On Air & In the Cloud: Digital Radio Leader's Lift and Shift Journey to AWS

The Client

The Client is a pioneer in digital media and is one of the world's largest producers of original live Internet talk radio programming. Along with its sister network, the Client delivers hundreds of weekly original programs featuring over 200 hosts covering diverse topics from sports and finance to health, business, and pop culture. Their commitment to adopting cutting-edge technology has positioned them as industry leaders in web-based talk radio programming, continuously introducing innovative ways to deliver content to millions of listeners worldwide.

The Challenge

The Client's growth and expanding audience strained their legacy on-premises infrastructure, creating several critical operational and business challenges.

- **Infrastructure Scalability:** The Client's on-premises infrastructure struggled to accommodate traffic spikes during popular live shows, resulting in buffering issues and poor listener experience. Physical infrastructure constraints hindered the Client's ability to deliver content to their growing audience efficiently.
- **High Operational Costs:** Maintaining and upgrading physical infrastructure required significant capital expenditure and ongoing operational overhead.
- **Limited Disaster Recovery**: The existing infrastructure provided inadequate redundancy and business continuity capabilities, creating risk for their 24/7 broadcasting requirements.
- **Technical Debt:** Legacy systems and custom solutions caused integration challenges and required specialized knowledge to maintain.
- **Innovation Bottlenecks:** Development teams spent excessive time maintaining infrastructure rather than focusing on new features and innovation.

The Solution

Opteamix proposed a strategic AWS lift and shift migration approach to modernize the Client's broadcasting infrastructure while maintaining operational continuity.

- **AWS Infrastructure Assessment:** Conducted comprehensive analysis of existing workloads to determine optimal AWS service selection for the lift and shift approach.
- **Migration Strategy:** Implemented a phased migration approach to minimize disruption to live broadcasting operations:
  - Phase 1: Non-critical workloads and development environments
  - Phase 2: Content storage and media processing systems
  - Phase 3: Live streaming infrastructure and core broadcasting systems

- **AWS Service Implementation**:
  - Amazon EC2: Deployed right-sized instances to host application servers and broadcasting software
  - Amazon S3: Migrated extensive media library and program archives
  - Amazon CloudFront: Implemented CDN to improve global content delivery
  - Amazon RDS: Migrated databases supporting content management and listener profiles
  - AWS Elastic Load Balancing: Distributed traffic to ensure high availability
  - Amazon ElastiCache: Improved performance for frequently accessed content
- **Networking and Security:** Configured VPCs, security groups, and IAM roles to maintain secure operations while enabling appropriate access for broadcasting teams.
- **Operational Transformation**: Implemented CloudWatch monitoring and alerting, as well as AWS Systems Manager for streamlined infrastructure management.

Value Delivered

The AWS migration delivered transformative business outcomes, significantly enhancing the Client's operational capabilities and competitive positioning in the digital media landscape.

- **99.99% Uptime:** Eliminated service disruptions during peak broadcasting periods, enhancing listener satisfaction and trust.
- **40% Cost Reduction:** Shifted from capital-intensive infrastructure investments to a flexible pay-as-you-go model, significantly reducing TCO.
- **Performance Improvement:** Reduced latency by 65% for international listeners through strategic use of AWS global infrastructure and CloudFront distribution.
- **Scalability on Demand:** Successfully handled a 300% traffic spike during a major news event without performance degradation.
- **Enhanced Disaster Recovery:** Implemented cross-region redundancy with a 15-minute recovery time objective (RTO), dramatically improving business continuity capabilities.
- **Innovation Acceleration:** Freed up 30% of IT team resources to focus on innovation rather than infrastructure maintenance.
- **Time-to-Market Improvement:** Reduced new program launch timeline from weeks to days by leveraging standardized AWS deployment templates.
- **Analytics Capabilities:** Gained deeper listener insights through AWS analytics services, improving content targeting and advertising effectiveness**.**

About Opteamix

Opteamix is an AI-powered technology services company specializing in AI, Application Development, Robotic Process Automation (RPA), DevOps, Enterprise Mobility, Test Automation, and Global Capability Center (GCC) operations. Guided by our higher purpose- **"Simplifying Success"**-we deliver transformative solutions that help organizations scale efficiently and thrive. Headquartered in Denver, Colorado, we operate a wholly owned delivery center in Bengaluru, India.