Apex Integration Overview

**Learning Objectives**

After completing this module, you will be able to:

* Describe the differences between web service and HTTP callouts.
* Authorize an external site with remote site settings.

**Make Callouts to External Services from Apex**

An Apex callout enables you to tightly integrate your Apex code with an external service. The callout makes a call to an external web service or sends an HTTP request from Apex code, and then receives the response.

Apex callouts come in two flavors.

* Web service callouts to SOAP web services use XML, and typically require a WSDL document for code generation.
* HTTP callouts to services typically use REST with JSON.

These two types of callouts are similar in terms of sending a request to a service and receiving a response. But while WSDL-based callouts apply to SOAP Web services, HTTP callouts can be used with any HTTP service, either SOAP or REST.

So you are probably asking yourself right now, “Which one should I use?” Whenever possible, use an HTTP service. These services are typically easier to interact with, require much less code, and utilize easily readable JSON. All the “cool kids” have been switching to REST services over the last couple of years, but that's not to say that SOAP Web services are bad. They've been around forever (in Internet years) and are commonly used for enterprise applications. They are not going away anytime soon. You'll probably use SOAP mostly when integrating with legacy applications or for transactions that require a formal exchange format or stateful operations. In this module we'll touch on SOAP, but will spend most of our time on REST.

**Follow Along with Trail Together**

Want to follow along with an expert as you work through this step? Take a look at this video, part of the Trail Together series on Trailhead Live. You can find a link to the full session in the Resources section.

**Authorize Endpoint Addresses**

We love security at Salesforce! So, any time you make a callout to an external site we want to make sure that it is authorized. We can't have code calling out willy-nilly to any endpoint without prior approval. Before you start working with callouts, update the list of approved sites for your org on the Remote Site Settings page.

We'll be using the following endpoints in this module, so go ahead and add them now. If you forget to add an endpoint, trust me, you'll get a reminder when you try to run your code. We'll be making calls to the following sites.

* https://th-apex-http-callout.herokuapp.com
* https://th-apex-soap-service.herokuapp.com

Authorize both of these endpoint URLs by following these steps.

1. From Setup, enter Remote Site Settings in the Quick Find box, then click **Remote Site Settings**.
2. Click **New Remote Site**.
3. For the remote site name, enter animals\_http.
4. For the remote site URL, enter https://th-apex-http-callout.herokuapp.com.

This URL authorizes all subfolders for the endpoint, like https://th-apex-http-callout.herokuapp.com/path1 and https://th-apex-http-callout.herokuapp.com/path2.

1. For the description, enter Trailhead animal service: HTTP.
2. Click **Save & New**.
3. For the second remote site name, enter animals\_soap.
4. For the remote site URL, enter https://th-apex-soap-service.herokuapp.com.
5. For the description, enter Trailhead animal service: SOAP.
6. Click **Save**.

**Resources**

* [*REST vs SOAP*: When Is REST Better?](https://stormpath.com/blog/rest-vs-soap/)
* [*Trailhead Live*: Trail Together - Apex Integration Services](https://trailhead.salesforce.com/live/broadcasts/a2r3k000001vDCw/trail-together---apex-integration-services)

Top of Form

**Hands-on Challenge**

**+500 points**

**GET READY**

You’ll be completing this unit in your own hands-on org. Click **Launch** to get started, or click the name of your org to choose a different one.

If you use Trailhead in a language other than English, make sure that your hands-on org is set to the same language as the challenge instructions. Otherwise you may run into issues passing this unit. Want to find out more about using hands-on orgs on Trailhead? Check out [Trailhead Playground Management](https://trailhead.salesforce.com/en/content/learn/modules/trailhead_playground_management).

**YOUR CHALLENGE**

**Be sure Remote Site Settings have been added**

Add two Remote Sites to the Remote Site Settings to allow callouts to external sites.  
  
**Prework**: If you already added the Remote Sites as directed in the unit then you are ready to verify.

* Add a Remote Site
  + Name: animals\_http
  + Remote site URL: th-apex-http-callout.herokuapp.com
  + Description: Trailhead animal service: HTTP
* Add a Remote Site
  + Name: animals\_soap
  + Remote site URL: th-apex-soap-service.herokuapp.com
  + Description: Trailhead animal service: SOAP

**swamy2**

Last used on 7/6/2022

Bottom of Form