

Analytics Dashboard Based On Notification Click-Data

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Business Need

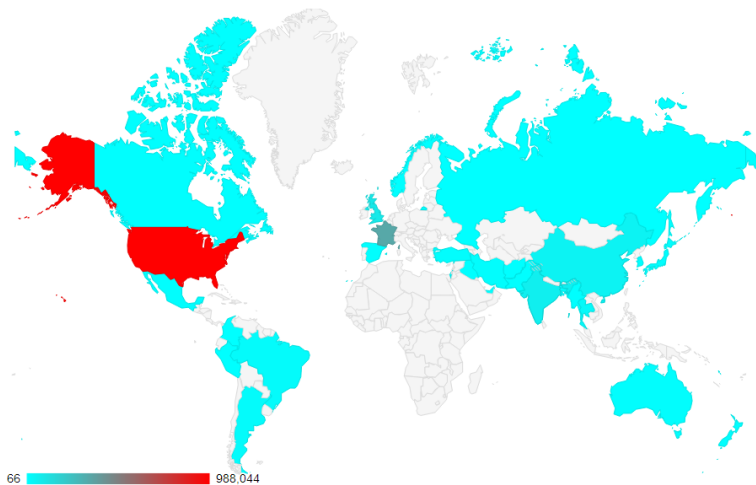
Business Need

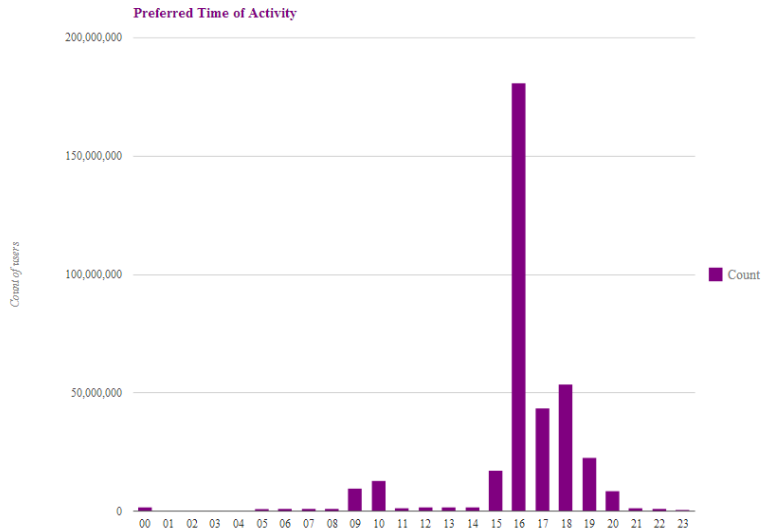
1. User Demand Analytics

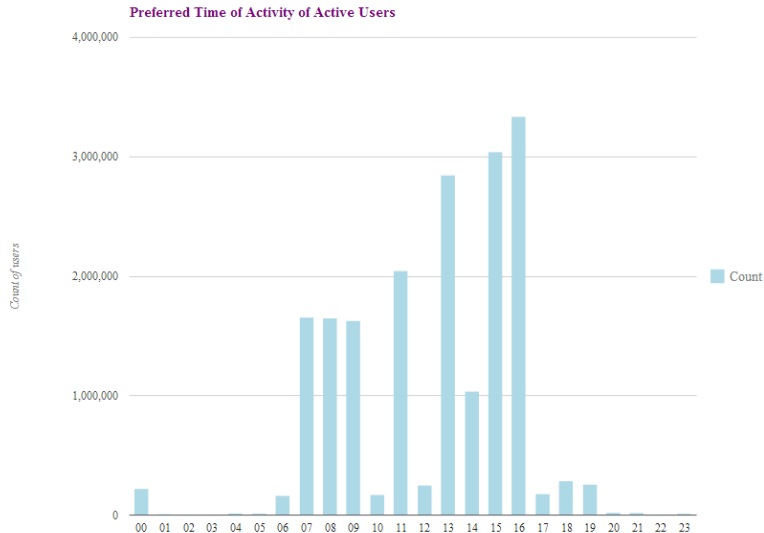
Business Need

1. User Demand Analytics
2. Intelligent Notification

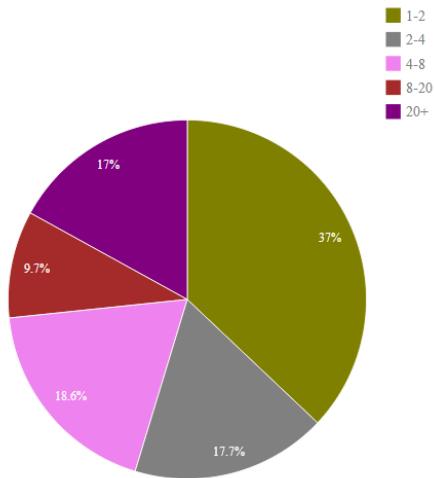
Unique Users.
38,206,844 subscriptions.







Number of subscriptions vs. CTR



Accessible Information

- Location of Access
- Time of Access
- Frequency of Visitation
- User Last Seen
- Last Notification sent Timestamp
- Age group of the User
- Count of Notifications sent
- User Click Timestamp
- User Agent

Usefulness

- Provide Users better content based on Age and Location
- Distinguish the Users as Active and In-Active
 - Auto-subscribe users based on their Search Pattern
 - Notify users to Re-subscribe
 - Unsubscribe the Inactive Users
- Provide Suggestions to users based on Previously subscribed Notification Alerts
- Provide Alerts to users at their Time of Access

- Provide related [Application Suggestions](#) on the basis of User Agent
- Identify the target [Browsers](#) used to view Notifications

Technical Challenges

- Data Count (Very Large Data-sets 5 Billions tuples)
- Periodic Review of the Data
- Different Fields and Tables of Analytics
- Variable Queries and Data-types depending on the Data available
- Convenient Way of Representation
- Code Change Minimal

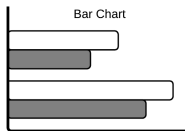
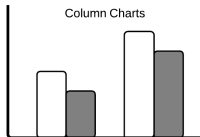
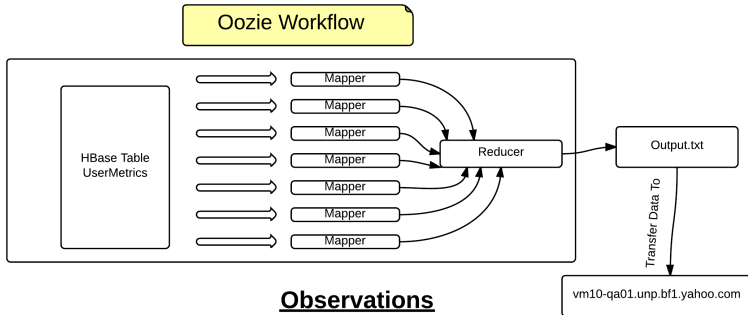
Solution Overview

- Handling Large Data-sets - **Processing the Data in Parallel using Map-Reduce Jobs**

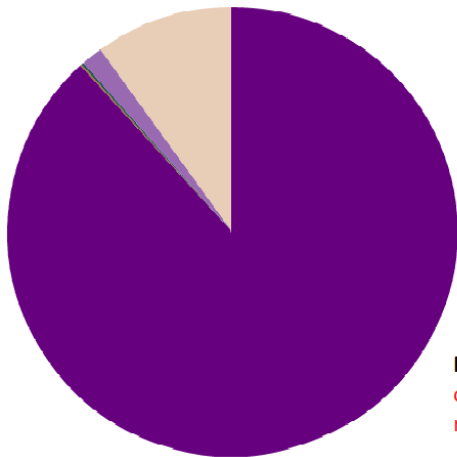
Observation

- Sequential Scan with Caching value 500
- Tuples scanned - **2 Lakhs**
- Time Taken - **3 min 45 sec**
- Periodic Review of the Data - **Cron jobs using Oozie Workflow**
- Different fields and table of Analytics - **Adding the variable Dynamically**

- Variable Queries and Data-Types -**Making the variables configurable**
- Convenient Way of Representation -**YUI Charts and Google Charts**
- Code Change Minimal -**Hard coding Minimal and adding variables in a Separate File**



Results from Hbase



Click : 0-5 215638492

Click : 5-10 364573

Click : 10-15 545674

Click : 15-20 4353856

Click : >=20 48345733

Note: Click is the total no of clicks by the users in the notifications.

Future Directions

Data Available

- **IP Address** can be used to get the place of Access by the user and give Location based suggestions.
- **User Agent** helps the Notification sender to target the browsers which are being used to view the Notifications
- **Notification Payload** would help users to know the notifications they have missed which further helps Unsubscribe and Re-subscribe users.

Questions?