

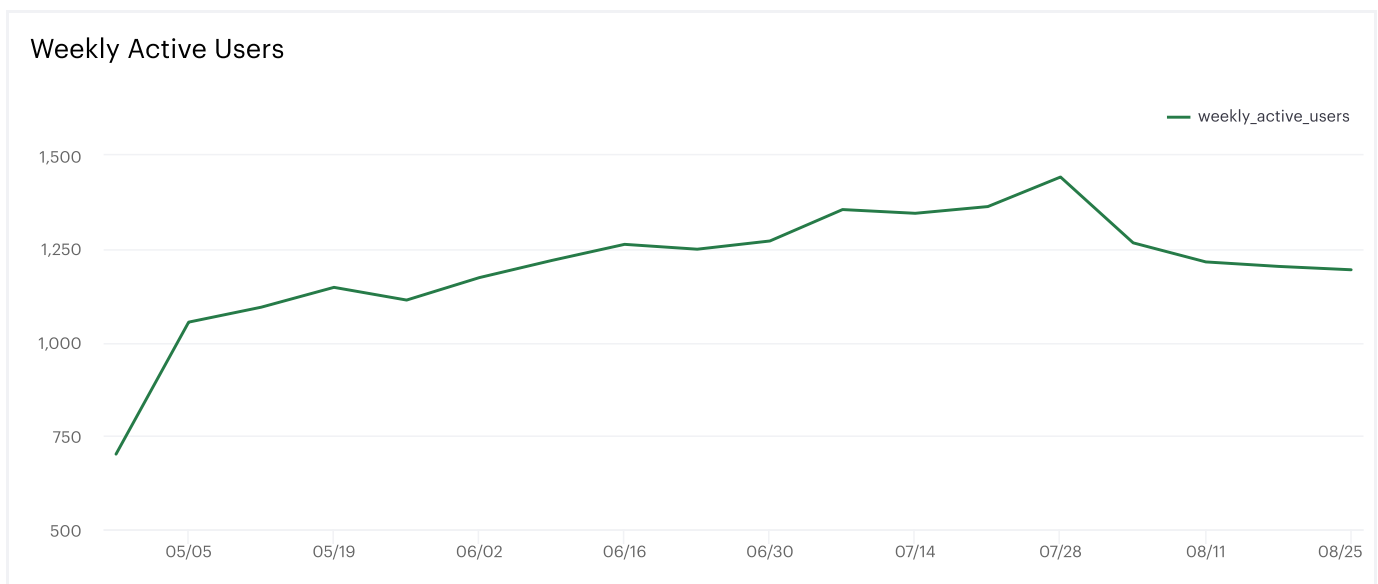
Analysis of Drop in Yammer's Users' Engagement

This report describe the analysis done to understand the reasons behind the drop in Yammer's users activity during July-August 2014

The Problem:

There is a drop in Yammer's active users during the last week of July 2014 as shown in the below dashboard. We need to investigate the possible reasons behind this users' activity decline and come up with solution proposals if possible.

This case study and related data is available at <https://community.modeanalytics.com/sql/tutorial/a-drop-in-user-engagement/> (<https://community.modeanalytics.com/sql/tutorial/a-drop-in-user-engagement/>)



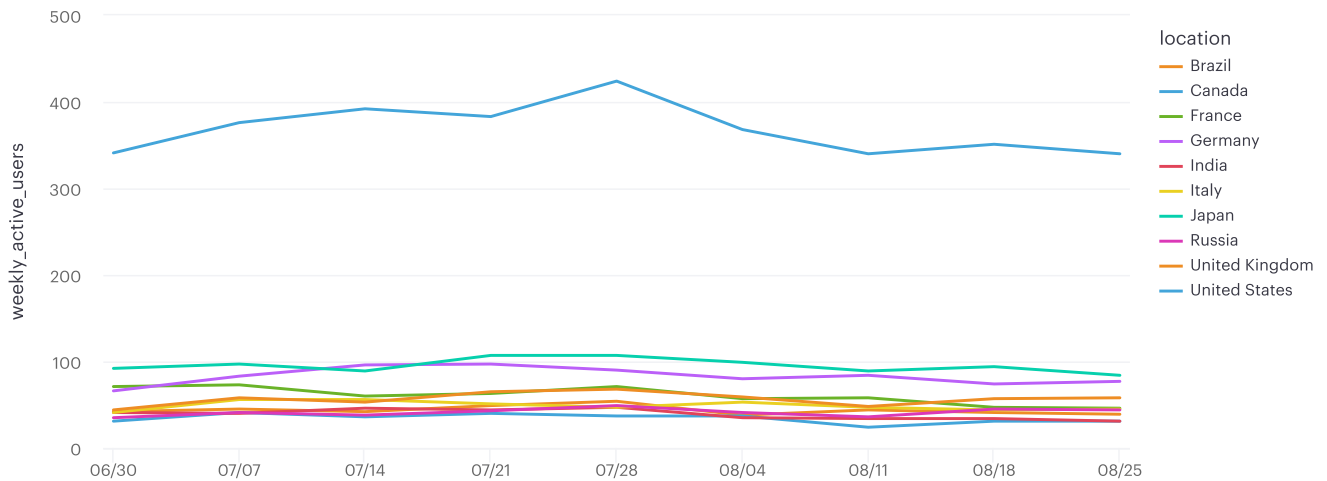
The Solution:

Trying to understand the possible reasons leading to the above mentioned problem, the following hypothesis will be checked in order :

1. Users Activity by Country: The trend will indicate if there are some special occasions / holidays or may be Internet connectivity issues in some parts of the world.
2. Users Activity by Device or Device Type: The trend will indicate if the decline is related to some device types like tablets, phones or computers.
3. Users Activity by Activity Type: The trend will indicates if the decline is related to specific activity/functionality type

Users Activity By Country:

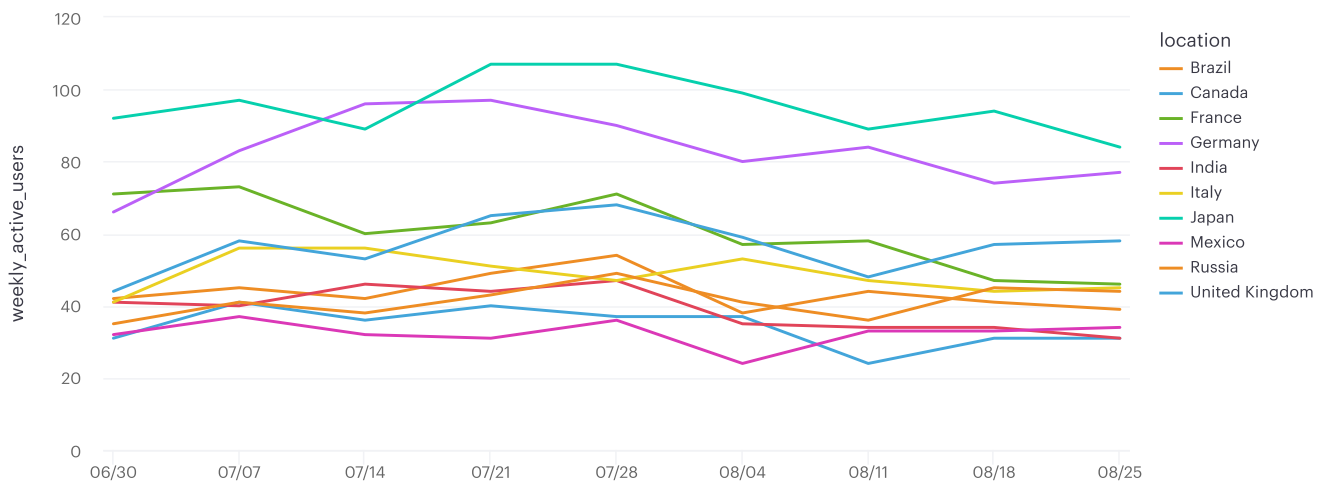
Active Users per Country - Top 10



As the United States has the big share of active users, the activity fall in users activity is clear for the period 28-Jul to 04-Aug.

Let us exclude the United States from the query and have a deeper look to other countries and see if the pattern re-occurs.

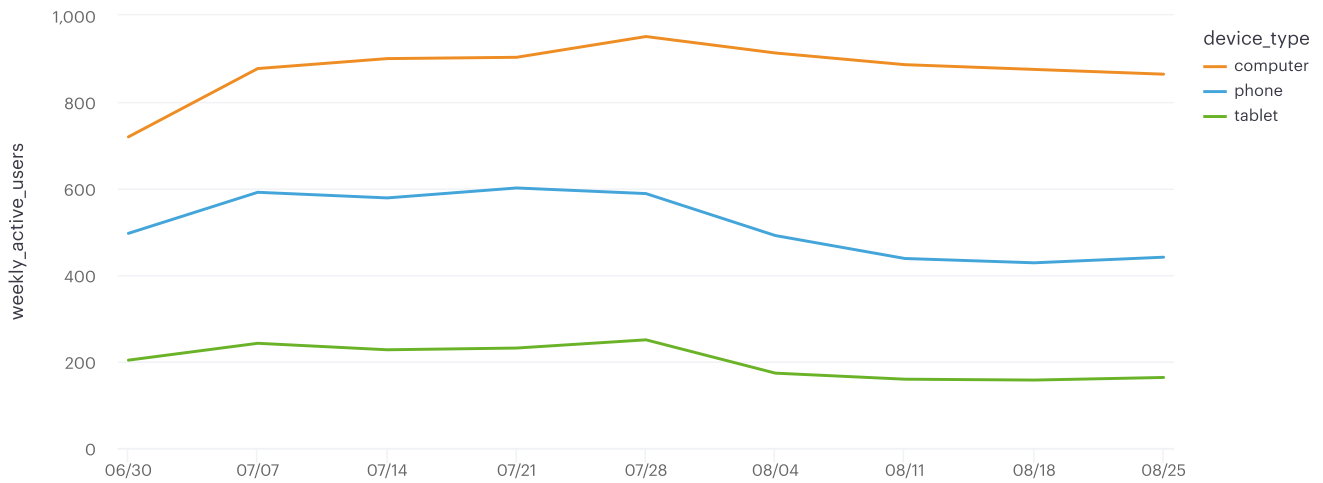
Active Users per Country Exec. US - Top 10



Apart from Italy, all other countries show the same dip in users activity for the same specific period. This rule-out the problem being specific to some locations in the world.

Users Activity by Device or Device Type:

Active Users per Device Type



Active Users per Device Type

Explore

| week | device_type | | | Totals |
|--------------------------|--------------|--------------|--------------|---------------|
| | computer | phone | tablet | |
| 2014-06-30T00:00:00.000Z | 719 | 496 | 203 | 1,418 |
| 2014-07-07T00:00:00.000Z | 877 | 591 | 242 | 1,710 |
| 2014-07-14T00:00:00.000Z | 900 | 578 | 227 | 1,705 |
| 2014-07-21T00:00:00.000Z | 903 | 601 | 231 | 1,735 |
| 2014-07-28T00:00:00.000Z | 951 | 588 | 250 | 1,789 |
| 2014-08-04T00:00:00.000Z | 913 | 491 | 173 | 1,577 |
| 2014-08-11T00:00:00.000Z | 886 | 438 | 159 | 1,483 |
| 2014-08-18T00:00:00.000Z | 875 | 428 | 157 | 1,460 |
| 2014-08-25T00:00:00.000Z | 864 | 441 | 163 | 1,468 |
| Totals | 7,888 | 4,652 | 1,805 | 14,345 |

Percentage Change in Active Users per Device Type

Explore

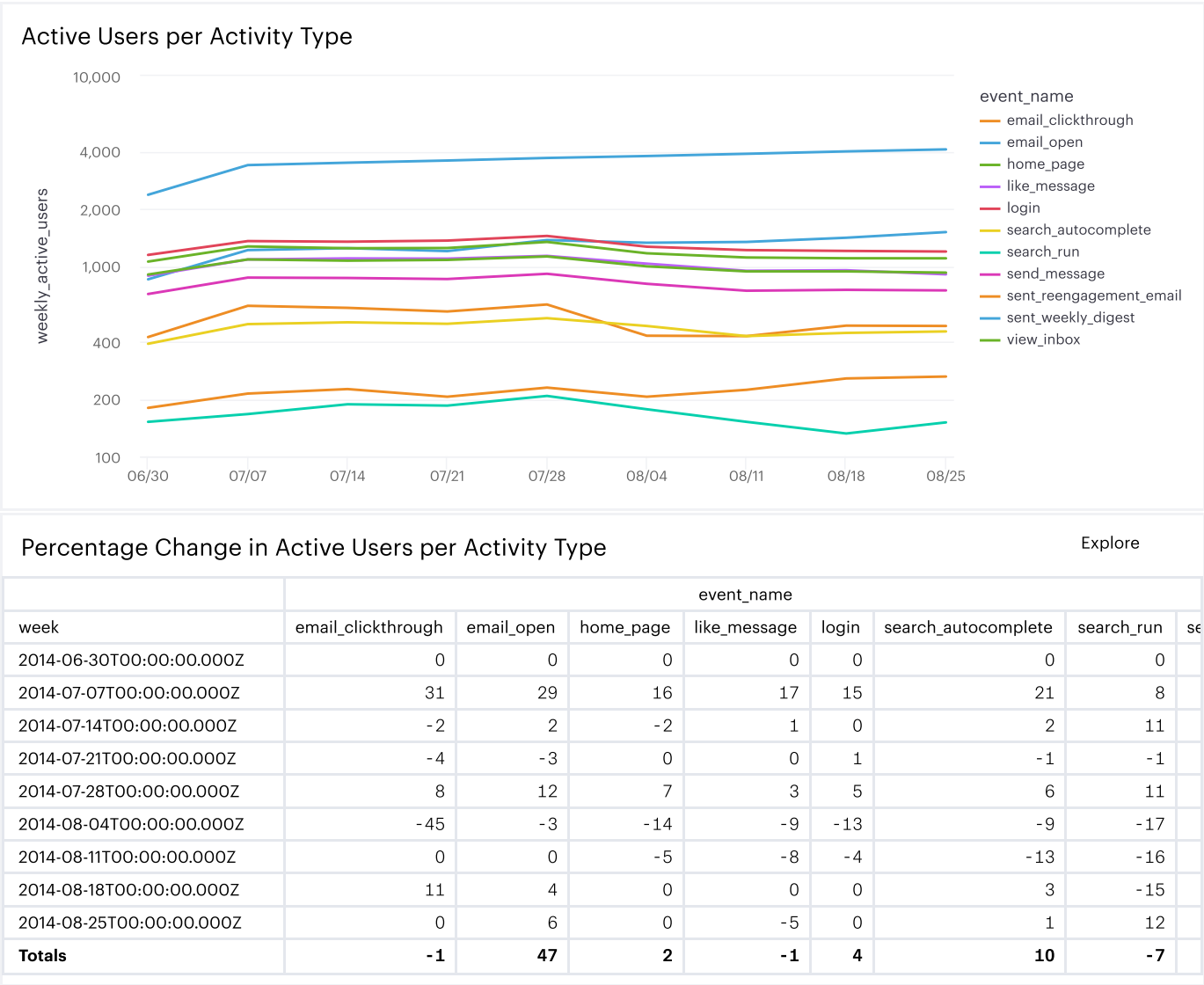
| week | device_type | | | Totals |
|--------------------------|-------------|------------|------------|------------|
| | computer | phone | tablet | |
| 2014-06-30T00:00:00.000Z | 0 | 0 | 0 | 0 |
| 2014-07-07T00:00:00.000Z | 18 | 16 | 16 | 50 |
| 2014-07-14T00:00:00.000Z | 2 | -2 | -6 | -6 |
| 2014-07-21T00:00:00.000Z | 0 | 3 | 1 | 4 |
| 2014-07-28T00:00:00.000Z | 5 | -2 | 7 | 10 |
| 2014-08-04T00:00:00.000Z | -4 | -19 | -44 | -67 |
| 2014-08-11T00:00:00.000Z | -3 | -12 | -8 | -23 |
| 2014-08-18T00:00:00.000Z | -1 | -2 | -1 | -4 |
| 2014-08-25T00:00:00.000Z | -1 | 2 | 3 | 4 |
| Totals | 16 | -16 | -32 | -32 |

Focusing in the difference between 28-Jul and 04-Aug:
The drop in active users per device type: computer = -4.0% , phone = -19%, tablet = -44%

The contribution per device type on the overall drop in active users: computer = 18%, phone= 45.7%, tablet = 36.3%

According to the above statistics, the problem can be localized in phone and tablet devices. May be there were some product changes specific to phone and tablet system modules introduced on the week starting on 28-Jul that lead to this dip in users activity.

Users Activity by Activity Type:



Again, Focusing on the period 28-Jul to 04-Aug, there is a sharp drop (-45%) in 'email_clickthrough' user activity as well as some drop in activities like 'view_inbox', 'send_message' which are all related to the e-mail functionality of the system. This lead us to focus on the e-mail module as a possible cause of users activity dip.

Conclusion:

Two possible reasons for Yammer's users activity drop in Jul-Aug 2014 were malfunction:

1. The system modules for phone and tablet devices
2. The e-mail application functionality

These findings should be discussed with the product manager for validation and remedy actions.