Introducing: Inmail & Mailmute

Bounce processing for Drupal 8
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E-mail headers

```
Return-Path: <arild@klavaro.se>
MIME-Version: 1.0
Received: by 10.194.153.164 with HTTP;
  Tue, 4 Nov 2014 07:01:16 -0800 (PST)
X-Originating-IP: [83.150.36.145]
Date: Tue, 4 Nov 2014 16:01:16 +0100
Message-ID: <CAFZOsfM0fFqo+S-r+vHpZqQohnO9@mail.gmail.com>
Subject: I made a mail
From: Arild Matsson <arild@klavaro.se>
To: hopelesscowsalad@hotmail.com
Content-Type: text/plain; charset=UTF-8

Hello World!
How are you doing?
Cheers
-- Arild
```
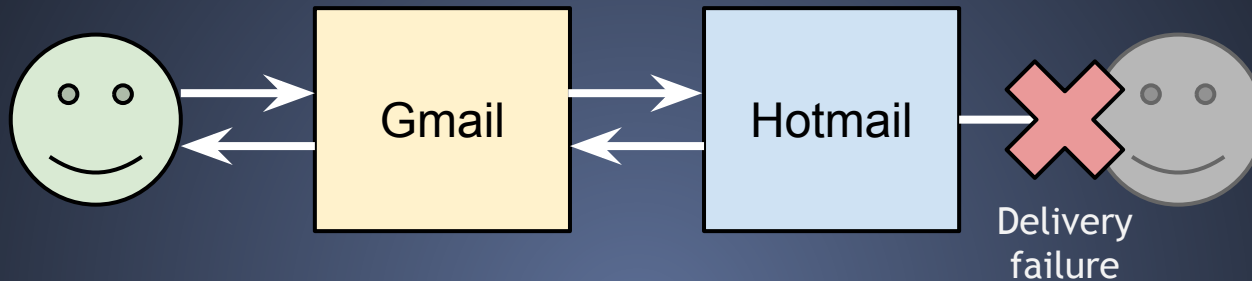
Bounce messages


```
Delivery to the following recipient failed
permanently:

     hopelesscowsalad@hotmail.com

Technical details of permanent failure:
Google tried to deliver your message, but it was
rejected by the server for the recipient domain
hotmail.com by mx3.hotmail.com. [65.54.188.126].

The error that the other server returned was:
550 Requested action not taken: mailbox unavailable
```

Problem

1. User email out-of-date
2. Mail is *bouncing*
3. No keeping track of the bounces

$\Rightarrow$ Website keeps sending

$\Rightarrow$ Less delivery rate

$\Rightarrow$ Spam reputation

"Anything above 10% […] will raise red flags with your ISP"

http://www.activecampaign.com/sender-reputation/

"keep your bounce rate as low as possible (less than 2%)"

https://www.mailjet.com/support/what-is-an-acceptable-bounce-rate,76.htm

Solution strategy

1. Define a Return-Path mailbox
2. Fetch messages
3. Detect a bounce
4. Set a flag on the user
5. Suppress further sending
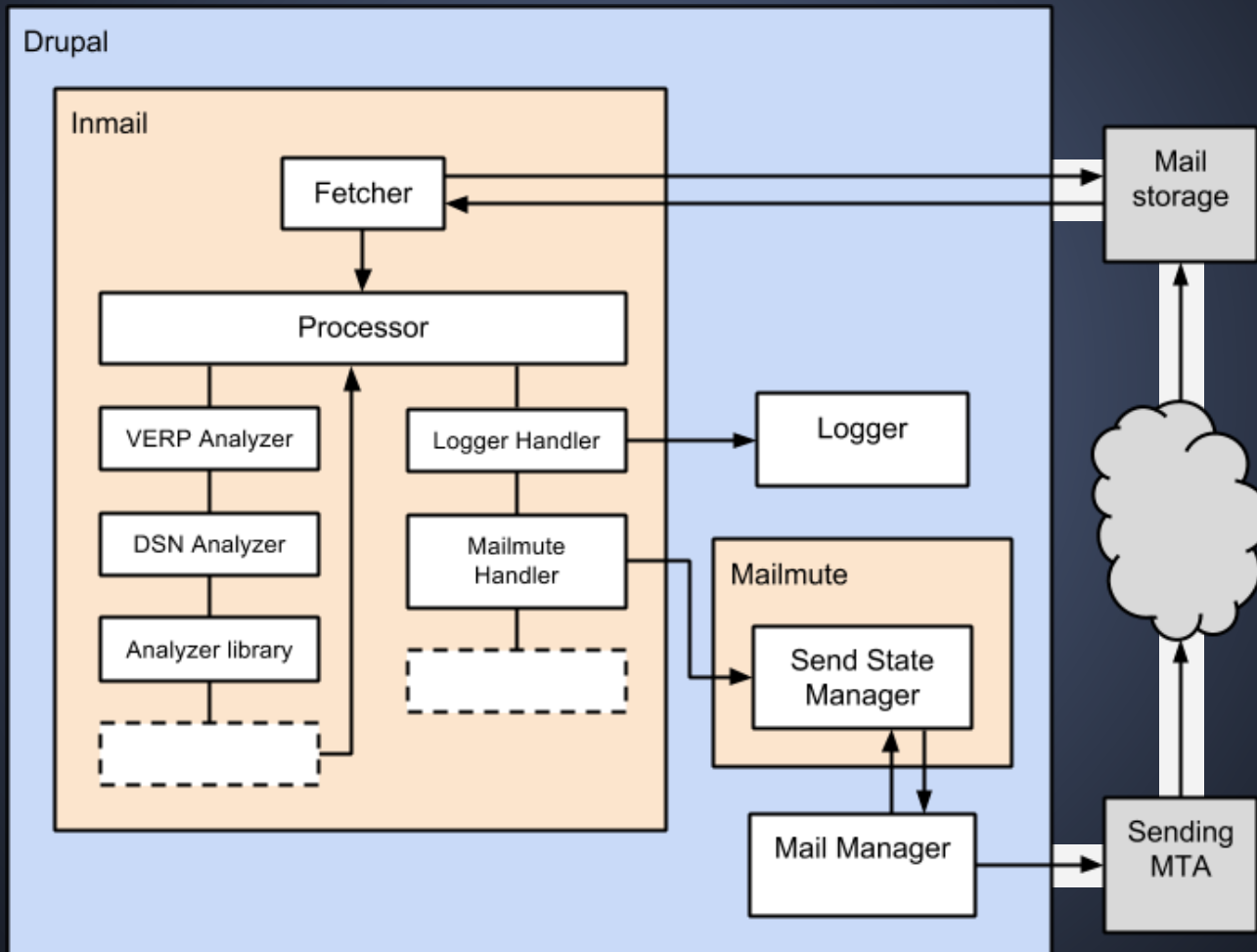
Solution strategy, generalized

1. Fetch each message
2. Run *analyzers* on it, retrieve a *result*
3. Run *handlers* with the result

One analyzer for detecting bounces
One handler for setting the mute flag

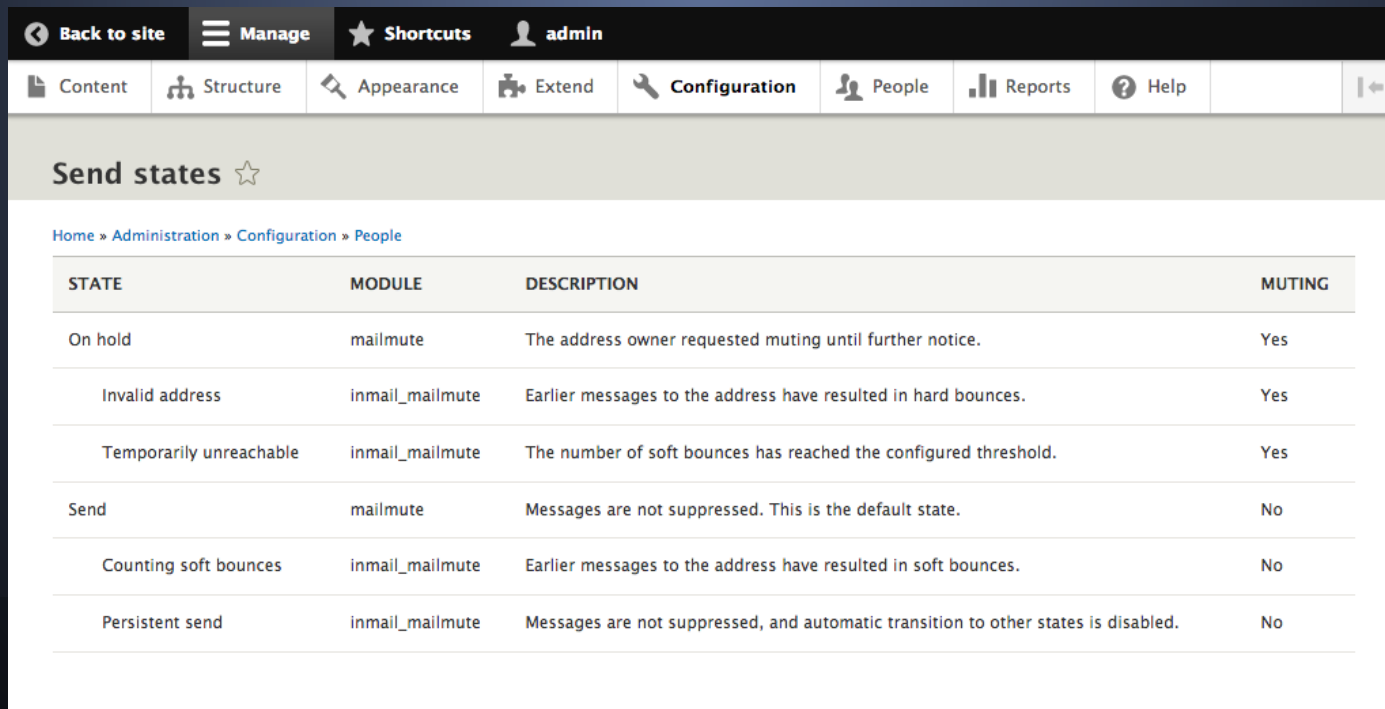A mail alter hook for suppressing muted users

Architecture overview

Mailmute

Ingredients:

1. A per-user *send state*
2. A mail alter hook

Mailmute: Send state

- Plugins
- Hierarchically ordered
- May be muting

Back to site | Manage | Shortcuts | admin

Content | Structure | Appearance | Extend | Configuration | People | Reports | Help

Send states ☆

Home » Administration » Configuration » People

STATE	MODULE	DESCRIPTION	MUTING
On hold	mailmute	The address owner requested muting until further notice.	Yes
Invalid address	inmail_mailmute	Earlier messages to the address have resulted in hard bounces.	Yes
Temporarily unreachable	inmail_mailmute	The number of soft bounces has reached the configured threshold.	Yes
Send	mailmute	Messages are not suppressed. This is the default state.	No
Counting soft bounces	inmail_mailmute	Earlier messages to the address have resulted in soft bounces.	No
Persistent send	inmail_mailmute	Messages are not suppressed, and automatic transition to other states is disabled.	No

Mailmute

Field widget on user edit form
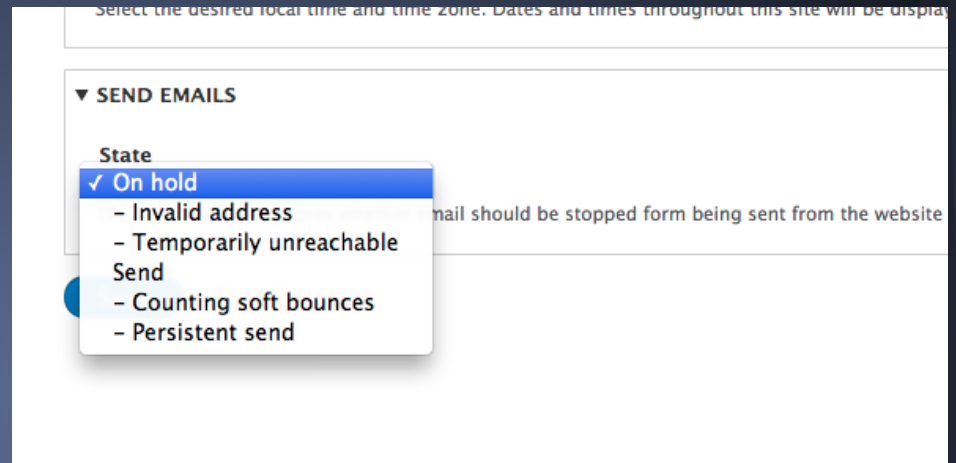
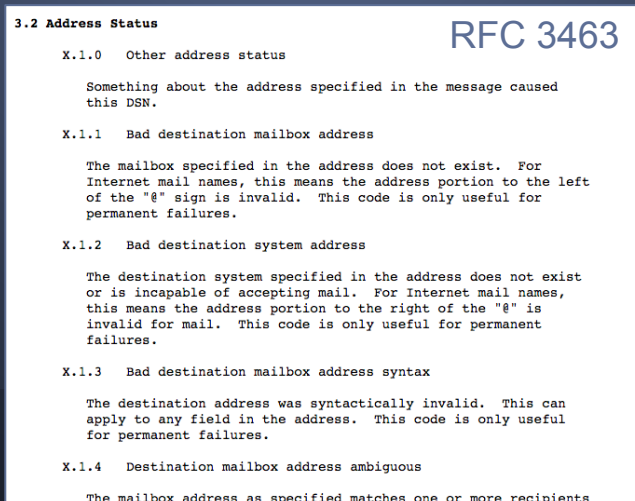Notice when attempting to mail a "muted" user

Inmail

1. Fetch message
2. Parse message
3. Run each analyzer
    a.   Report results
4. Run each handler
    a.   Perform actions depending on the result object

Standard DSN Analyzer

Simple approach: follow a standard!

RFC 3463 + RFC 3464

1. Identifies a status code (e.g. 5.7.1)
2. Identifies the recipient
3. Extracts a "reason" message

External bounce libs

"There is probably a well-designed, frequently used, easily integrated library for this"

- BounceHandler
  https://github.com/Rambomst/PHP-Bounce-Handler
- PHPMailer-BMH
  https://github.com/instaclick/PHPMailer-BMH

To do: evaluate and decide

Mailmute handler

If the analyzers identified a bounce
Then set the send state to mute

Introduce new send states

Soft bounce (4.x.x)

- Set to *Counting bounces*
- After 5 bounces, set to *Temporarily Unreachable*
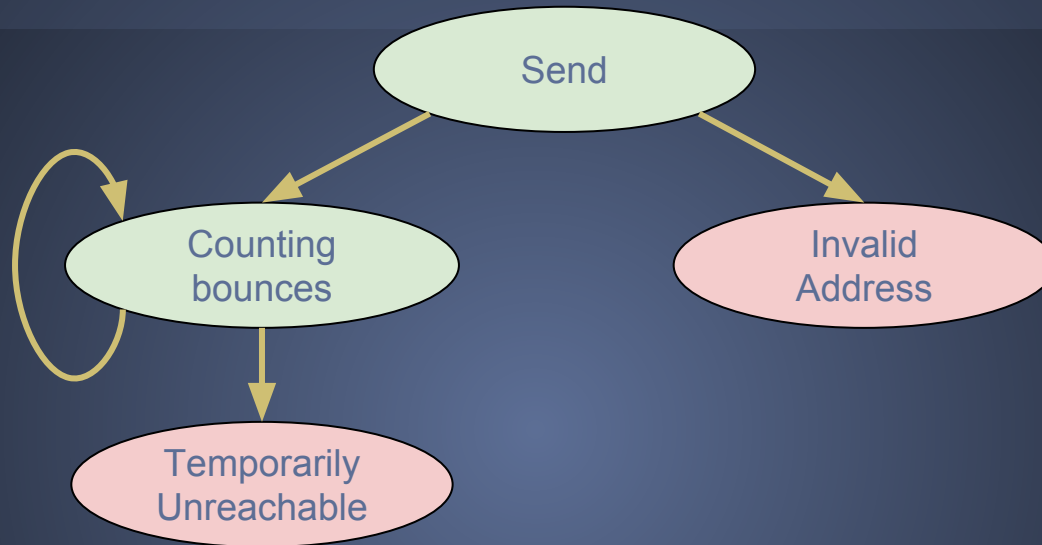
Hard bounce (5.x.x)

- Set to *Invalid Address*

Bounce send states

Soft bounce (4.x.x)

Hard bounce (5.x.x)

- Set to *Counting bounces*
- After 5 bounces, set to *Temporarily Unreachable*

- Set to *Invalid Address*

Integration

MTA (Postfix) → Drush → Inmail

drush inmail-process
Postfix configuration

Roadmap

Get started ✔

Proof of concept ✔

Move to Drupal.org ✔

Get users

Deploy on a live website

Release 1.x

Current issues

- Stabilise API
- Moderation queue UI
- Improve logging
- Processing non-bounces

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