Projects:

Realtime Informatics on Systemic KPIs (RISK)

(Lead/Visionary for team of Dev/Infra/Video Engineers)

Problem Statement: Due to the multi-system and network reliance to perform transcoding, we needed a way to visualize the full picture to understand performance and where to focus on optimization.

* RISK is a second accurate data aggregator & visualizer that is used for transcoding performance metrics at the App, System, Network and Storage Layer
* Queries transcoder APIs to aggregate job data to determine success/fail rates, output types, and percent real-time

(1hr movie - 1.5hr transcode = 1.5x Percent Realtime)

* Queries from Zabbix, KubeHealthy, and CloudWatch to gather system layer performance, CPU, GPU, MEM, DISK
* Queries Riverbed to gather network layer performance
* Queries NetApp Managers to pull performance metrics from storage volumes.
* Once all the data is collected, we can layer and create interactive visualizations of the components to create logical KPIs to understand the overall system health and performance as well as tune through the testing pipeline

Technologies: React, d3.js, Java, Solr, DataStax, Cassandra, Ateme, Elemental, NetApp, Kubernetes, MPX, SDVI, Riverbed

Win: Reduced core utilization by 25% to reduce AWS spend while retaining performance and video quality.

RAIDER

Realtime Asset Identifier (Raider)

(Lead/Visionary for team of Dev/Infra/Ops engineers)

Problem Statement: Our workflow orchestrators are performance focused with minimal visualization clarity for customers. We needed a way to aggregate millions of assets into a single pane of glass per workflow for ease of asset status identification and automatic triage.

* Raider is a second accurate data aggregator/visualizer for ingest workflows to track and simplify asset status as it moves through our workflow
* A single pane of glass to quickly identify any errors for individual providers and ties into Netflix Conductor to automatically triage content by utilizing the rules engine and bucketize assets accordingly by error code for resolution
* Raider is leveraged by customers, prod support and the content management team to manage issues daily
* Raider also aggregates data interactively to show historical workflow performance history, success rates by provider or partner, and error percentages by geographical ingest location

Technologies: React, d3.js, Java, Solr, DataStax, Cassandra, MPX, SDVI, Ruby, Netflix Conductor

Win: This application has greatly reduced Opex across multiple teams by enhancing meantime to detect and repair keeping us in the 3 9’s (99.9%) success rate. Prod Support understands immediately if the issue is downstream by validating success. Reduced ingestion escalations by 75% freeing up three engineers full time to focus on systemic needs.