Modern Travel Cloud Platform for improved business performance

Scales operations and expands memberships globally
THE DIGITAL MANDATE

In 2016/2017, the customer took a strategic decision to move their existing IT infrastructure onto Cloud (specifically Amazon Web Services). This decision was in line with their Digital Agenda strategy. They created the CMAP (Cloud Migration Adoption Program) to achieve this and its key milestones are:

- By 2020 – No new hardware to be procured for the On-Premise Data Center
- By 2025 – Decommission the On-Premise Data Center
- Stay ahead of competition by leveraging features of Cloud
- Make infrastructure more scalable based on demand and setup the supporting ecosystem.

The customer modernized their application stacks and overcame the constrains of lack of scalability by leveraging Sonata’s Cloud Platform™ approach.

Client Organization
Sonata’s Cloud Platform and Application Analysis framework

Sonata’s Cloud Platform™
We conducted 6R analysis of the client’s applications and profile them as digitally critical and non-critical assets. Then we charted out their respective modernization and optimization paths for optimum performance on Cloud.

Migrate and Optimize
Applications which are non-critical to the client business and which don’t require scale and elasticity to operate optimally in Cloud are migrated to Cloud and then optimized for Cost, Infrastructure, Resources and Process Improvements.

Migrate and Modernize
Applications which require scale and elasticity of Cloud and are critical to the business functioning of the customer are modernized to Cloud using Sonata’s mArchitecture. These modernized applications incorporate features of modern digital platforms which are Open, Connected, Scalable and Intelligent.

6R and Digital Profile Analysis Result
Application identified for Migration

Web Search Stack:
A complex e-commerce based holiday reservation application landscape with Integration to On-Premise Back office setup.
Sonata’s Platform Engineering Framework

<table>
<thead>
<tr>
<th>Teams</th>
<th>Implementation Steps</th>
<th>Building Blocks of Cloud Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automation and DevOps</td>
<td>identification</td>
<td>Account structure</td>
</tr>
<tr>
<td>Teams</td>
<td>Validation</td>
<td>Network Connectivity</td>
</tr>
<tr>
<td>Security operations</td>
<td>Sizing and Scoring</td>
<td>Workload Monitoring</td>
</tr>
<tr>
<td>Implementation and support</td>
<td>Resource Allocation</td>
<td>Logging &amp; Alerting</td>
</tr>
<tr>
<td>team</td>
<td>Migration</td>
<td>Backup and restore</td>
</tr>
<tr>
<td>Architecture &amp; re-usable</td>
<td>Optimization</td>
<td>Disaster Recovery</td>
</tr>
<tr>
<td>frameworks</td>
<td>Modernization</td>
<td>Operating System</td>
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<tr>
<td></td>
<td></td>
<td>Identity and Access Management</td>
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<td>Security policies</td>
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<td></td>
<td></td>
<td>Infrastructure Orchestration</td>
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<td></td>
<td>Artefact Repository</td>
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<td></td>
<td></td>
<td>Testing Framework</td>
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<td></td>
<td></td>
<td>Source Code Management</td>
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<tr>
<td></td>
<td></td>
<td>Continuous Integration</td>
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<tr>
<td></td>
<td></td>
<td>Collaboration</td>
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<tr>
<td></td>
<td></td>
<td>Application Deployment Orchestration</td>
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<tr>
<td></td>
<td></td>
<td>Configuration Management</td>
</tr>
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<td></td>
<td></td>
<td>Lifecycle Management</td>
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<td></td>
<td></td>
<td>Resource Tagging</td>
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<td>Service Discovery</td>
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<td>IPAddress Management</td>
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<td>DNS</td>
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Needs of On-Prem Application

Performance Needs
Need to improve on the current page Load SLA for search application of 1.2 seconds.

Infrastructure Needs
Optimize the use of the following infrastructure

<table>
<thead>
<tr>
<th></th>
<th>Hybris Admin</th>
<th>Hybris WEB</th>
<th>Endeca Assembler</th>
<th>Apache</th>
<th>ATCOM cache</th>
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<tbody>
<tr>
<td>Servers</td>
<td>2</td>
<td>28</td>
<td>24</td>
<td>8</td>
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<tr>
<td>RAM</td>
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<td>386</td>
<td>612</td>
<td>12</td>
<td>1024</td>
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<tr>
<td>CPU</td>
<td>4</td>
<td>28</td>
<td>48</td>
<td>2</td>
<td>160</td>
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Architecture Needs
Need to design and build a number of foundational building blocks of the applications that may be used in future workloads in cloud.
Migration flow

Current infra spend is £5.4M per year

STEP 1: Design and implement an enterprise ready Cloud Landing Zone to host the stack

STEP 2: Migrate the web trading stack to Cloud

STEP 3: Design the target operating model for running applications in Cloud

STEP 4: Prepare customer teams for the changes that the new operating model and technology stack will have.

STEP 5: Embrace an experimental approach to develop standards, ensuring quality of service and supportability

STEP 6: Enable re-use of best practice, processes, designs, patterns, standards and code across the customer companies.
Benefits of Migration and Optimization

**Migration Stats**

- Achieved 100% infrastructure availability.
- Achieved Scalable and Elastic infrastructure.
- Reduced test environment spin up time from 80 working days to 3 days.

**Optimization Stats**

- Achieved better utilization of infrastructure.
- Utilize 100% ISP Network Capacity.
- Achieved resource reduction to maintain the infrastructure.

Infra Spend per year increased
To £10 M from £5.4 M

Infra Spend reduced
from £10 M to £6.5 M
Modernizing Applications

The Following Applications were modernized

Modernize the Database from Oracle RDS to AWS Aurora
- Convert database schema and code
- Migrate data from the source database to the target database using AWS Database Migration Service
- Perform post-migration activities such as running SQL queries for validating the object types, object count, and the number of rows for each table between source and target databases

Modernize Applications to use Elasticsearch instead of Endeca
- Batch ETL and real-time synchronization feeds catalog, inventory, pricing, and offers to the cloud
- Export Tools from Endeca to the new search engine
- Support legacy URL during migration and maintaining it with ES-based implementations
- Test new services to ensure that the relevancy is better.

Benefits
- Reduction in DBA activities
- AMC Cost reduction 300 K for Endeca
- License cost reduction of 300K for replacing Endeca with Elasticsearch
- Performance improvement
Value Created by Modernizing the Applications

**DIGITAL THROUGH PLATFORMATION™**

**OPEN**
- Industry standard interface options for new trade partner onboarding
- Flexible provision for new service providers and payment gateways on demand

**SCALABLE**
- Scalable infrastructure to address demand spikes
- Provision of adding unlimited number of new vendors for packages, services and for operations
- New rules and policies can be configured with ease

**CONNECTED**
- Real-time data exchange with third party entities using Built-in integration framework
- Customer & context specific notifications, promotions and offers based on AI

**INTELLIGENT**
- Customer data & web analytics for contextual recommendations and personalized experience.

**Performance**
- +35% Search Performance Gain
- +10% PageLoad Performance Gain

**Operational Results**
- 153k Peak Hour Searches
- 6861 Peak Day Bookings

**Resource Efficiency**
- 100% Infrastructure Availability
- 100% ISP Network Capacity

**Business Agility**
- 10% Reduction in cost/year
- +15% Traffic Volumes
- +3% Customer Satisfaction Score

**Operational Results**

**Operational Results**

**Operational Results**

**Operational Results**