

MICHIGAN STATE
UNIVERSITY

Alpha Presentation

Identity Based Communication and Content Services

The Capstone Experience

Team MaxCogito

Bryan Hitchcock

Andrew Kim

Harrison Samoy

Conor Sands

Tengjiao Wang



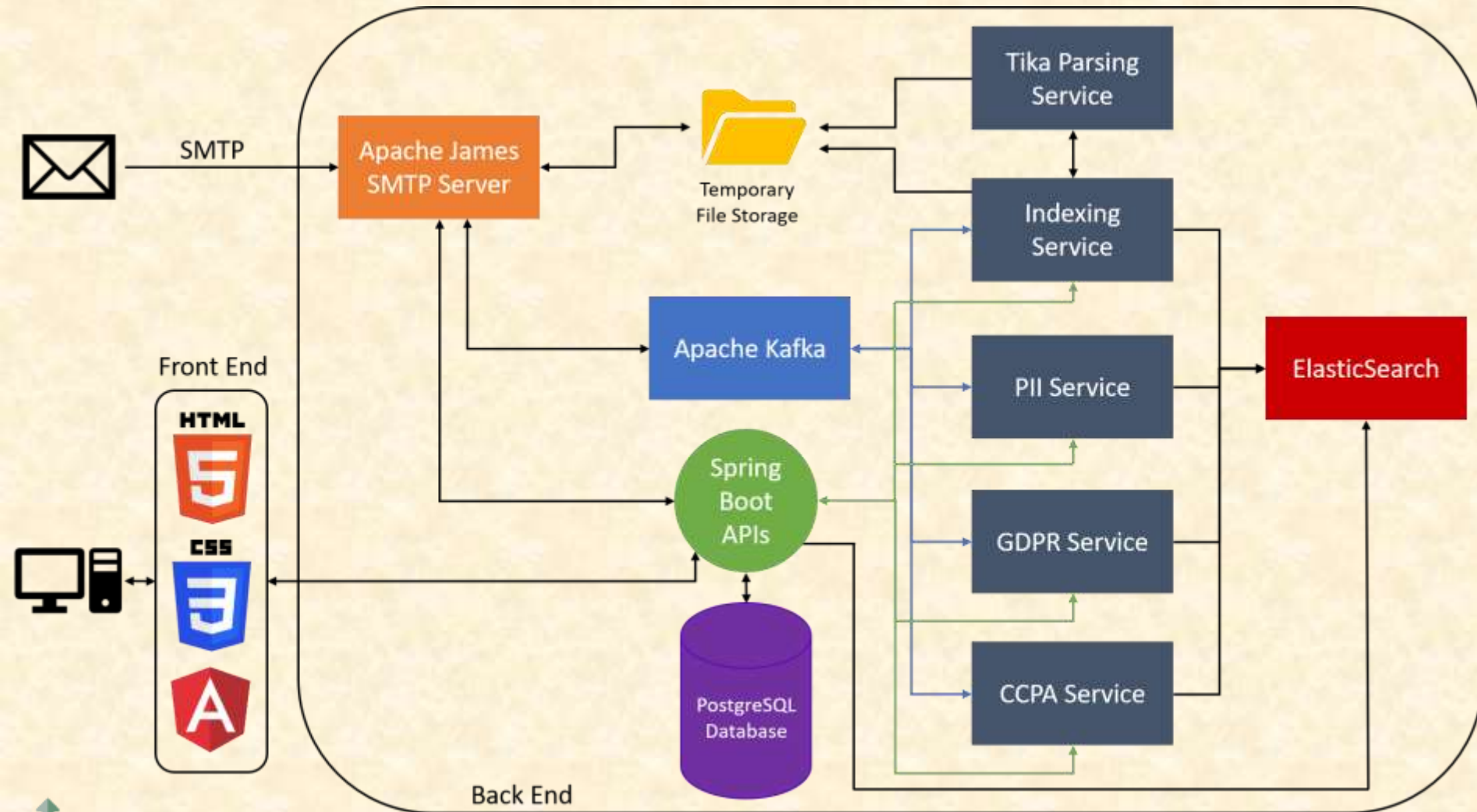
*From Students...
...to Professionals*

Department of Computer Science and Engineering
Michigan State University
Spring 2020

Project Overview

- Give companies insight into the messages passing through their servers.
- Analyze and process emails
 - Allow companies to create custom policies
 - Tag messages that do not comply with firm policies
 - Highlight data that does not comply
- Maintain compliance with regulations
 - Privacy: GDPR, CCPA
 - Financial: SEC, ESMA

System Architecture



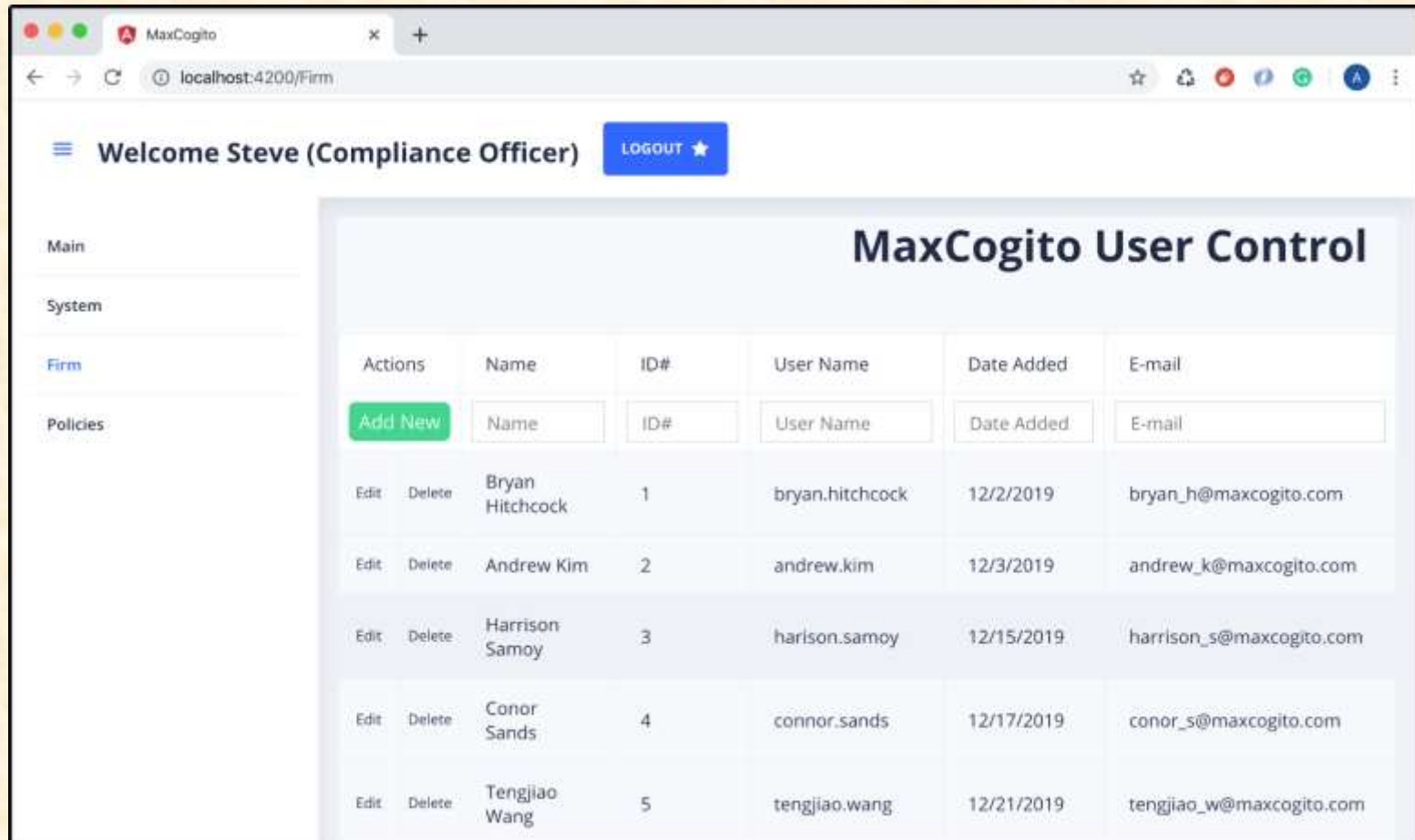
Compliance Officer Dashboard

The screenshot displays the MaxCogito Compliance Officer Dashboard. The browser address bar shows the URL <http://www.maxcogito.com/main>. The dashboard header includes a welcome message "Welcome Steve (Compliance Officer)" and a "LOGOUT" button. The sidebar on the left contains navigation links: "Main", "System", "Firm", and "Policies". The main content area features a search bar with "Start Date" and "End Date" fields. Below the search bar is a calendar for February 2020, with the 12th highlighted. A table of email notifications is displayed below the calendar.

E-mail	Title
akak89@mcg.com	Details about Issue #161
ai1337@bigdata.org	please review
helloworld@demo.com	IMPORTANT PLEASE READ
stevea@maxcogito.com	To all employees
harrison111@yahoo.com	re: Personal Identification
jack@msu.edu	re: Tuesday's meeting



User Management Dashboard



The screenshot shows a web browser window with the URL `localhost:4200/Firm`. The page title is "MaxCogito" and the user is logged in as "Steve (Compliance Officer)". A "Logout" button is visible. The dashboard is titled "MaxCogito User Control" and displays a table of users. The table has columns for Actions, Name, ID#, User Name, Date Added, and E-mail. There are five users listed: Bryan Hitchcock, Andrew Kim, Harrison Samoy, Connor Sands, and Tengjiao Wang. Each user row has "Edit" and "Delete" links. A green "Add New" button is located at the top left of the table.

Actions	Name	ID#	User Name	Date Added	E-mail
Add New	<input type="text" value="Name"/>	<input type="text" value="ID#"/>	<input type="text" value="User Name"/>	<input type="text" value="Date Added"/>	<input type="text" value="E-mail"/>
Edit Delete	Bryan Hitchcock	1	bryan.hitchcock	12/2/2019	bryan_h@maxcogito.com
Edit Delete	Andrew Kim	2	andrew.kim	12/3/2019	andrew_k@maxcogito.com
Edit Delete	Harrison Samoy	3	harison.samoy	12/15/2019	harrison_s@maxcogito.com
Edit Delete	Connor Sands	4	connor.sands	12/17/2019	conor_s@maxcogito.com
Edit Delete	Tengjiao Wang	5	tengjiao.wang	12/21/2019	tengjiao_w@maxcogito.com



Regex Consumer Example

```
*** EMAIL *****
```

Dear Mr. Dykson,

This is a test for our Alpha presentation. Please let us know if you have any questions by calling us at 555-555-5555 .

Also feel free to use our credit card: 340000000000009

- Team Maxcogito

```
*****
```

Searching for...

[AMEX CC](s)

[340000000000009]

[PHONE NUMBER](s)

[555-555-5555]

AWS Elasticsearch Index Success

```
1 {  
2   "_index": "alpha",  
3   "_type": "_doc",  
4   "_id":  
5     "493269ec3b143ec768535b15906edf9bb4939c47ec3762996ef546acb408387b",  
6   "_version": 1,  
7   "_seq_no": 2,  
8   "_primary_term": 1,  
9   "found": true,  
10  "_source": {  
11    "sender": "steve@maxcogito.com",  
12    "toAddr": "james@maxcogito.com",  
13    "subject": "Alpha Presentations",  
14    "toList": "james@maxcogito.com",  
15    "ccList": "NULL",  
16    "bccList": "NULL",  
17    "attachFiles": "NULL",  
18    "sentDate": "Tue Feb 18 04:22:32 UTC 2020",  
19    "htmlContent": "NULL",  
20    "textContent": "Hi James,\r\n\r\nSee attached for the  
alpha presentation.\r\n\r\nThanks,\r\n\r\nSteve\r\n\r\n",  
21    "gdpr": "NULL",  
22    "pii": "NULL",  
23    "ccpa": "NULL"  
24  }
```



What's left to do?

- Apache Tika integration
- Set up Apache James as SMTP relay
- Make Apache Kafka more robust
- Write additional Apache Kafka consumers
- Secure API endpoints
- Front end

Questions?

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