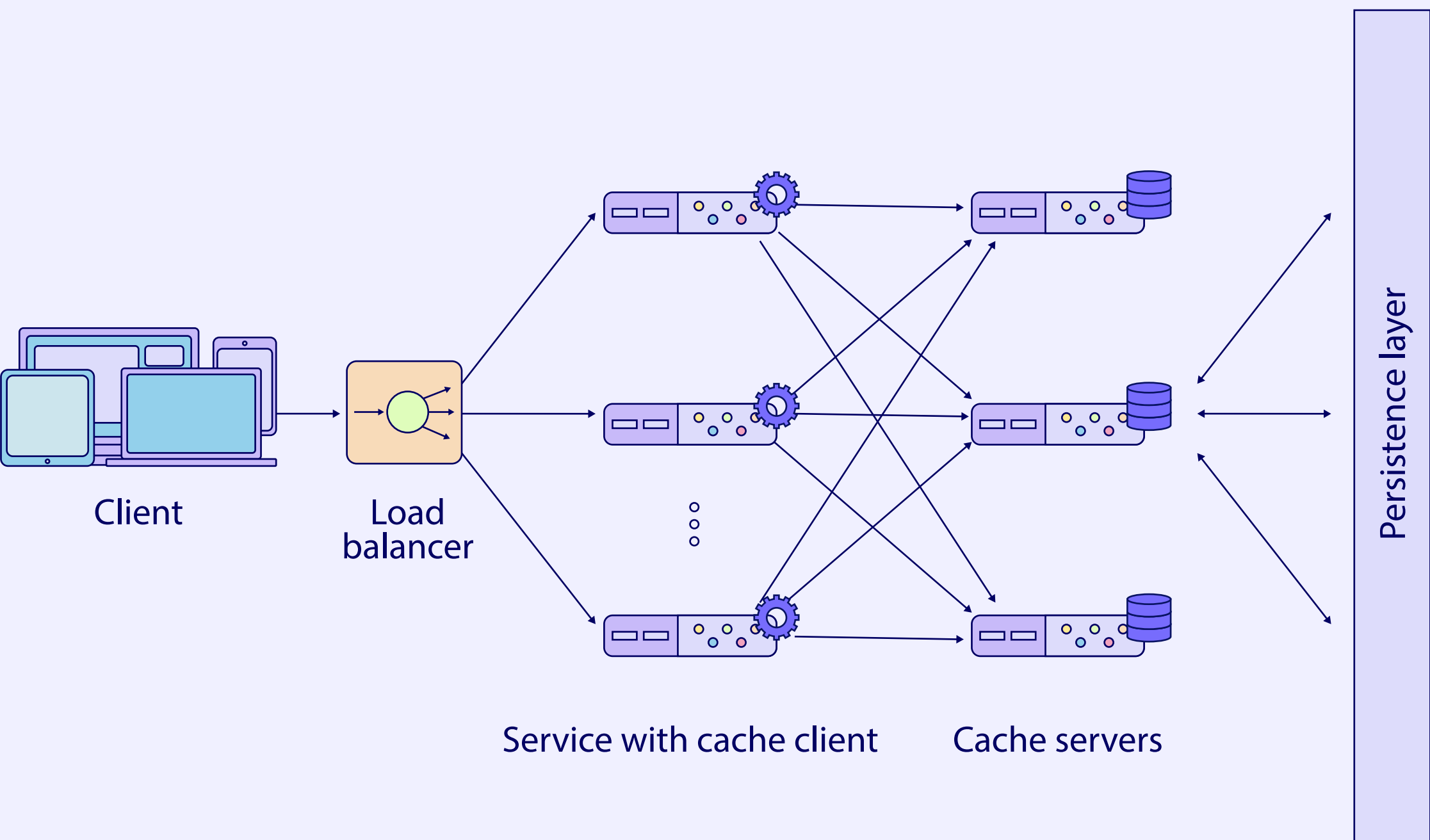
Databases:

Essential for applications to efficiently store and retrieve structured data.



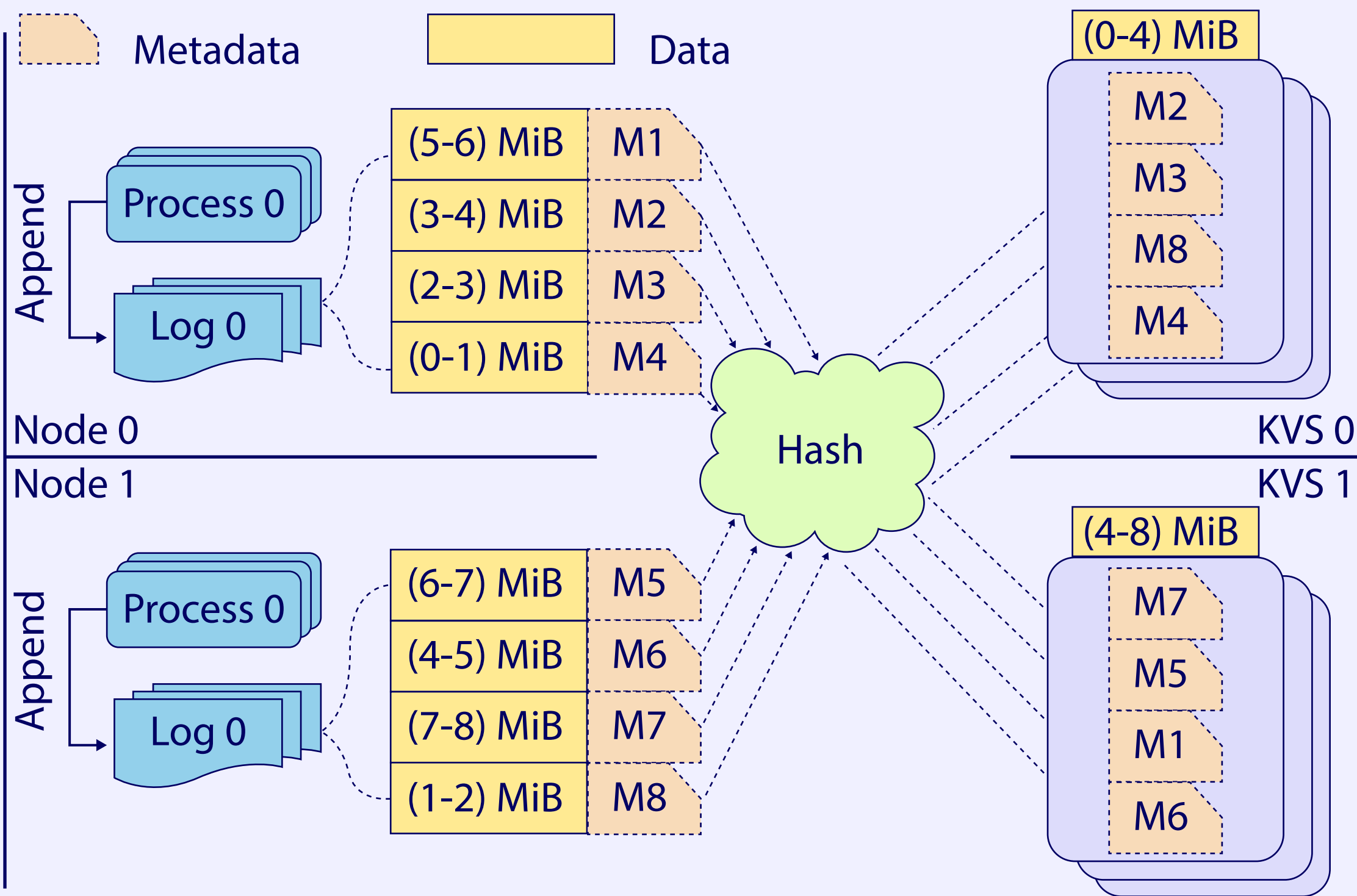
Distributed Caching:

Stores frequently accessed data in memory across multiple nodes, reducing database load and improving response times.



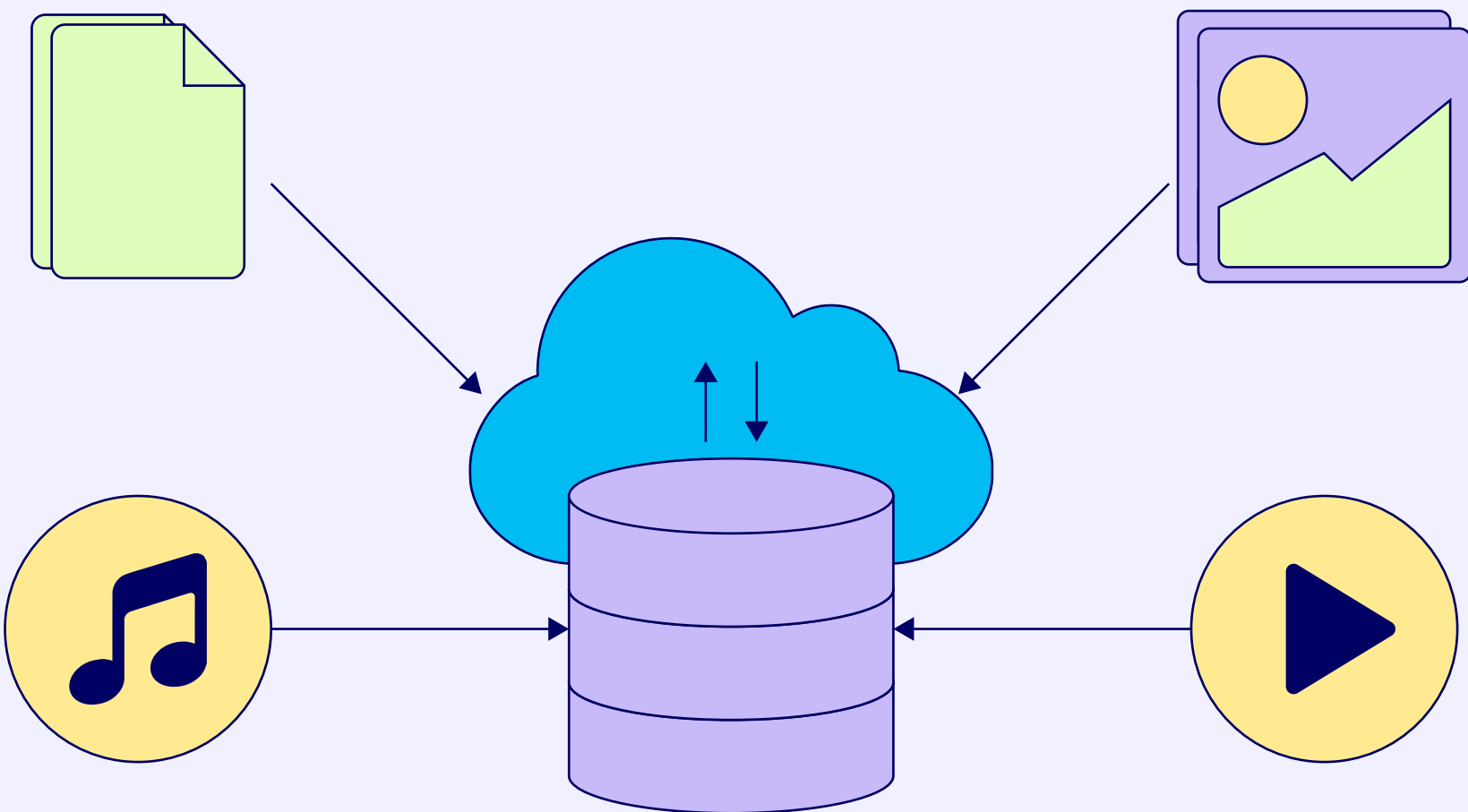
Key-Value Store:

Stores data as simple key-value pairs, offering fast retrieval and efficient storage, often used for caching.



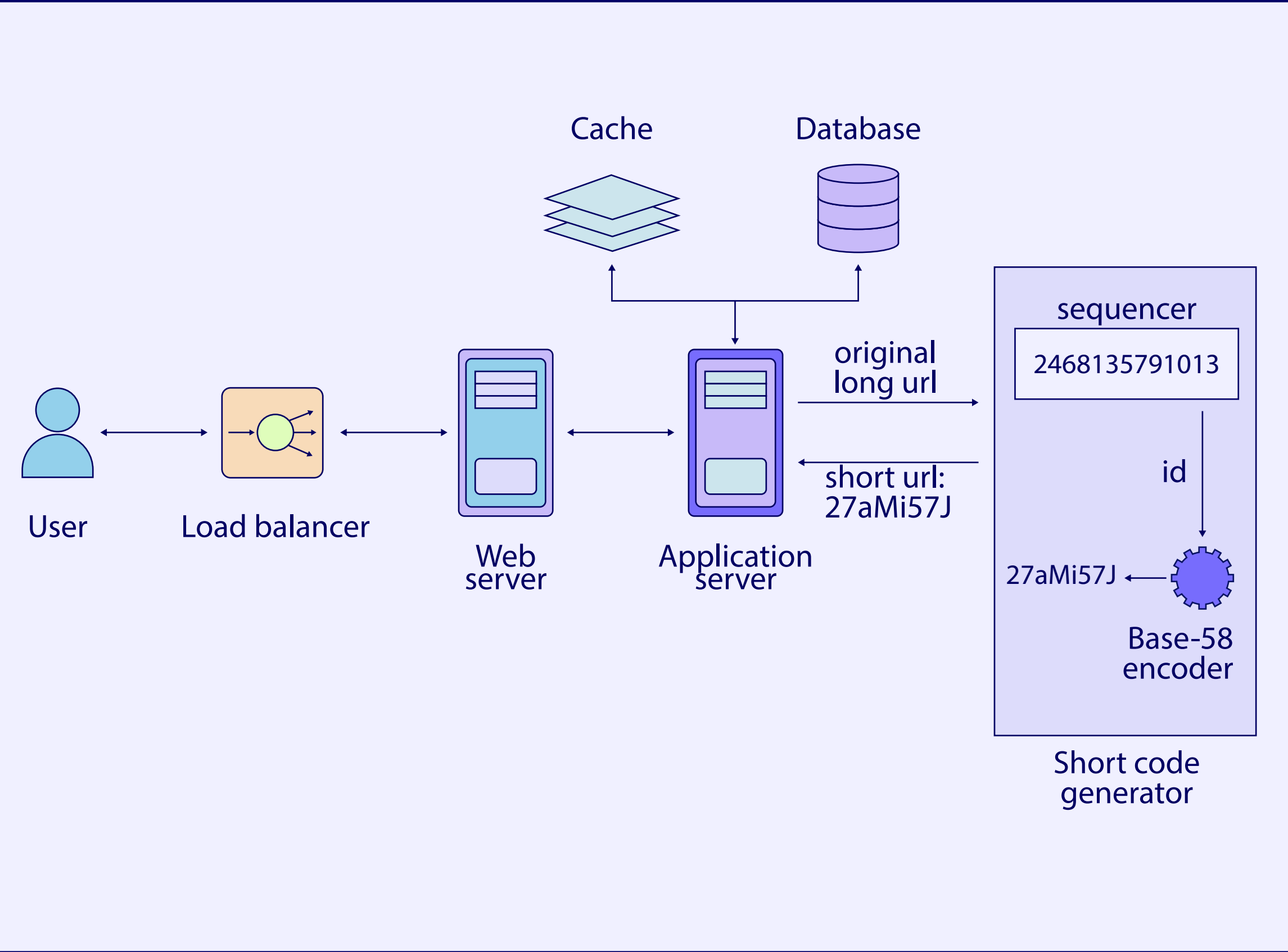
Blob Store:

Stores and retrieves large, unstructured data like images or videos efficiently.



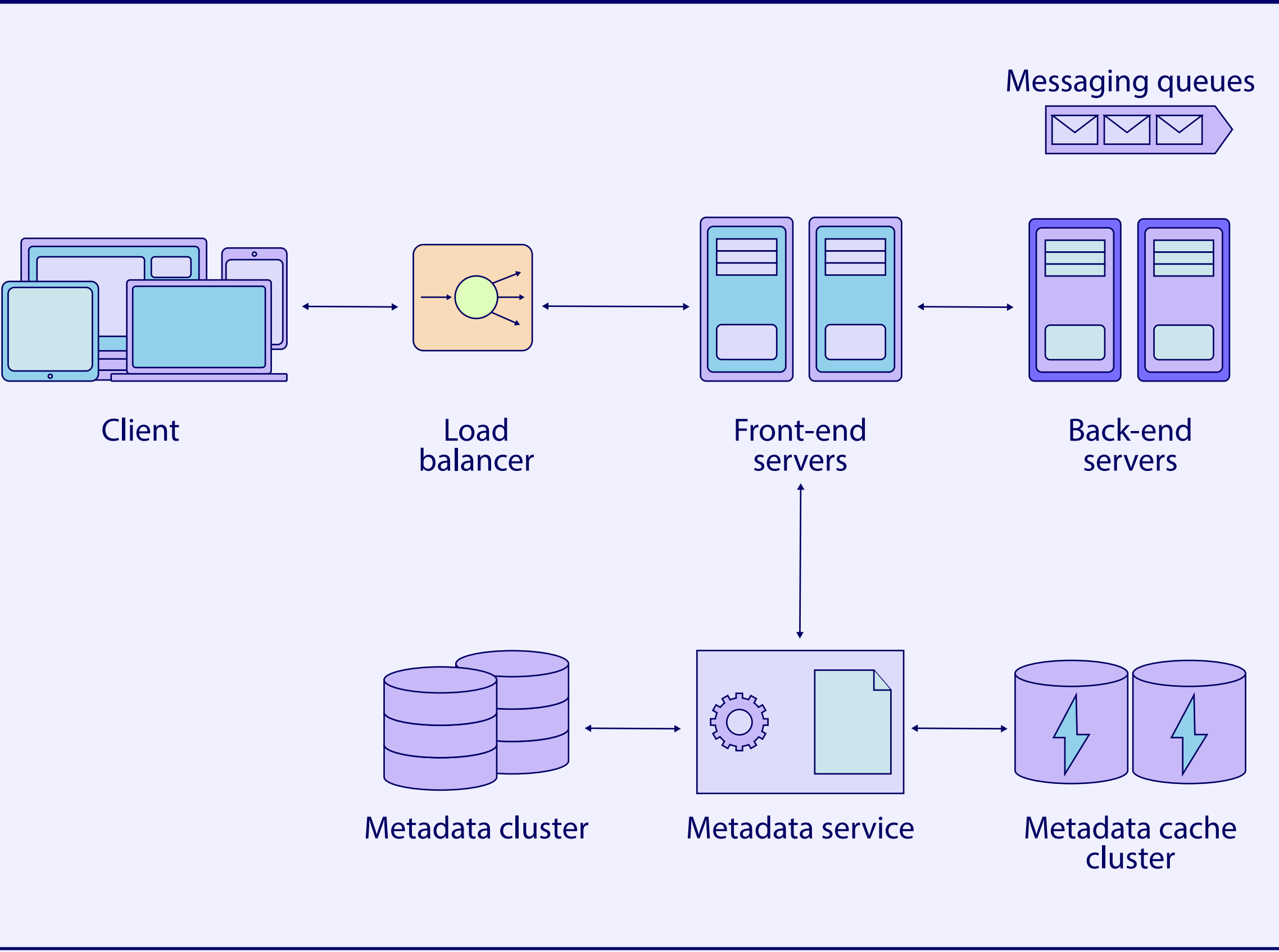
Sequencer:

Assigns unique sequence numbers to events, crucial for maintaining sequence in distributed systems and tracking changes.



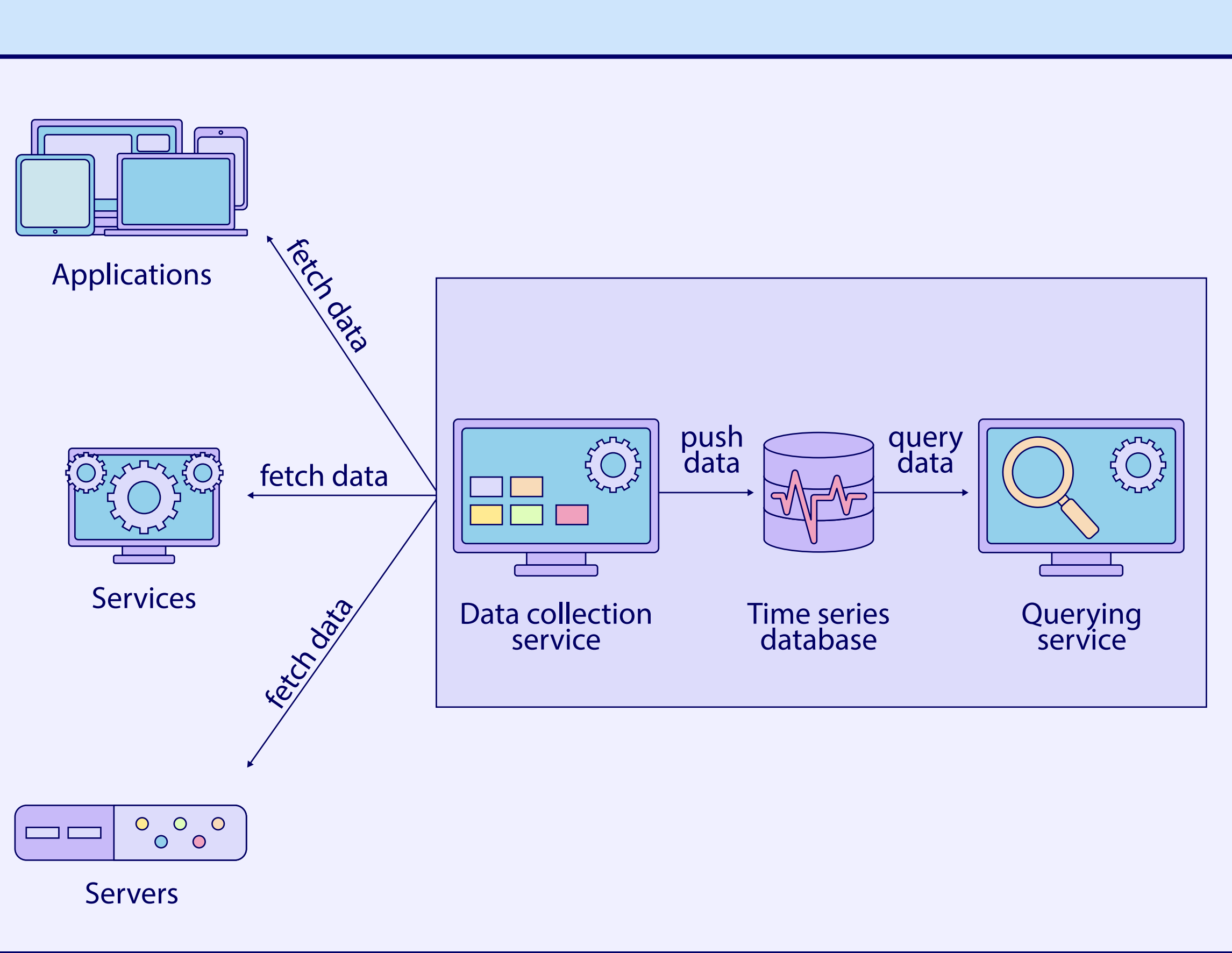
Messaging Queue:

Facilitates communication between different parts of a system, decouples the producer and consumer of data, allowing for more flexible and scalable system interactions.



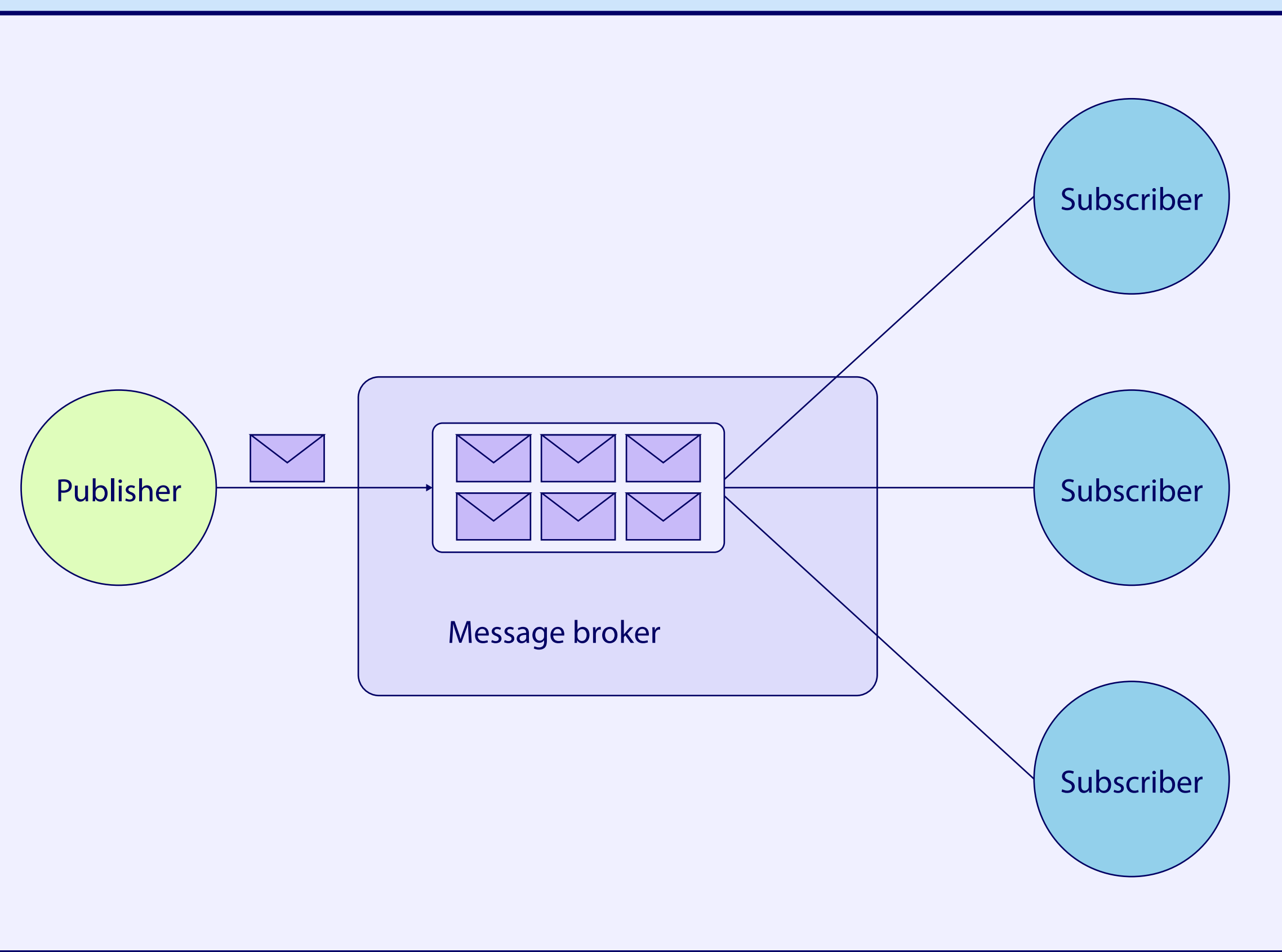
Service Monitoring:

Constantly observes system components, detecting issues early and ensuring optimal performance.



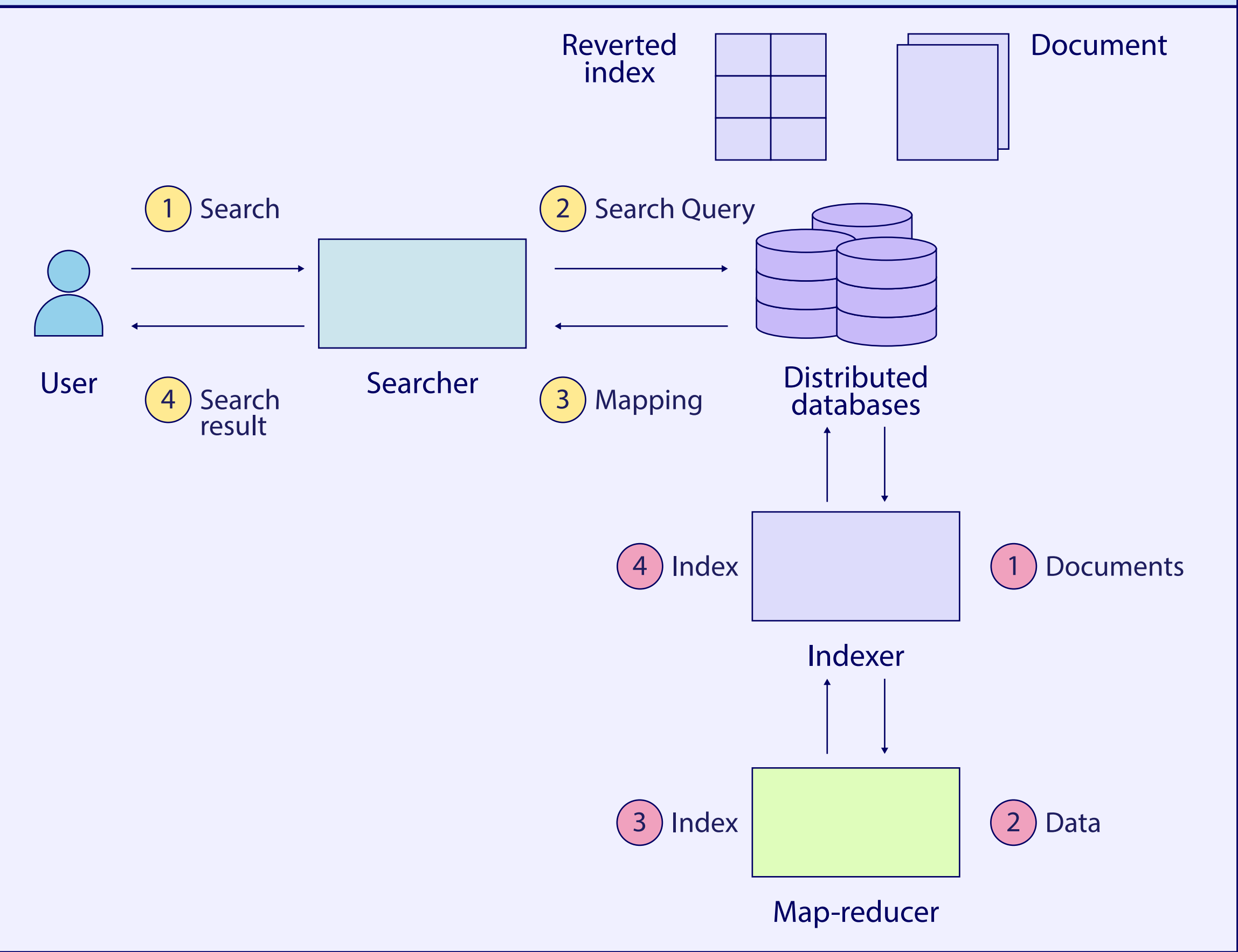
Pub/Sub (Publish-Subscribe System):

An advanced messaging queue where multiple parties can publish data and multiple parties can subscribe to interesting events.



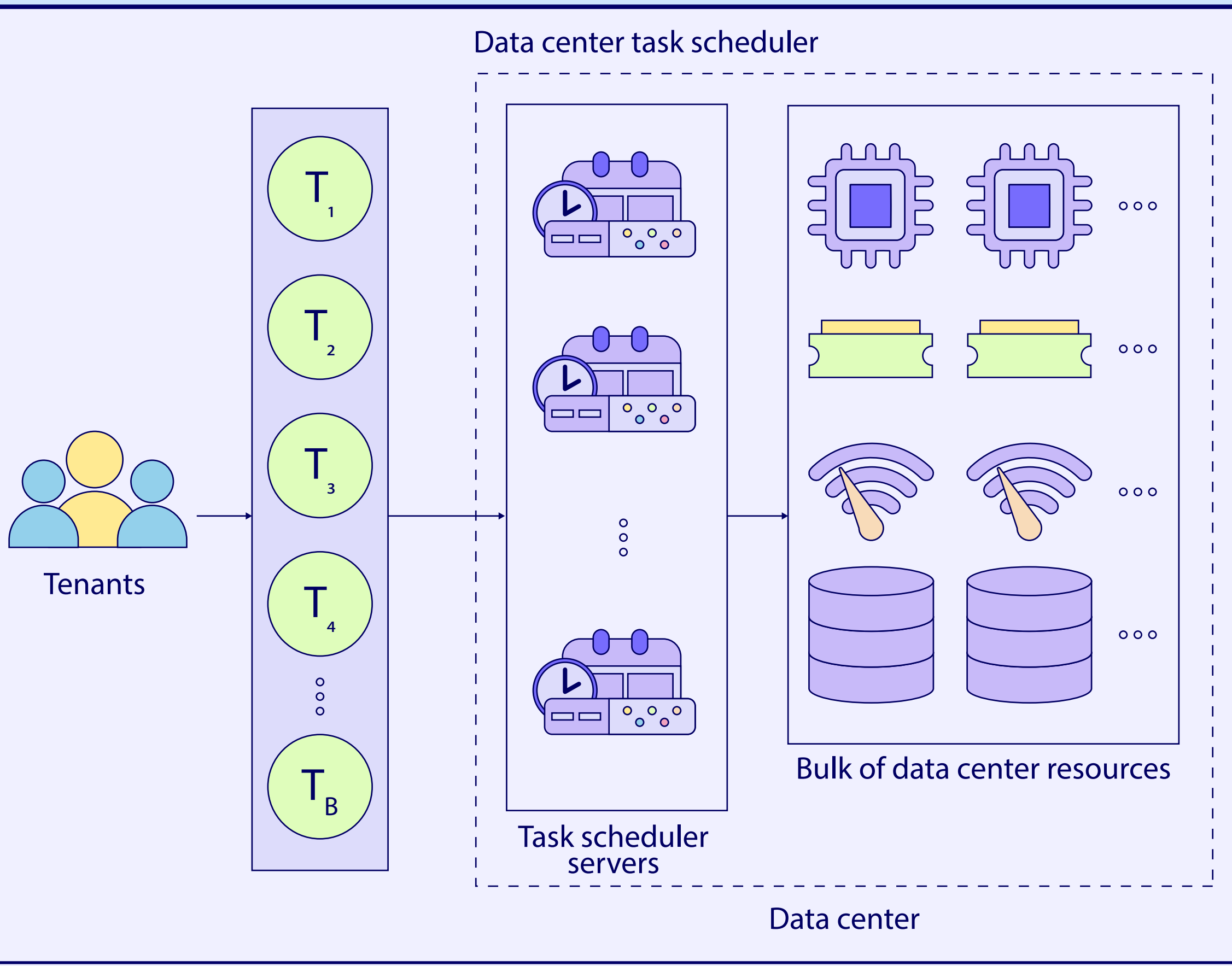
Distributed Search:

Enables searching across vast amounts of data distributed across multiple servers, improving search latency.



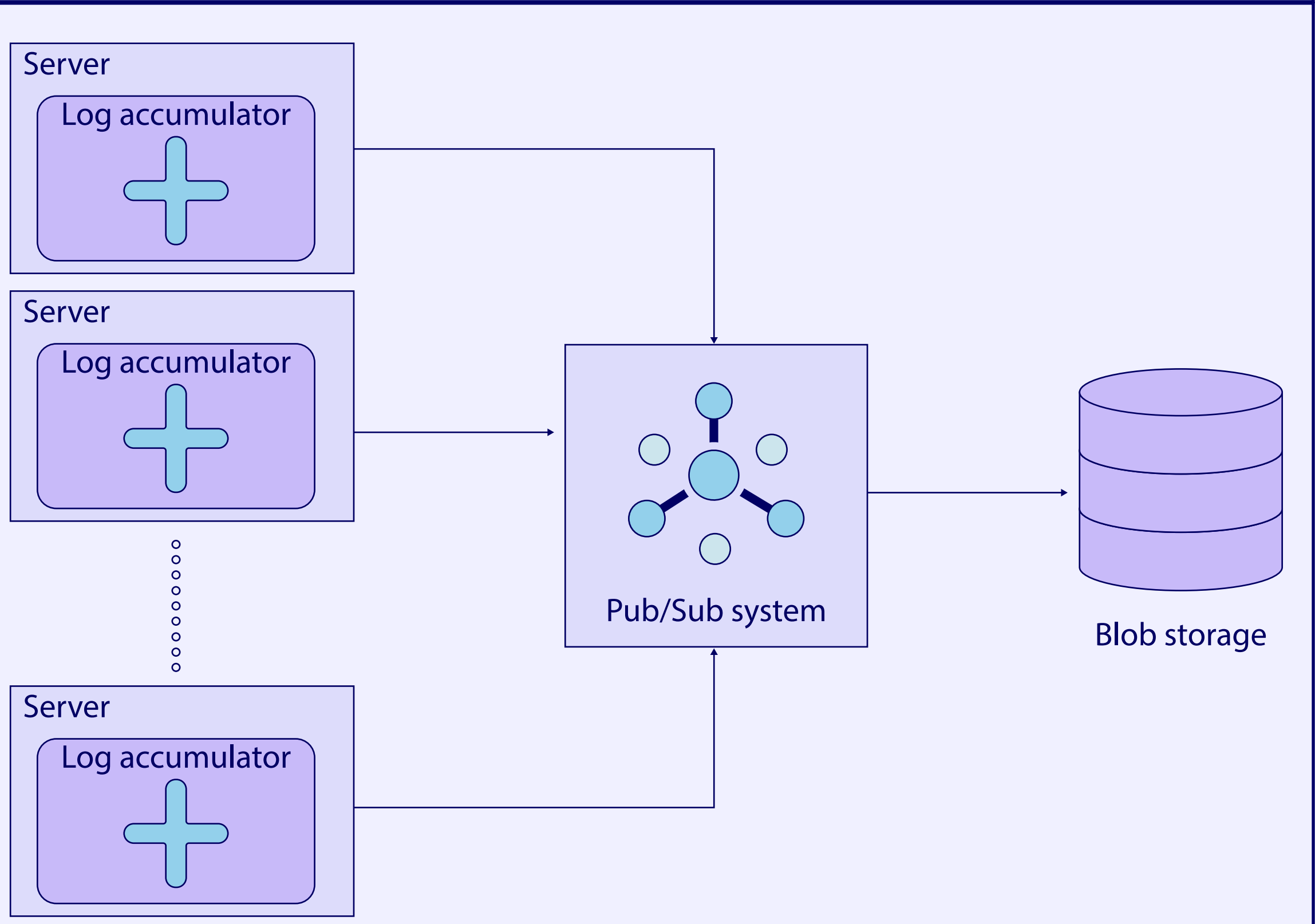
Task Scheduling:

Plans and automates the execution of tasks, optimizing resource usage and system efficiency.



Distributed Logging:

Collects and organizes log data from various sources, aiding in debugging and system analysis.



Sharded Counters:

Keeps accurate counts of millions of events happening per second, such as likes on a Tweet by a celebrity.

