Implementing a Multi-tenant, Self-Service Solution Using Microstrategy

Presented by:
Moshik Hadad, Yaar Reuveni
Liveperson

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LivePerson Leading Digital Platform
Connecting Brands and Consumers

- Founded 1995
- Public since 2000 (NASDAQ: LPSN)
- Over 1,000 employees
- 19,000 customers (approx.)
- Headquartered in NYC with offices across Israel, Japan, Australia, Europe and the U.S.

Financial | Retail | Telecoms | Technology | Travel
---|---|---|---|---
PNC | Lancôme | T-Mobile | IBM | American Airlines
bankwest | backcountry.com | BT | Microsoft | virgin atlantic
Fidelity | TED Baker | Intuit | Adobe |
Transforming the Connection Between Brands and Consumers

LivePerson’s vision is to give consumers their time back by enabling them a way to connect with their brands via their favorite digital channel.
## LivePerson - Enterprise Scalability

Scalable infrastructure ready to support any traffic levels

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>99.997%</td>
<td>High availability uptime in 2017</td>
</tr>
<tr>
<td>6 (3x2)</td>
<td>Private Cloud</td>
</tr>
<tr>
<td>2.7 Billion</td>
<td>Monitored visits per month</td>
</tr>
<tr>
<td>5 Billion</td>
<td>Events per Day</td>
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</tbody>
</table>
The LiveEngage Platform

- Agent
- Campaigns
- LE Dashboard
- BI Dashboard
- Report Builder

Realtime

Offline
Our Microstrategy Story
The BI Platform Requirements

SaaS BI Platform for Enterprise Requirements

Enterprise Customers Expect -

- High Availability
- Reliability
- Security
- Customizable Platform
- Extensibility
- Supportability
- Functionality

Our Derived Requirements -

- Multi-tenancy support
- Scale out/up
- Performance
- Ease of operation at large scale
- Cost of operation
- Troubleshooting
- Seamless integration
- Multi-data source integration
- Fast time to market
- Enterprise BI features
The solution: MSTR BI

- 1 cluster per farm
- Based on MSTR 9.4
- Same “Look and Feel” as LiveEngage
- Heavy usage of MSTR SDK
- Dozens of Dashboards
- Direct queries from DB
LiveEngage BI Dashboard
The BI Platform Solution

Solution Outline -

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Looking to the future - a new solution

Different customers consumes the data differently

Solution – “The Report Builder”

Visual Insights Out of The Box
New Major Requirements

- Time to market and supporting enterprise customers' expectations
- Multi-tenant and scalable platform
- Development and operation
Time to market and supporting enterprise customers expectations
## LivePerson Customers Types

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small and Medium</td>
<td>Using predefined dashboards</td>
</tr>
<tr>
<td>Enterprise with no internal BI team</td>
<td>Predefined dashboards + Support by LivePerson Customer Success</td>
</tr>
<tr>
<td>Enterprise with internal BI team</td>
<td>Customizing their own dashboards</td>
</tr>
</tbody>
</table>
Multi-tenant and scalable platform
Multi-tenant and scalable platform Topics

- System architecture
- Performance
Architecture

More than 20 Clusters across the world
Architecture

More than 20 Clusters across the world
One Cluster vs. Multi Clusters

Reasons

- Concurrency
- Loader Performance
- Deployment and Rollback
- Scale Up
- Grids
Performance

- Implemented in-memory intelligent cubes for better performance and concurrency
  - Daily incremental cube refresh
  - 50 Cubes
  - Total cubes size - 35GB
  - Loading frequency - Once a day

- Reduced load on vertical database using aggregation tables as direct access
Development and operation
Development and Operation

Alerts
Set up proactive notifications to alert when there is high usage and availability using Enterprise Manager

Cluster management
- Manage multiple clusters
- Option to move accounts between clusters

Deployment
- Automated deployment
- No down time

Roll Back
- Metadata rollback
- Tomcat rollback
LiveEngage Report Builder

Solution Outline -

- Multiple clusters per farm
- Based on MSTR 10.4 VI
- Uses only “out of the box” features
- Minimal usage of MSTR SDK
- Use Cubes and Cache

Our Derived Requirements -

- Multi-tenancy support
- Scale out/up
- Performance
- Ease of operation at large scale
- Cost of operation
- Troubleshooting
- Seamless integration
- Multi-data source integration
- Fast time to market
- Enterprise BI features
Demo
Q&A
Thank you