Testing email with Mailcatcher

Eric Jacolin
eric@jacolin.net

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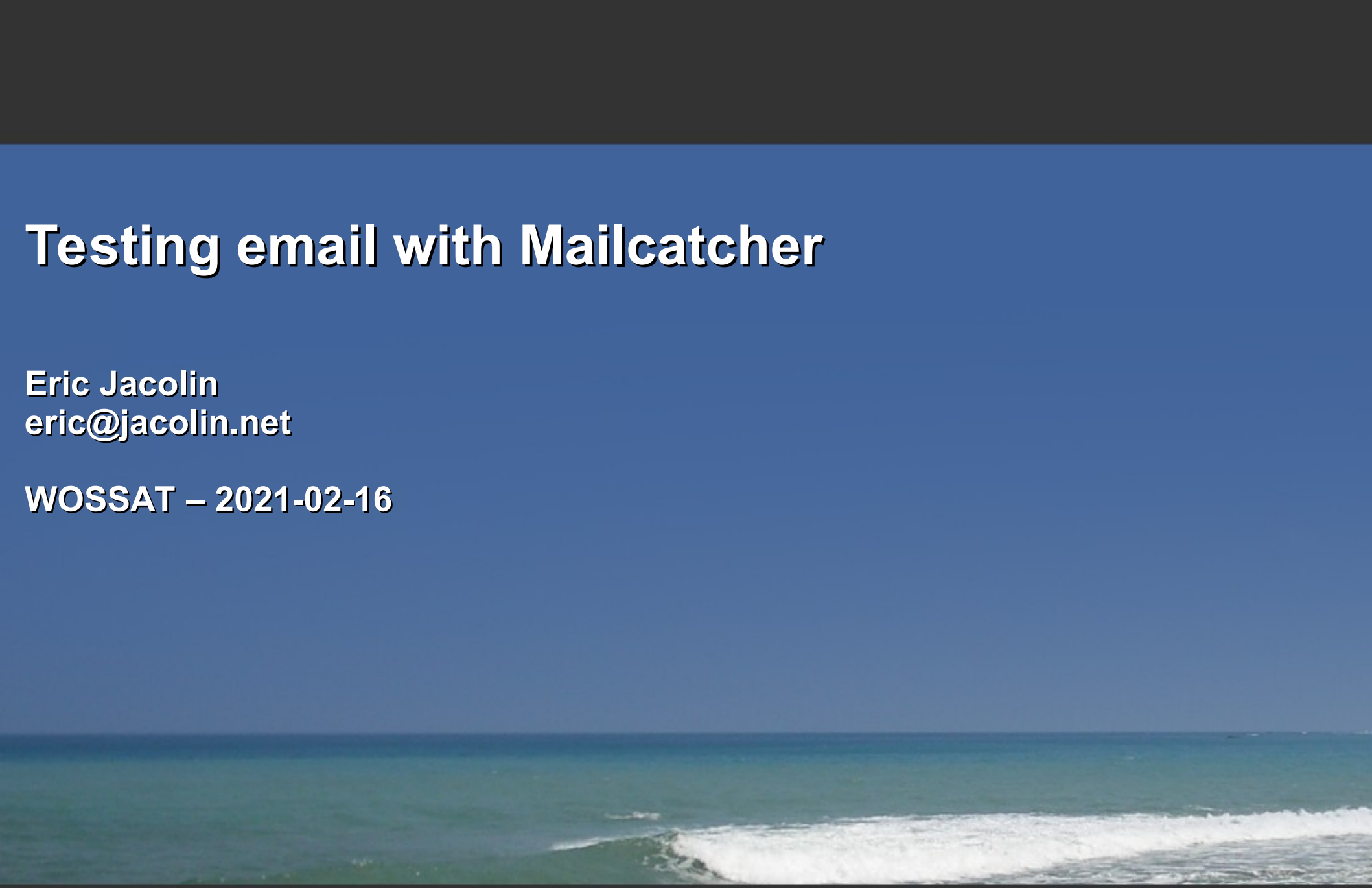

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1. A typical email architecture

- Web controllers publish messages (to the application DB, RabbitMQ, Cloud pub/sub, etc.)
- A messenger worker processes these messages asynchronously, sends them to the local MTA (typically running in the same container)
- The MTA handles the mechanics of sending the messages to the target SMTP server (retries, etc.)

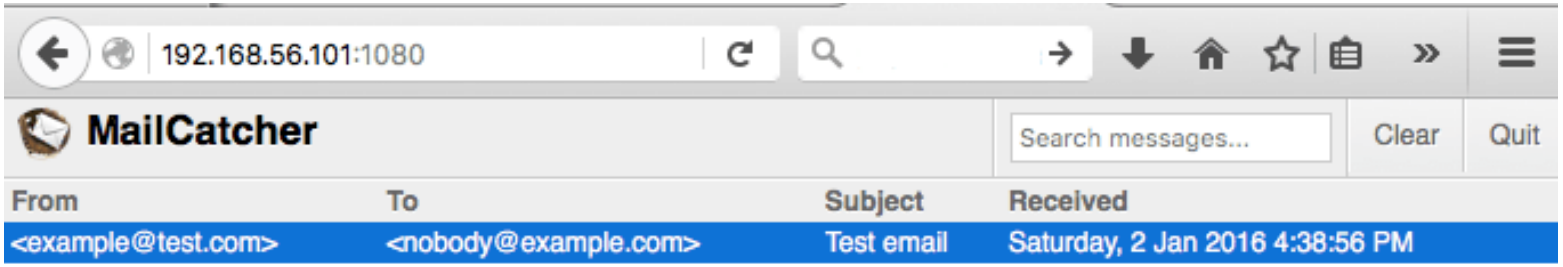
2. Testing objectives

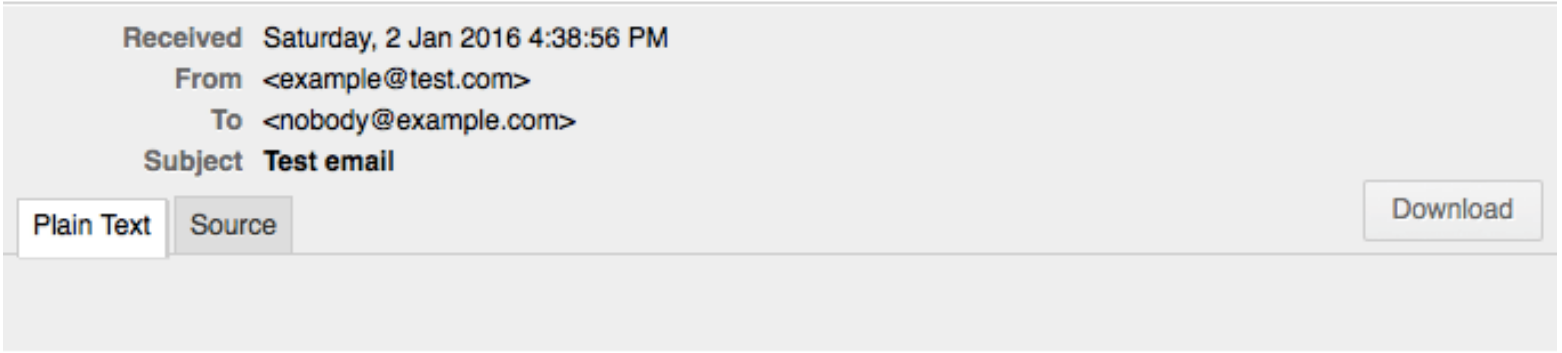
- Identical code on local and remote environments
- Emails actually sent in dev (not just held off)
- ... while avoiding spamming real users (or getting blacklisted)
- Actual emails can be inspected

3. Mailcatcher

- An SMTP server running on localhost
- Can be deployed as an executable or a docker container (the latter is straightforward)
- Includes a web server where emails can be viewed

3. Mailcatcher





4. Typical configuration

- Define different SMTP configuration for local dev and remote environments
- Example using msmtp as MTA:
  - msmtp determines the SMTP account to use depending on the sender email address
  - define a different sender email address on local dev

4. Typical configuration

```
defaults
logfile        /var/www/var/log/msmtp/msmtp.log

# OVH
account        ovh
host           ssl0.ovh.net
auth           on
port           465
from           info@example.com
user           info@example.com
passwordeval   "echo $MAILER_PASSWORD"
auth           on
tls            on
tls_trust_file /etc/ssl/certs/ca-certificates.crt
tls_starttls   off

# mailcatcher (local)
account         mailcatcher
host            10.0.2.2
port            1025
from            dummy@example.com
auth            off
tls             off

# Set a default account
account default : {{ .Env.SMTP_ACCOUNT }}
```

5. Limitations

- Only runs on localhost, can't be shared
- Alternative: Mailtrap: similar functionality, but on a remote server (SaaS)
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- Reference: https://blog.mailtrap.io/mailcatcher-guide/