

Drop in the User Engagement

SQL 1: Active User vs New User

```
SELECT count(distinct e.user_id) AS active_user,  
       count(distinct u.user_id) AS new_users,  
       date_trunc('day',e.occurred_at) AS day,  
       date_trunc('day',u.activated_at)  
FROM tutorial.yammer_events e,  
     tutorial.yammer_users u  
WHERE activated_at >= '2014-07-01'  
      AND activated_at <= '2014-09-01'  
GROUP BY day,  
         date_trunc('day',u.activated_at)  
HAVING date_trunc('day',e.occurred_at) = date_trunc('day',u.activated_at)  
ORDER BY day
```

SQL 2: New User Weekly

```
SELECT count(distinct user_id) AS weekly_new_active_users,  
       DATE_TRUNC('week', created_at),  
       state  
FROM tutorial.yammer_users  
GROUP BY 2,  
         3  
ORDER BY 2
```

SQL 3: Retention Rate by User Age

```
SELECT DATE_TRUNC('week',z.occurred_at) AS "week",
```

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    AVG(z.age_at_event) AS "Average age during week",

    COUNT(DISTINCT CASE WHEN z.user_age > 70 THEN z.user_id ELSE NULL
END) AS "10+ weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 70 AND z.user_age >= 63 THEN
z.user_id ELSE NULL END) AS "9 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 63 AND z.user_age >= 56 THEN
z.user_id ELSE NULL END) AS "8 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 56 AND z.user_age >= 49 THEN
z.user_id ELSE NULL END) AS "7 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 49 AND z.user_age >= 42 THEN
z.user_id ELSE NULL END) AS "6 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 42 AND z.user_age >= 35 THEN
z.user_id ELSE NULL END) AS "5 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 35 AND z.user_age >= 28 THEN
z.user_id ELSE NULL END) AS "4 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 28 AND z.user_age >= 21 THEN
z.user_id ELSE NULL END) AS "3 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 21 AND z.user_age >= 14 THEN
z.user_id ELSE NULL END) AS "2 weeks",

    COUNT(DISTINCT CASE WHEN z.user_age < 14 AND z.user_age >= 7 THEN
z.user_id ELSE NULL END) AS "1 week",

    COUNT(DISTINCT CASE WHEN z.user_age < 7 THEN z.user_id ELSE NULL
END) AS "Less than a week"

FROM (

    SELECT e.occurred_at,

           u.user_id,

           DATE_TRUNC('week',u.activated_at) AS activation_week,

           EXTRACT('day' FROM e.occurred_at - u.activated_at) AS age_at_event,

           EXTRACT('day' FROM '2014-09-01'::TIMESTAMP - u.activated_at) AS
user_age

    FROM tutorial.yammer_users u

    JOIN tutorial.yammer_events e

```

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        ON e.user_id = u.user_id
        AND e.event_type = 'engagement'
        AND e.event_name = 'login'
        AND e.occurred_at >= '2014-05-01'
        AND e.occurred_at < '2014-09-01'
        WHERE u.activated_at IS NOT NULL
    ) z

```

```

GROUP BY 1
ORDER BY 1
LIMIT 100

```

SQL 4: Device Access

```

SELECT DATE_TRUNC('week', occurred_at) AS week,
        COUNT(DISTINCT e.user_id) AS weekly_active_users,
        COUNT(DISTINCT CASE WHEN e.device IN ('macbook pro', 'lenovo
thinkpad', 'macbook air', 'dell inspiron notebook',
        'asus chromebook', 'dell inspiron desktop', 'acer aspire notebook', 'hp pavilion
desktop', 'acer aspire desktop', 'mac mini')
        THEN e.user_id ELSE NULL END) AS computer,
        COUNT(DISTINCT CASE WHEN e.device IN ('iphone 5', 'samsung galaxy
s4', 'nexus 5', 'iphone 5s', 'iphone 4s', 'nokia lumia 635',
        'htc one', 'samsung galaxy note', 'amazon fire phone') THEN e.user_id ELSE
NULL END) AS phone,
        COUNT(DISTINCT CASE WHEN e.device IN ('ipad air', 'nexus 7', 'ipad
mini', 'nexus 10', 'kindle fire', 'windows surface',
        'samsung galaxy tablet') THEN e.user_id ELSE NULL END) AS tablet
FROM tutorial.yammer_events e
WHERE e.event_type = 'engagement'

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```
AND e.event_name = 'login'
GROUP BY 1
ORDER BY 1
```

SQL 5: Email Action Weekly

```
SELECT date_trunc('week', occurred_at),
       count(*),
       action
FROM tutorial.yammer_emails
GROUP BY 1,
       3
ORDER BY 1
```

SQL 6: User Events Weekly

```
select DATE_TRUNC('week', e.occurred_at),
       COUNT(DISTINCT e.user_id) AS weekly_events,
       e.event_name
from tutorial.yammer_events e
group by 1, 3
order by 1;
```