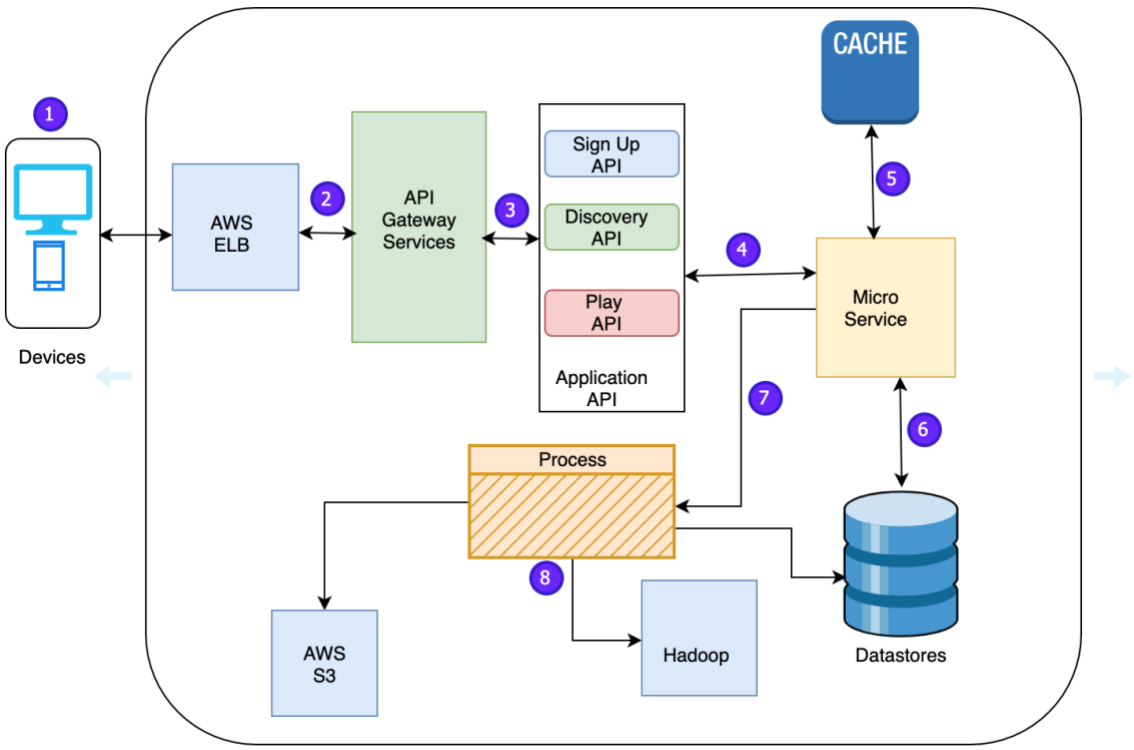
Case Study of Current Netflix Software Architecture

Summary

Netflix, currently the world's leading internet television network, with over 100 million members worldwide adoring 125 million hours of TV shows and movies each day, including original series, documentaries, and feature films. Allowing members to watch as much as they want, anytime, anywhere, on nearly any Internet-connected device. Interesting to know, is that in the year 2000, the company called Blockbuster LLC had an opportunity to buy Netflix for just $50 million during its difficult times but never did. Then in 2016, Netflix made a comeback and accumulated about $8.83 billion in revenue.

One would wonder how come a company which was worth $50 million in 2000 now worth around $87 billion. Thanks to the management and the team of great developers who redesigned the entire software architecture.



Netflix System Architecture

Cloud Architecture of Netflix

Netflix runs on Amazon Cloud Services (AWS) and Open Connect, its in-house content delivery network. Both systems must work together seamlessly to deliver high quality video streaming services globally. From the software architectural point of view, Netflix comprises 3 main parts which are:

1. *Client*
2. *Backend and*
3. *Content Delivery Network (CDN).*

1. Client: The client refers to any supported browsers on a laptop/desktop or any mobile device. More so, some mobile devices like iOS or Android have specially designed Netflix Apps that could be installed and allow customers to watch directly.

2. Backend: This includes services, databases, storages running entirely on AWS cloud. Backend basically handles everything not involving streaming videos. Some of the Backend AWS components used are EC2, S3, DynamoDB, EMR.

3. Open Connect: CDN is a network of servers called Open Connect Appliances (OCAs) optimized for storing and streaming large videos. These OCAs servers are placed inside internet service providers (ISPs) and internet exchange locations (IXPs) networks around the world. OCAs are responsible for streaming videos directly to clients.