Analytics: Conquering Perception With Data
A Story of Increased Customer Satisfaction

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Introduction

Stuff for business side of the house – dev’s allowed, too
About Me
Hagop

- Hagop Hagopian
- Senior Product Manager | Charles Schwab & Co, Inc.
  - Digital Onboarding Solutions – Account Open & Enrollment Applications
- Not technical – part of the business
- Responsible for:
  - Retail Channel enrollment and account open
    - Schwab.com
    - Internal tools
  - Robo Advisor enrollment and account open
    - Schwab Intelligent Portfolios
    - Schwab Intelligent Advisor
Charles Schwab & Co, Inc.

- The Charles Schwab Corporation (NYSE: SCHW) is a leading provider of financial services, with more than 340 offices and 10.5 million active brokerage accounts, 1.5 million corporate retirement plan participants, 1.1 million banking accounts, and $3.04 trillion in client assets as of June 30, 2017. Through its operating subsidiaries, the company provides a full range of wealth management, securities brokerage, banking, money management, custody, and financial advisory services to individual investors and independent investment advisors. Its broker-dealer subsidiary, Charles Schwab & Co., Inc. (member SIPC, http://www.sipc.org), and affiliates offer a complete range of investment services and products including an extensive selection of mutual funds; financial planning and investment advice; retirement plan and equity compensation plan services; referrals to independent fee-based investment advisors; and custodial, operational and trading support for independent, fee-based investment advisors through Schwab Advisor Services. Its banking subsidiary, Charles Schwab Bank (member FDIC and an Equal Housing Lender), provides banking and lending services and products. More information is available at www.schwab.com and www.aboutschwab.com.
Account Open Process Flow
1000ft Diagram of Process

Schwab.com → Open Account → Choose Account Type → Data Gathering

Data Gathering → Data Gathering → Data Gathering → Data Gathering

Submit → Account Creation → Log On to Schwab.com
Why is Account Open & Enrollment important?

First touch
- You only get one chance to make a first impression

Sets state for future interaction
- Helps onboarding process, familiarizes users with Schwab
- Smooth AO&E process builds trust with the firm

Sets proper expectations
- Clear concise interactions and messaging throughout process
Story of Splunk
How I started using Splunk

- Needed a real-time system that could deliver immediate conclusions based on data
- Did not want to aggregate data from Warehouses, hives, clusters and other DB’s
- Weblog data already existed at Schwab used by other groups
- We have many data points that are already being captured from multiple channels
- As our Splunk usage increased, we worked with our development team to build additional logging capabilities
Schwab’s Splunk Instance

- Multi-TB User
- Use cases that extend from Security to App Development
- Many different types of users Developers/Prod Support/Development
- Recent increase in capacity by 3x
- 175 Teams
I want an easy to use, easy to share solution that will help me achieve various objectives using seemingly arbitrary insights.
Actionable Intelligence From A Reliable Source
On Demand Analytics Without Needing To Rely On A Data Warehouse
Informed Development Priorities With Fact-based Statistics
Actionable Intelligence From A Reliable Source

Data gathering mission?

- Customer Feedback (challenges)
  - Phone calls
  - Email Support
  - Social Media
- Employee Feedback
  - Ideas Portal
  - Feedback box
  - Ad-hoc discussions
- QA Findings
  - Bugs
  - Bugs
  - Bugs
<table>
<thead>
<tr>
<th>Phone team, probably.</th>
<th>Email team, likely.</th>
<th>Social Media team, yup.</th>
</tr>
</thead>
<tbody>
<tr>
<td>“This happens <strong>ALL</strong> the time”</td>
<td>“Every single one of my clients experienced this”</td>
<td>“People are complaining about this on social media”</td>
</tr>
</tbody>
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Quantifying impact is difficult

These are not real statements, but illustrative of the problem solving process.

Actionable Intelligence From A Reliable Source

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“I heard through the grapevine that an error scenario exists but I have no reliable way to quantify impact”

-me
Actionable Intelligence From A Reliable Source

What actionable intelligence can I use from an unbiased source?
Actionable Intelligence From A Reliable Source

A single event can yield the necessary intelligence
Real-time Analytics Without Needing To Rely On A Data Warehouse

Query This?

- Date Warehousing
- Hadoop Hives
- Structured DB
- Unstructured DB

- Batch loads
- CSV
- Excel Spreadsheets
- Pivot Tables
- Tableau-TabNeau!
Real-time Analytics Without Needing To Rely On A Data Warehouse

Watch This

- Real-time/ instant ad-hoc reports
- Customizable and Shareable
- Built in Dashboarding
- Alerts
- Self service, self driven
- Allows Curiosities to run wild
Real-time Analytics Without Needing To Rely On A Data Warehouse

Watch This
Informed Development Priorities With Fact-based Statistics.

Decide this

- Active backlog management
  - Confirm or dispel assumptions to focus on what’s important
  - Dashboarding at a glance to confirm MVP

- Assist with prioritization of bugs, feature, new products
  - Immediate usage counts to assess impact and determine next steps

- Eliminates wasted resources to address ‘perceived’ issues
  - No more ‘telephone game’. Messages are delivered with fact based stats
Informed Development Priorities With Fact-based Statistics.

Decide this
Informed Development Priorities With Fact-based Statistics.

Decide this
Result Of Using Splunk @Schwab

▶ Noticed other users in the firm ‘Liberating’ dashboards created by AO&E
  • Shows a sharp interest in the abilities of the tool
▶ Decision making process has been vastly improved
  • Impact can be assessed in near real time
  • Single event can yield a tangible action item
▶ Easily identifiable areas of opportunity
  • Dashboarding allows for a clear concise overview
  • Unknown unknowns become known knowns
▶ Splunk COE
  • Sounding board for all things Splunk amongst like minded individuals
  • Easily and efficiently identify opportunities, solve complex issues, etc.
Future Plans...

Db Connect

MLTK

ITSI
Thank You

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