

Listening for Stripe Events



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Webhook

Webhooks are "user-defined HTTP callbacks". They are usually triggered by some event, such as pushing code to a repository or a comment being posted to a blog. When that event occurs, the source site makes an HTTP request to the URI configured for the webhook. Users can configure them to cause events on one site to invoke behaviour on another.



Webhooks

- Notify you about events that happen in a Stripe account

Webhook: How It Works



Register a URL that will be notified

Stripe creates an Event object

- Event type
- Associated data

Stripe sends an HTTP POST request

- With the Event object
- To all registered URLs

Stripe Event Examples

Charge refunded

Trial end

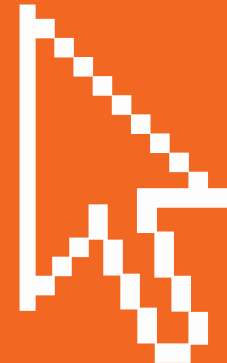
Invoice payment
succeeded

Webhook Use Cases

- Event not the result of a direct API request
- Services not making API requests may need response data



Registering a Webhook URL



Creating a Webhook

Receiving Webhooks

```
public class StripeWebhookController : Controller
{
    [HttpPost]
    public ActionResult Index()
    {
    }
}
```

Responding to Webhooks

```
[HttpPost]
public ActionResult Index()
{
    if(error)
    {
        //Any response code outside the 2xx range, including 3xx, 4xx, 5xx codes
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest, "Incoming event empty");
    }

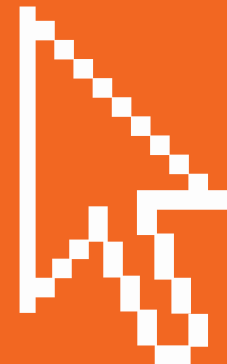
    //no problems, return a 2xx HTTP status code
    return new HttpStatusCodeResult(HttpStatusCode.OK);
}
```

Webhook Best Practices

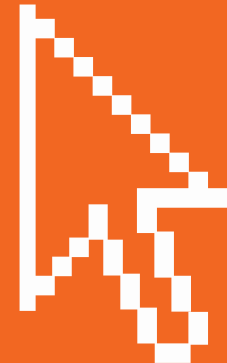
Make your event processing
idempotent

Confirm that Stripe sent the
webhook

Hello World Webhook



Testing a Webhook



IIS Application Host File

IIS Express

Visual Studio 2013

%USERPROFILE%\My Documents\IISExpress\config\

Visual Studio 2015+

\$(solutionDir)\.vs\config\applicationhost.config

IIS

%WINDIR%\system32\inetsrv\config

- applicationhost.config

IIS Application Host File Configuration

```
<site name="StripeFundamentals.Web" id="3">
  <application path="/" applicationPool="Clr4IntegratedAppPool">
    <virtualDirectory path="/"
      physicalPath="C:\code\StripeFundamentals\StripeFundamentals.Web" />
  </application>
  <bindings>
    <binding protocol="http" bindingInformation="*:52355:localhost" />
    <binding protocol="http" bindingInformation="*:52355:da34d230.ngrok.io" />
  </bindings>
</site>
```


Http.Sys Configuration

```
netsh http add urlacl url=http://da34d230.ngrok.io:52355/ user=everyone
```

Http.Sys

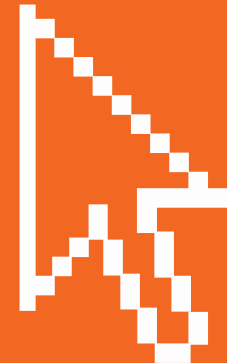
The Windows component that handles incoming network requests made using the HTTP protocol



By default only allows applications ports 80 and 443.

Also blocks applications from serving external traffic.

Charge Refunded Webhook



Webhook Best Practices



Webhooks and API Versions

Initial Response

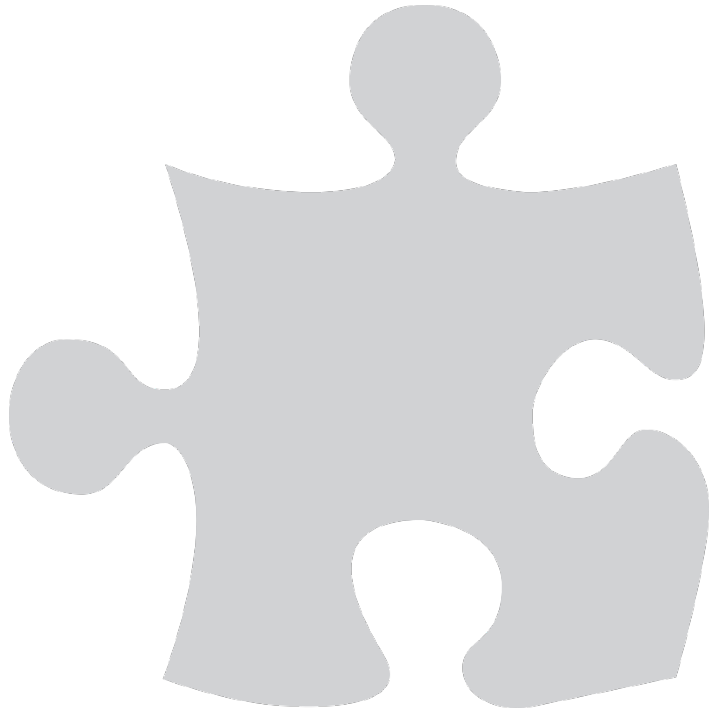
Always sends according to API Version in Account Settings

Fetching older (historic) event

Has no impact on the event's structure
Even if API version has been updated

Event Documentation

What | Stripe API reference



When | Stripe event cheatsheet



This Module Covered

Webhooks

- Definition, event examples, use cases

Demo

- Registering , receiving and responding
- Testing
- Best practices

API Versions & Documentation

