

MICHIGAN STATE

U N I V E R S I T Y

Project Plan

Predictive Support Module

The Capstone Experience

Team Place Technology

Angela Satullo

Brian Dokas

Kingston Tran

Lin Cheng

Mithuun Srinivasan

Department of Computer Science and Engineering
Michigan State University

Spring 2020



*From Students...
...to Professionals*

Functional Specifications

- Problem
 - Troubleshooting is difficult for Salesforce orgs
- Solution
 - Log Aggregator Managed Package
 - Each Org/Customer ships data to log aggregation service (Datadog/ELK)
 - Logs stored in Datadog and Elasticsearch
 - Customer support can retrieve and analyze log data



Design Specifications

- Salesforce
 - Admin configuring the managed package will affect every user in the org.
 - Admin can set interval when data logs are sent.
 - Admins and regular users can send logs ad hoc
 - Admins and regular users can contact customer support
- Kibana/Datadog Dashboards
 - UI for Log Aggregation Services
 - Customizable



Log Aggregation Admin Page

The screenshot displays the 'Log Aggregation Admin Page' within a Salesforce interface. At the top, there is a search bar labeled 'Search Salesforce' and navigation links for 'Log Aggregator', 'Admin', and 'Support'. The main content area is titled 'Admin' and contains two sections:

- Log Aggregator Configuration:** This section includes a 'Log Aggregator Service' dropdown with 'ELK' and 'DataDog' options. Below it is a 'Set Interval' section with 'Date' and 'Time' input fields. To the right, there are 'Endpoint' and 'Certificate' input fields with placeholder text: 'Paste your Endpoint here' and 'Paste your certificate here.' A 'Save Configuration' button is located at the bottom of this section.
- Configured Objects:** This section features a table with the following data:

	Object Name	Object Configurations	
<input type="checkbox"/>	Account	Account	
<input type="checkbox"/>	Contacts	Contacts	
<input type="checkbox"/>	Order	Order	



Log Aggregation Support Page

Log Aggregator Admin Support

Support

*Name
Your Name

*Ticket Title
Ticket Title

*Email Address
Your Email

Submit Ticket

*Details
Details

Account

Objects	Fields
Account	AccountNumber
Account	AccountSource
Account	AccountRevenue
Account	BillingAddress
Account	BillingCity
Account	BillingCountry
Account	EmailSuccess

Contact

Orders

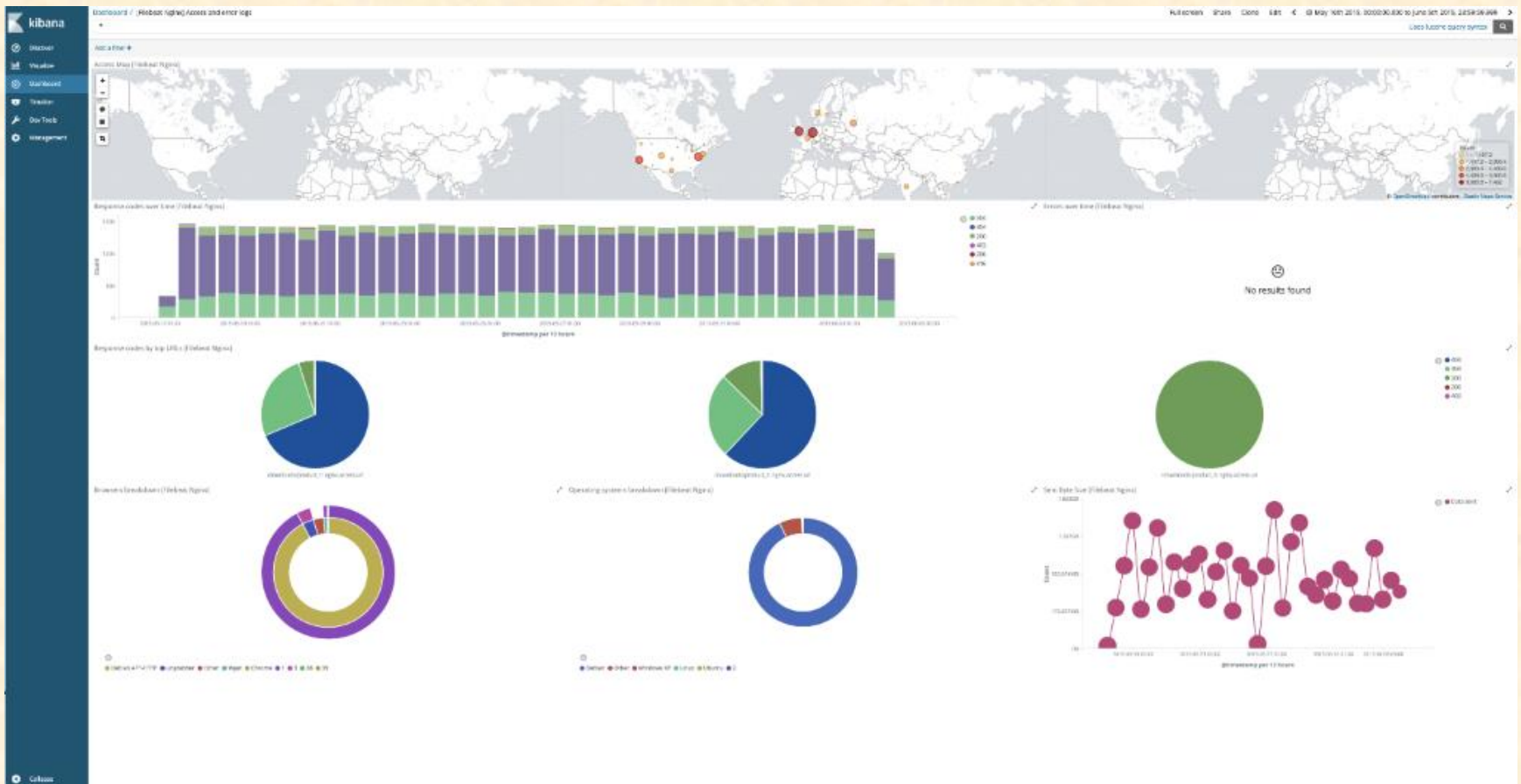
Add Element(s) here

Send To Log Aggregator

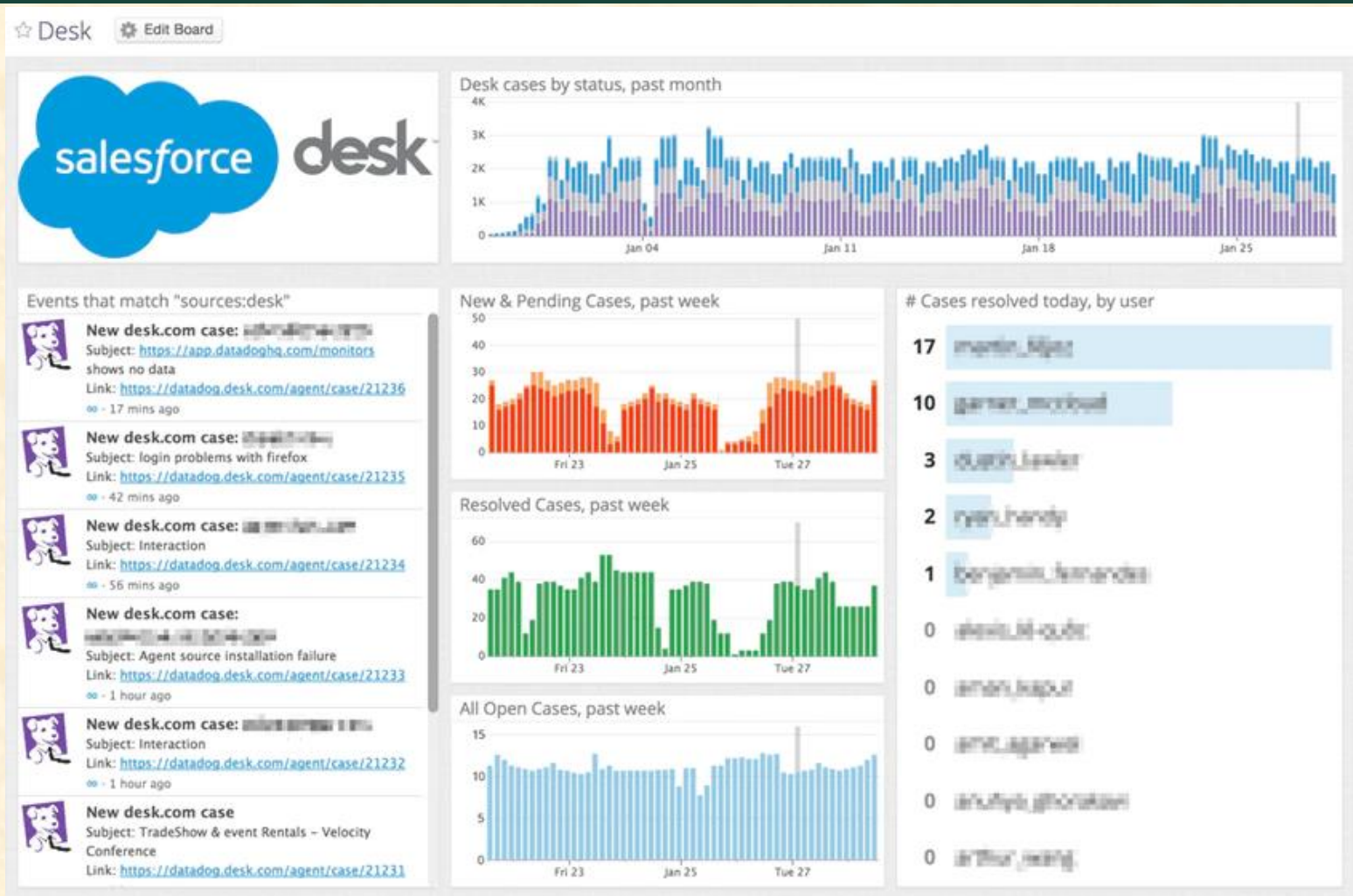
Ticket Number	Ticket Title	Description	Email Address	Email Sent	Date Sent
Ticket-1	randomly reloaded	I was updating the configurations when it randomly reloads the page.	tranking@msu.edu	Yes	1/20/2017
Ticket-2	Keep on sending	The log data keeps on sending without rest even though I have it set for daily sending.	tranking@msu.edu	Yes	1/21/2017
Ticket-3	Can't edit configured objects	I cannot edit objects that I configured before.	tranking@msu.edu	Yes	1/22/2017
Ticket-4	OAuth doesn't work	My OAuth token doesn't let me send to Logstash.	tranking@msu.edu	Yes	1/23/2017
Ticket-5	No objects shown	I don't see anything on the screen	tranking@msu.edu	Yes	1/24/2017
Ticket-6	Ran out of memory	I get a error message that I ran out of available memoo	tranking@msu.edu	Yes	1/26/2017



Kibana Analytics Dashboard



Datadog Analytics Dashboard

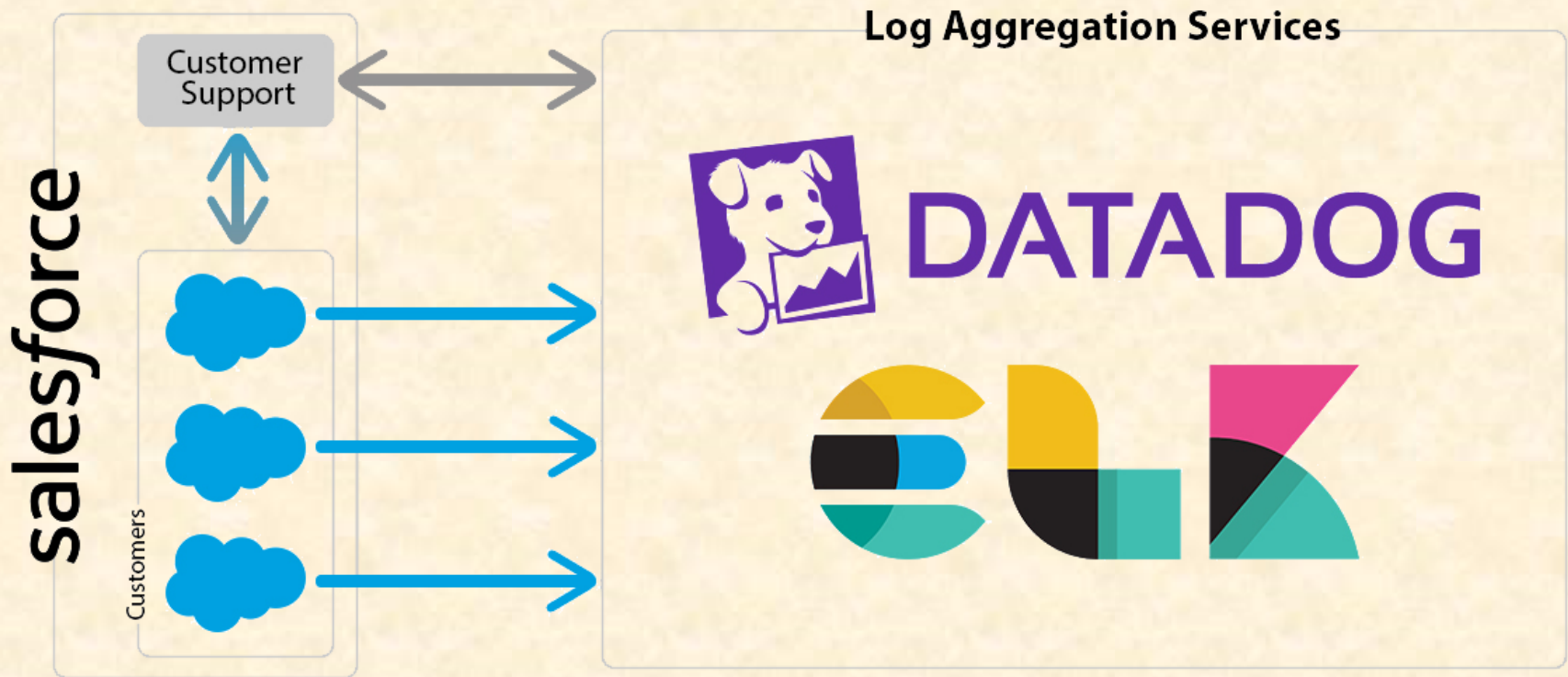


Technical Specifications

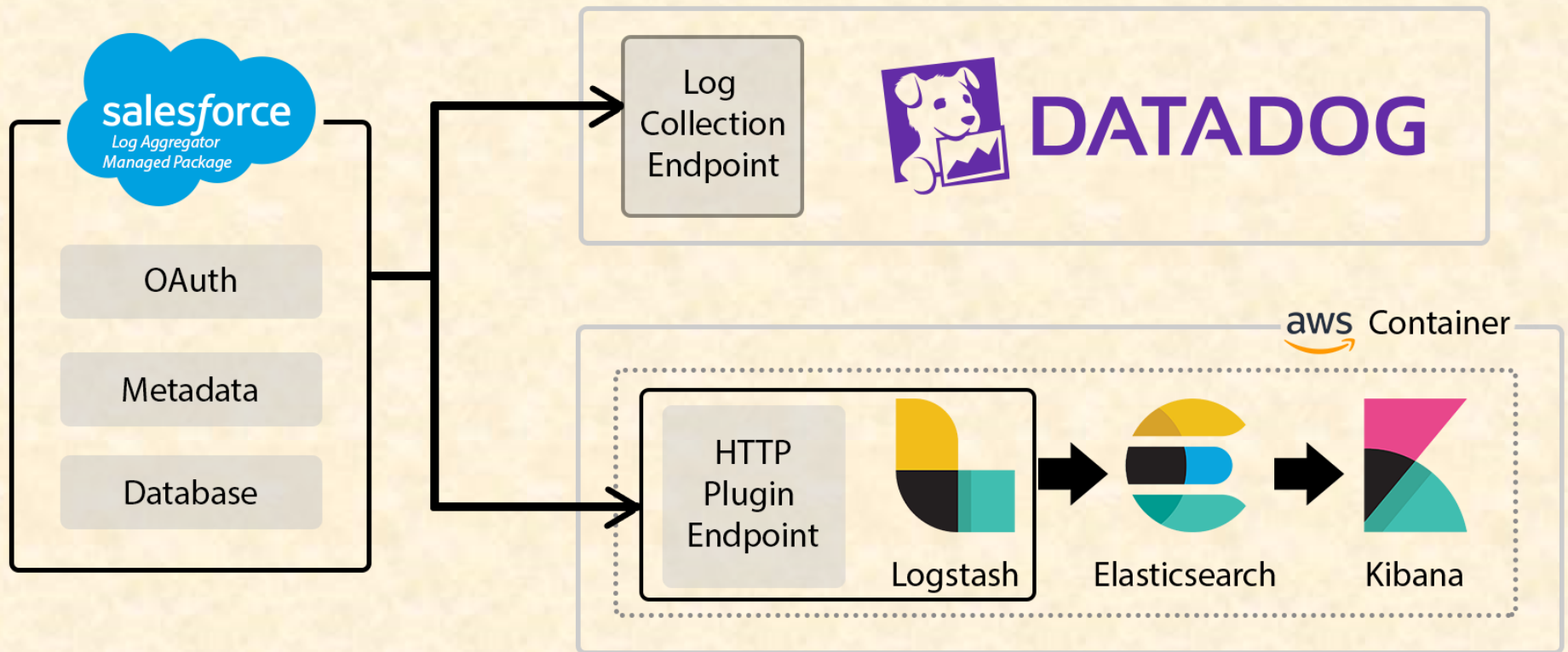
- Salesforce/Orgs
 - Customer relationship management solution
 - Customer version of salesforce and data within instance
- Log Aggregation Service
 - Collection of log data for searchability and analyzation
- Customer Support



System Architecture Diagram (High Level)



System Components Diagram (Low Level)



System Components

- Salesforce
 - OAuth
 - Metadata
 - Database
- Log Aggregation Services
 - ELK Stack
 - Elasticsearch, Logstash, Kibana
 - Amazon Web Services
 - Datadog



Risks

- Salesforce Experience
 - Nobody has used Salesforce
 - Trailheads
- Pipeline Connection
 - Connecting to AWS
 - Work with Yash
- Datadog
 - No API for Salesforce
 - Use a collection endpoint



Questions?

?

?

?

?

?

?

?

?

?

