**‘Cinemana’ System Architecture**

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**Description:**

Cinemana is a subscription-based streaming service that allows its members to watch TV shows and

movies on an internet-connected device. Cinemana allows its users to easily navigate through a number of movies and TV shows effortlessly and also provides a search bar functionality. Users will be able to stream the content online or download it directly to the device. It is equipped with user-tailored recommendation system which is backed by a large database of movies. It is available in different languages and also provides its users with the flexibility to synchronize different devices under the same account. It also allows the users to add movies to a “watch-later” list and also group movies together.

**Quality Attributes:**

There are several quality attributes that are important for Cinemana software architecture from a software architecture perspective. These include:

1. Performance: Cinemana software architecture needs to be able to deliver a high-quality video streaming experience to customers with minimal buffering or lag time. This requires the software to be optimized for speed and efficiency.
2. Scalability: The software architecture needs to be able to handle a large number of concurrent users and traffic spikes, particularly during popular events such as new releases or major sporting events.
3. Reliability: The software architecture needs to be highly reliable, with minimal downtime or service disruptions. Customers expect to be able to access the service at any time, and any technical issues can lead to frustration and lost revenue.
4. Security: The software architecture needs to be secure, with robust measures in place to protect customer data and prevent unauthorized access or hacking attempts.
5. Maintainability: The software architecture needs to be easy to maintain, with clear documentation and well-organized code that can be easily updated or modified as needed.
6. Usability: The software architecture needs to be easy to use, with intuitive interfaces and navigation that allow customers to quickly find and stream the content they are looking for.
7. Compatibility: The software architecture needs to be compatible with a wide range of devices and platforms, from desktop computers to mobile devices. This requires the software to be designed to work seamlessly with a variety of hardware and software configurations.

**Stakeholders:**

1. Users (Customers): Users are the most important stakeholders in Cinemana's software architecture. They use the service to stream content and expect the software to be fast, reliable, and easy to use.
2. Software developers: The software developers are responsible for building and maintaining the software that powers Cinemana. They need to ensure that the software is scalable, efficient, and easy to maintain.
3. Operations team: The operations team is responsible for ensuring that the software is running smoothly and that any issues are resolved quickly. They need to ensure that the software is highly available and that the customer experience is not impacted by any technical issues.
4. Content providers: Content providers are responsible for providing the content that is streamed on Cinemana. They need to ensure that their content is compatible with the software and that it is delivered in the best possible quality.
5. Business stakeholders: Business stakeholders include executives, investors, and partners who have a financial interest in the success of Cinemana's software architecture. They need to ensure that the software is delivering value to the customers and that it is profitable for the company.

**Viewpoints:**

1. Functional viewpoint: Different functions and features can be used to analyse the architecture.
2. Use-case viewpoint: Different use cases of various stakeholders can be mentioned here.
3. Cloud Viewpoint: This viewpoint describes the cloud infrastructure used by Cinemana, which is based on Amazon Web Services (AWS) and other cloud providers. The viewpoint could include a description of the different cloud services used by Cinemana, such as EC2, S3, and DynamoDB, and how they are integrated into the architecture.
4. Security Viewpoint: This viewpoint describes the security architecture of Cinemana, which is based on a multi-layered approach that includes network security, application security, and data security. The viewpoint could include a description of the different security controls used by Cinemana, such as firewalls, encryption, and authentication, and the security policies and procedures used to protect user data and content.
5. Performance Viewpoint: This viewpoint describes the performance architecture of Cinemana, which is based on a combination of caching, scaling, and load balancing techniques. The viewpoint could include a description of the different performance metrics used by Cinemana, such as response time, throughput, and availability, and the performance testing and optimization strategies used to ensure high performance at scale.

**Business Information**

1 BusinessVision

2 BusinessRationale

3 ProductDescription

4 TargetAudience

5 SystemEvolution

6 BusinessandDomainModel

7 Roadmap

8 FinancialModel