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# Enhancing Operational, Digital Experience & Performance Monitoring for US Airline

**Client: :** A top American Airline with destination coverage for North & South America
**Services Provided:** The project aimed to provide comprehensive observability and monitoring solutions to support Spirit Airlines' ambitious growth plans and ensure seamless digital interactions for their customers..

## Business Challenge

- **Complex Application Ecosystem:** The Airline manages numerous mission-critical applications, including cloud-based online and mobile commercial applications for customer self-service, and operational applications for fleet and maintenance management.
- N**eed for Enhanced Visibility:** The airline required increased visibility into the customer journey and third-party applications integrated with its services.
- **Quick Issue Resolution:** Traditional monitoring methods were insufficient for the rapides olution of issues in their applications.

## Solution

**Splunk for Log Management and Analysis:**

- **Centralized Logging:** Implemented Splunk to centralize log data from various applications and infrastructure components.
- **Real-time Monitoring:** Enabled real-time monitoring and alerting to quickly identify and resolve issues.
- **Data Analytics**: Utilized Splunk's powerful analytics capabilities to gain insights into system performance and user behavior.

**Dynatrace for Observability and Performance Monitoring:**

- **End-to-End Observability:** Deployed Dynatrace to provide end-to-end observability across Spirit Airlines' hybrid technology stack.
- **Digital Experience Monitoring (DEM):** Leveraged Dynatrace's DEM capabilities to monitor and enhance the digital guest journey.
- **AIOps and Automation:** Utilized Dynatrace's AIOps and automation features to reduce manual monitoring efforts and accelerate issue resolution.
- **Synthetic Monitoring:** Implemented synthetic monitoring to evaluate the performance of third-party dependencies and external platforms.

## Technology and Tools Stack

**Splunk Implementation:**
Data Ingestion Dashboards and Alerts Search Processing Language (SPL)

**Dynatrace Implementation:**
OneAgent Deployment Smartscap. Grail Data Lakehouse Synthetic Monitoring

## Results Data

- **Mean Time to Resolution (MTTR): Reduction in MTTR:** The implementation of Dynatrace's AIOps and automation capabilities significantly reduced the mean time to resolution for application issues. This allowed client to resolve incidents faster and minimize downtime
- **Digital Experience Score: Improved Digital Experience:** Using Dynatrace's Digital Experience Monitoring (DEM), client was able to track and improve the digital experience score, which measures the quality of user interactions with their digital platforms
- **Application Performance: Enhanced Application Performance:** Splunk's real-time monitoring and analytics capabilities helped in identifying performance bottlenecks and optimizing application performance, leading to smoother and faster user experiences
- **Customer Satisfaction (CSAT): Increased CSAT Scores:** By ensuring seamless digital interactions and quick issue resolution, clientsaw an increase in customer satisfaction scores, reflecting a better overall customer experience
- **Log Data Ingestion Rate:** High Data Ingestion Rate: Splunk's ability to ingest and process large volumes of log data in real-time provided comprehensive visibility into system operations and user activities
- **Synthetic Monitoring Metrics:**
  - Performance of Third-Party Services: Dynatrace's synthetic monitoring provided metrics on the performance and reliability of third-party services, ensuring that external dependencies did not negatively impact the user experience
- **Operational Efficiency:**
  - Improved Operational Efficiency: The insights gained from both Splunk and Dynatrace allowed the Airlinesto streamline their operations, reducing manual monitoring efforts and improving overall efficiency