

Working with Webhooks

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What is a Webhook?

An HTTP POST request.



Why Webhooks?

Event-driven HTTP = Webhooks



Webhooks in the Wild

Slack Integrations



github APP 5:37 PM

[nexmo-python-quickstart] New branch "account-examples" was pushed by lornajane

[nexmo-community/nexmo-python-quickstart] Pull request submitted by lornajane

#46 Add get-balance and configure-account building blocks

We've added a couple of building blocks for account, so I thought I'd add python examples to get us started.

GitHub Builds



All checks have failed

1 failing check



continuous-integration/travis-ci/pr — The Travis CI build failed



This branch has no conflicts with the base branch

Only those with [write access](#) to this repository can merge pull requests.

Webhook Use Cases

- Notify of events
- Deliver data when available
- Broadcast to multiple receivers as-it-happens



How APIs Work

How APIs Work



How APIs Work



How APIs Work



How Webhooks Work

How Webhooks Work

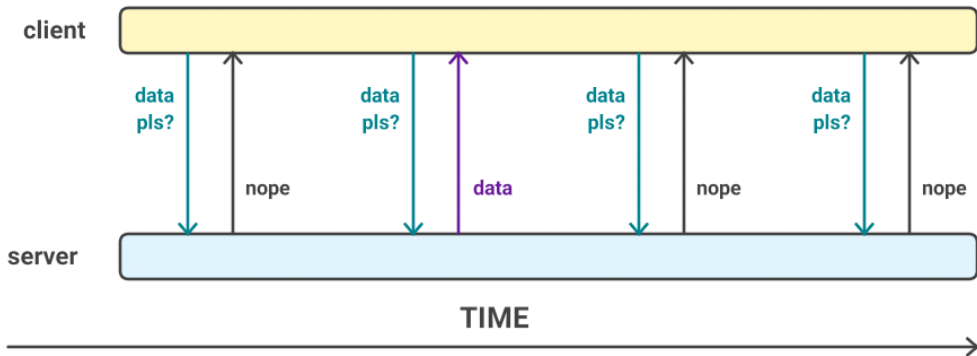


How Webhooks Work

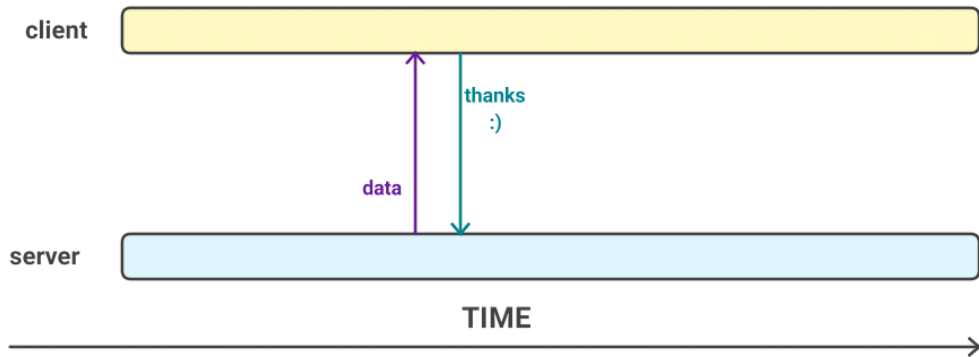


What About Time?

APIs Over Time



Webhooks Over Time





Where To Webhook To?

Webhooks Need Pre-arrangement

With APIs, the client calls the server.

With Webhooks, the client has to register with the server, to get data later.



Receiving Webhooks

Warning: minor tangent ahead



Ngrok for Testing Webhooks

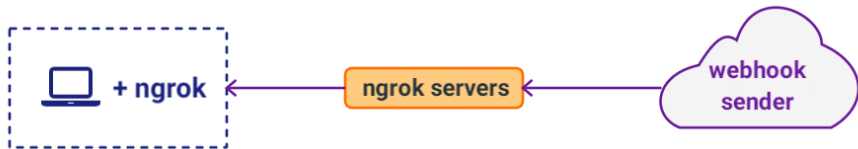
<https://ngrok.com/> - secure tunnel to your dev platform

Use this tool to:

- webhook into code running locally
- inspect the request and response of the webhook
- replay requests and see the responses

Ngrok for Testing Webhooks

Start the tunnel on your laptop: receive a public URL



Example: Nexmo SMS

When you register a phone number and receive an SMS, your application receives a webhook.



**I'm running open endpoints on the internet
and accepting data, now what?**

Webhook Security

When working with webhooks:

- be aware of attack vectors
- always use SSL
- consider shared secrets and hashing
- all good HTTP security practices apply



Nexmo SMS Security

Nexmo can sign messages using a shared secret.

The PHP library <https://github.com/nexmo/nexmo-php> can do this for you.

```
$signature = new \Nexmo\Client\Signature($_GET,  
    SIGNATURE_SECRET, 'sha256');  
  
$isValid = $signature->check($_GET['sig']);
```

Webhooks

... are awesome :)

Webhooks in Your Applications

- Use them WHEN you want to notify other systems
- Examples of HOW to use webhooks hopefully gave you some ideas
- Webhooks are HTTP: we already understand this

Thanks!

- Nexmo: <https://nexmo.com> (DM me for credit)
- Me: <https://lornajane.net> and @lornajane
- Ngrok: <https://ngrok.com/>
- PHP Web Services from O'Reilly

