Collaborative Debugging

A Tale of Two Bugs

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👋, I'm Jackie Luo!

I'm a software engineer who joined Square a few months ago, and I last worked at a startup called Nylas.

Customer Issues 48 ▾

T8567 IntegrityError Duplicate entry for key uid on contact table

T8607 TypeError during authentication

T8514 Events not added to user calendar / Invites not received (Lever)

T8552 account.invalid webhook is not sent when credentials change

T8600 Improve threading for Exchange

T8592 [webhooks] Move.com SQS receiving webhooks for cancelled account

T8582 202s returned indefinitely for sent messages

T8604 UIDVALIDITY Error: Detected endless uidvalidity resync loop

T8589 Integrity Error occurs when setting a label

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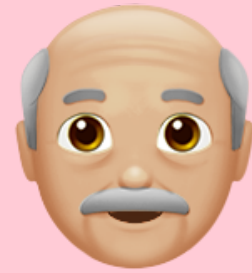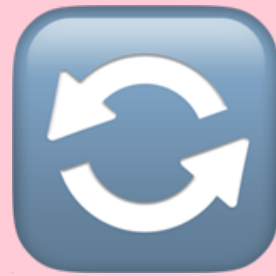**T8592** [webhooks] Move.com SQS receiving webhooks for cancelled account

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"Debugging is twice as hard as writing the code in the first place."

Brian W. Kernighan and P. J. Plauger

❗ AS 16.1 duplicate calendar event after update

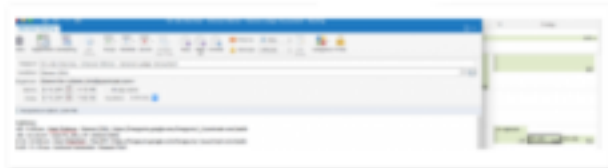☐ Open, High   👥 All Users

Description

It's possible that updates to calendar events for accounts syncing on 16.1 will show as two separate events in the user's client UI.

Here are two example event_ids that received updates, and showed multiple calendar events in the users calendars:

Cal event ID:
Email:
Nylas account ID:

Cal event ID:
Email:
Nylas account ID:

mike created this task. — Aug 14 2017, 1:25 PM

tomasz assigned this task to **halla**. — Aug 28 2017, 11:10 AM

halla moved this task from **Customer Issues** to **On Deck** on the board. — Aug 28 2017, 11:17 AM

halla removed **halla** as the assignee of this task. — Aug 31 2017, 6:07 PM

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jackie added a subscriber: **jackie**.   Sep 5 2017, 2:41 PM   ▼

i'm having a hard time reproducing—do you know if there are any more recent instances of this bug?

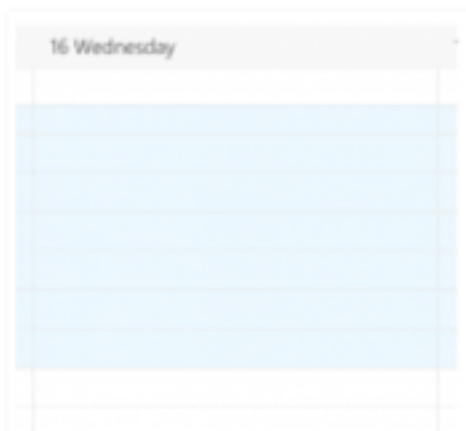mike created this task.   Aug 14 2017, 1:25 PM

tomasz assigned this task to halla.   Aug 28 2017, 11:10 AM

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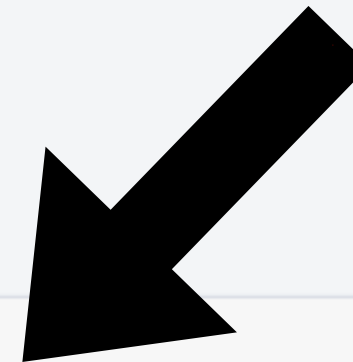
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jackie added a subscriber: **jackie**.   Sep 5 2017, 2:41 PM ▼

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What was wrong with this process?

Didn't collect enough information from the user

Missed window for checking the logs

Repeated work in different investigations

Enter... **collaborative debugging**.

Assumption: Each person should claim a bug, then fix it.

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But a lot of the hardest bugs don't work that way.

If we had been debugging *collaboratively*, each person would have left breadcrumbs for the next person to make sure as little progress was lost as possible.

What would be a better debugging process?

Get the right information from the user

Pull stacktraces from the logs ASAP

Document progress, good or bad

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☑ Fetching raw message returns 404 (Move.com)

☑ Closed, Resolved   👥 All Users

Description

Move.com needs to fetch raw messages ASAP to meet their product requirements.

They are running into an issue where they:

1. Initialize an account
2. Receive a webhook notification for a new message being created
3. Query `/messages/{id}` for the new message
4. Query `/message/{id}` with the `rfc-822` header to get the raw message

Step 3 returns a `200` and the message, but step 4 returns a `404`

Either, we need to return a status code other than `404` to indicate that the message isn't available yet so they can retry on the error, or we need to make sure raw messages are available sooner.

Affected Customers:
https://nylas.zendesk.com/agent/tickets/13145

mike created this task.   Sep 11 2017, 11:53 AM

mike updated the task description. **(Show Details)**   Sep 11 2017, 12:10 PM

halla claimed this task.   Sep 20 2017, 10:10 AM

halla moved this task from **Customer Issues** to **In Progress** on the ⬭ board.

halla added a comment.   Sep 20 2017, 10:34 AM ▾

Update on the s3 race condition theory:
It looks like we fallback to the provider if we couldn't find the message in s3 - https://github.com/nylas/cloud-core/blob/master/nylas/sync/api/blueprints/messages.py#L174-L187
This means we can't find the message on the provider either, so something bigger is going on.

halla added a comment.   Sep 20 2017, 11:02 AM ▾

We're actually throwing the error here: https://github.com/nylas/cloud-core/blob/master/nylas/sync/s3/backends/imap.py#L18

```
Traceback (most recent call last):
File "/usr/share/python/cloud-core/local/lib/python2.7/site-packages/nylas/sync/api/blueprints/messages.py", line
186, in lookup
    contents = get_raw_from_provider(message)
File "/usr/share/python/cloud-core/local/lib/python2.7/site-packages/nylas/sync/s3/base.py", line 9, in
get_raw_from_provider
    return account.get_raw_message_contents(message)
File "/usr/share/python/cloud-core/local/lib/python2.7/site-packages/nylas/db/sharded/models/backends/imap.py", line
78, in get_raw_message_contents
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deleted on the backend server.
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Looking into why a message might not have any imapuids.

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Not every problem is a technical problem.

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Say hello on Twitter! I'm @jackiehluo.

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