LTIMindtree

POV

OTT

Understanding the Landscape

Author: **Rahul Kulkarni**

LTIMindtree

A content platform is a platform that hosts, shares, and sells content (mostly multi-media), by creating, publishing, and distributing content for a targeted audience.

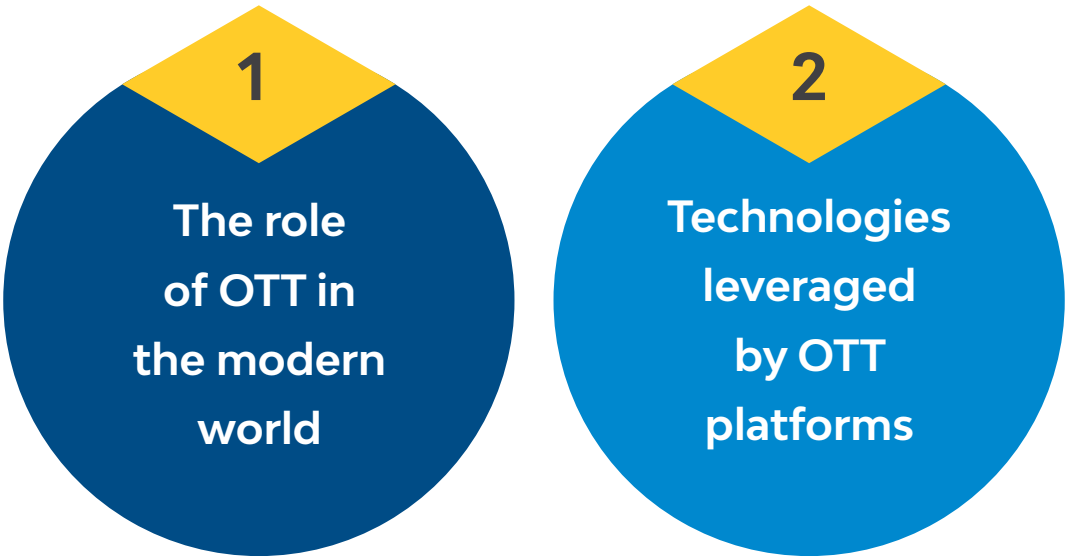
Such platforms are used by Over the Top (OTT) media services, such as those for content marketing companies including Netflix, Amazon Prime Videos etc. The term OTT comes for a simple reason that customers can subscribe to these content platforms which bypass cable, broadcast, and satellite televisions. OTT companies can author, store, and share the content. Customers are provided various options to browse the content of their choice, which can be free or paid content.

Now the key question that arises is that if these platforms, along with media services render a good business value, how does one go about creating such a platform? Well, this article provides the answer to the "How"

In this blog series, we are going to look at media services, its offerings, its technical structure i.e., design and construction, infrastructure and cloud requirements, data requirements, file storage requirements, and API requirements in a very structured way to create an OTT platform. This structure involves a microservices based domain driven design, which we shall carefully observe.

We will first try to understand the modern media landscape i.e., the overall platform, opportunities, and challenges. As we progress in the blog series, we will look at generic and specific implementations in the forthcoming blogs.

So let us look at some prime topics:



OTT – What Is It Exactly?

The term "OTT" which means "over-the-top" represents any online content provider that offers streaming media as a standalone product. This term is frequently used to represent video-on-demand platforms but this also comprises of audio streaming, messaging services, or even Internet-based voice calling services.

Let us look at the features of OTT and what it has to offer. OTT media services offer content in various ways to customers for subscription and consumption. Some of the services are OTT television, OTT messaging, and OTT voice calling. In our article, we are going to keep the scope focused on Internet-based television offerings. The OTT media service primarily offers films, television services with its own licensing model and offerings from various providers, content add-ons, live sporting events, and online video rental and purchasing services.

These services can be regional or internationally offered. For internationalization, a dedicated website for that region is needed to offer content based on regional preferences and better network speeds. The video quality is usually supported as 4K(UHD) and high dynamic range (HDR) streaming depending upon the device configuration. Other videos support full HD with Dolby Digital or Dolby Digital Plus or even Dolby Atmos as audio options.

Offerings

So, what do these services offer? Please note that media service offerings are different from offerings made by media service providers. Media service firms offer a variety of offerings as listed below:

Format Management

Videos can be delivered in various video formats as needed by the consumers.

Live streaming

Live broadcasting videos of various events like sports, public meetings, events like town hall, legislative bodies etc to consumers.

Performance

Enabling cloud-based CDNs to achieve large scaling to better handle instantaneous high load.

Audio and Video Analysis

Recorded videos and audios can be analyzed for various information and speech to text conversions.

Customers can use these services over the Internet i.e., watch movies, serials, television channels, news etc. on the online platform provided by these media service providers. They also get intelligent features like "Continue Watching", "Minutes Remaining" or even "You have watched XXX, you might like YYY".

So how is all this configured?

How do they know what we like or what we have seen?

Benefits

A big question comes to our mind, 'Why OTT is needed when traditional alternatives exist?' The answer is very clear, it is the format that drives the choices as it is more appealing. Some of the reasons why the format is appealing include:

1
High value content at low cost

Cost effective but high-quality content available.

2
Original content

OTT providers like Netflix, Amazon etc. produce their own content that is available through their service.

3
Multiple Device compatibility

For watching the OTT content, we do not need to watch it on television only. We can watch the content from multiple devices like smart TVs, laptops, mobiles etc.

Besides the above platform benefits, the various commercial benefits of the platform are as follows:

4
Global Demand

The use of streaming media is on the rise globally and lot of customers are now subscribing to OTT media services.

5
Non-Entertainment Markets

The platform provides benefits to non-entertainment markets like education, health based content etc. which is useful during these times of the pandemic.

6
Tiered Monetization

Subscribers can subscribe for various OTT platforms in the form of direct subscription or app purchases i.e., there are various tiered options for monetization.

Content Types

What are the different content types delivered by OTT media services? Well, the OTT media services largely offer video-on-demand services as the primary services. Along with these services, web-based content can also be delivered. This includes:

Videos

Videos is the most popular content of various OTT service providers.

Audio

Audio can be accessed using Internet radio stations or podcasts.

Messaging

OTT based instant messaging services connect users directly via Internet connections. Users can bypass the Internet-based chats like Google, Skype, and WhatsApp etc.

VoIP

Voice calling platforms such as Skype and WeChat that operate using Internet protocols are considered as OTT services. In some instances, these services can integrate with mobile phone networks to enhance certain features.

In the forthcoming chapters, let us understand the architecture and various components used which make all this possible. Let us also look at the system architecture of a typical media service, how it delivers various content to the customers and create a business value.

Challenges

Over the years, various OTT organizations land up in the market and create various services for customers. Due to this increase of competition, various organizations provide different subscriptions, which customers must subscribe to enjoy the services. Customers can get "Subscription Fatigue" with subscriptions to multiple services. Also, the growth of some platforms can really push the smaller platforms out of market. So diversification remains one of the key challenges to OTT platforms.

Summary

Media service providers like Netflix, Amazon Prime Video etc. are Over the Top (OTT) service providers and provide various media services like movies, plays, serials etc., on Internet-based mediums. These service providers design the system for maximum performance.

OTT is an extremely progressive media service platform. In a relatively short span of time, it has taken up a major percentage of the market for delivering rich content to various consumers in an extremely cost efficient way with high-quality. These services are multi-device compliant rather than just a television set and can be viewed over a range of devices. There are various content types delivered from OTT platforms. Video is the most popular content type, while the service also supports audio, messaging and VoIP and other types of content.

In the succeeding chapters, we will look at how these OTT platforms are constructed and how the architecture is designed. We will also look at Netflix as an example of how a typical OTT platform is created for commercial use in the modern world.

About the Author

Rahul Kulkarni

Enterprise Architect, LTIMindtree

Rahul Kulkarni is an enterprise architect with 18 years of experience. He is currently working with LTIMindtree's NWOW-NEAR Business Unit/Practice. Rahul has extensive experience in enterprise architecture and consultation, and has been part of various technology and architecture related projects.