NETFLIX

PLAYBACK DATA SYSTEMS

Team and Job Overview for Senior Software Engineer

World’s Leading Internet TV Network

- Opportunity: > 998M Broadband Households
- 167M+ Paid Members
- 190+ Countries
- 2000+ Device Types
- Commercial Free
  - TV
  - Movies
  - Original Content

NETFLIX

At Tremendous Scale

- Streaming video accounts for >60% of all traffic on the internet
- Netflix accounts for 12.6% of total downstream volume of traffic and 11.4% of all internet traffic!

GLOBAL APPLICATION TRAFFIC SHARE

1	HTTP MEDIA STREAM	12.8%(-0.1)	6.3%(+1.4)
2	NETFLIX	12.6%(-2.3)	2.1%(-0.8)
3	YOUTUBE	8.7%(-2.9)	2.4%(-0.6)
4	OPERATOR IPTV	7.2%(+2.8)	3.5%(-0.6)
5	HTTP DOWNLOAD	4.5%(+0.8)	1.0%(-0.3)
6	HTTP (TLS)	4.4%(+0.4)	2.2%(+0.1)
7	HTTP	3.0%(-0.1)	3.5%(-1.2)
8	FACEBOOK	3.0%(+1.2)	2.2%(+0.7)
9	PLAYSTATION DOWNLOAD	2.8%(+0.2)	0.4%(+0.0)
10	BITTORRENT	2.4%(+0.2)	27.5%(+6.4)

Source: [2019 Global Internet Phenomena Report]

Playback Services Stats

- Millions of Requests *per* Second and growing rapidly
- Tens of terabytes of data collected, processed, stored and curated!
- 100s of millions of hours streamed per day

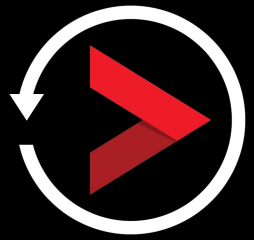
Freedom & Responsibility Culture

Every Netflix employee has the **freedom** to do their best work and the **responsibility** to achieve excellence.

Values Are What We Value

- Judgment
- Communication
- Impact
- Curiosity
- Innovation
- Courage
- Passion
- Integrity
- Selflessness
- Inclusion

See https://jobs.netflix.com/culture for more information on our innovative Freedom & Responsibility culture



PLAYBACK

SYSTEMS

Team Overview

Product Edge Systems

Playback Systems is a part of the Product Edge Systems group at Netflix. For an overview of the organization, see https://tiny.cc/NetflixPES.

Playback Systems Teams

Playback Lifecycle

Orchestrate every step of the Playback session. Provide stable abstractions between device and playback domains

Playback Licensing

Secure access to Netflix Content via Digital Rights Management

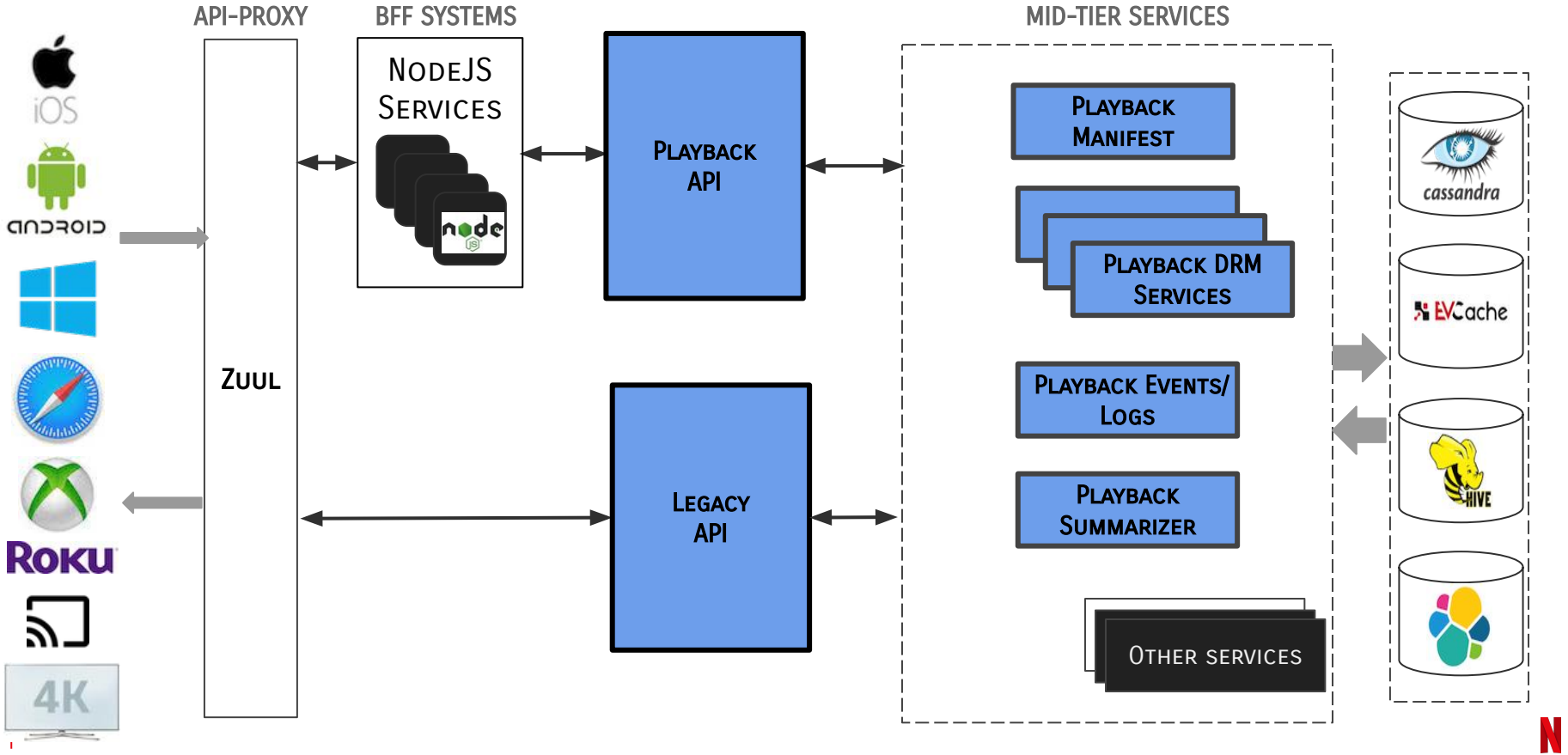
Playback Experience

Present the best personalized audio/video/text tracks for every playback

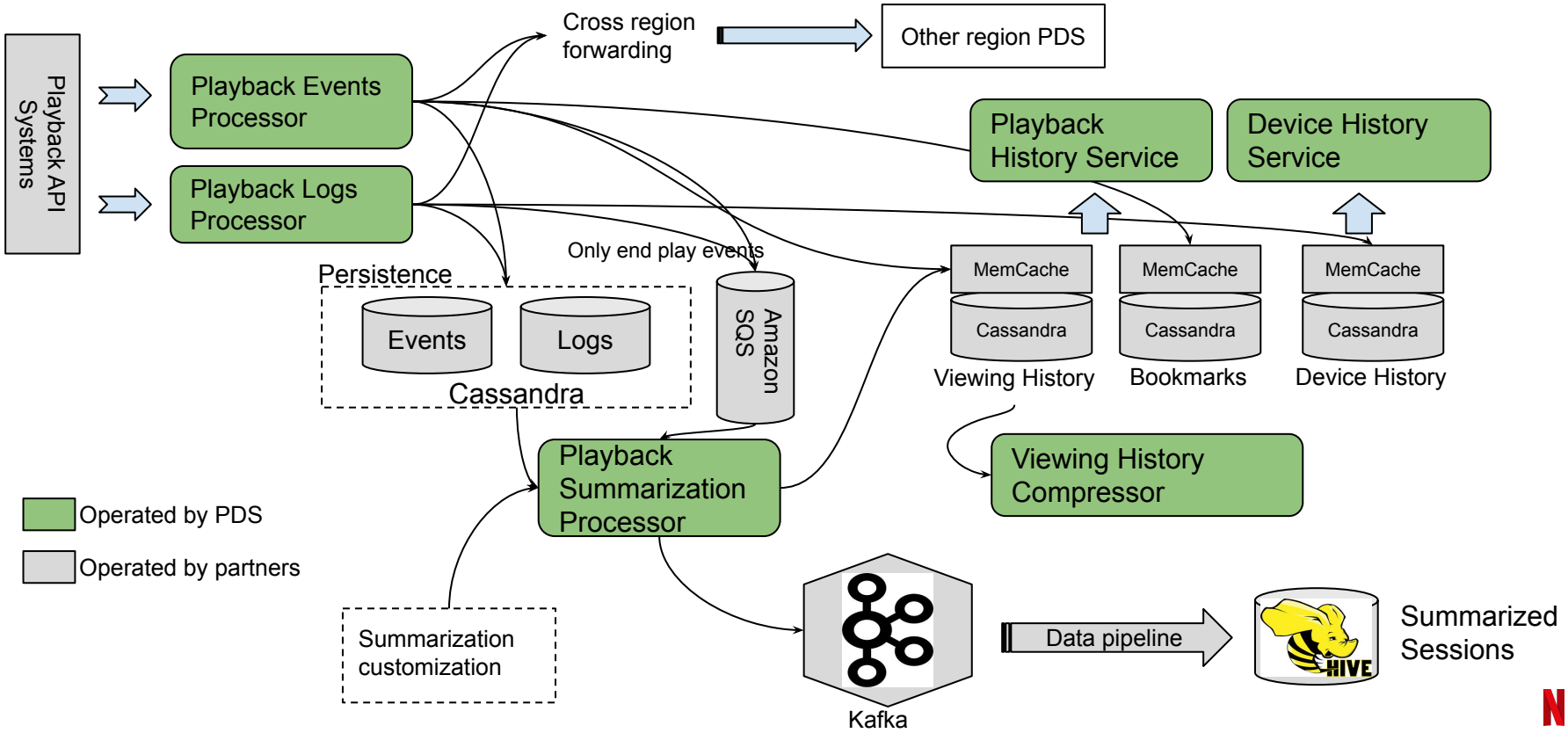
Playback Data Systems

Capture & Summarize a Playback Session. Curate and serve large scale time series data (Viewing History/Bookmarks)

Playback Systems Overall Architecture



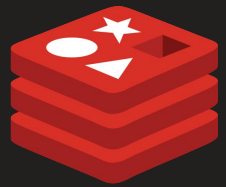
Current Playback Data Systems (PDS) Architecture



Top 2020 Goals for PDS

1. Prototype and arrive at an informed strategic bet on the overall architecture to support our 2025 scaling needs
2. Re-imagine product specific aggregated materialized views for Viewing History dataset
3. Achieve Simplicity by streamlining our Session Processing and Summarization architecture

Playback Data Systems Technology Stack



Team Blogs/Talks

- Playback Data Systems
  - Scaling Time Series Data (part 1 and part 2)
- Our Org level Resources
  - Playback Lifecycle: Why we built an Evolutionary Architecture (talk)
  - Playback Licensing: Scaling Event Sourcing for Downloads (talk, blog post 1 & 2)
  - Playback Experience: How Netflix Directs 1/3rd of Internet Traffic (talk)
  - Full Cycle Developers at Netflix (talk, blog)

Interested?

Contact me for more information!

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