

Drupal Services

A2 Drupal - July 2011

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Intent

- Introduction - aimed at the new services user, high level enough that non-hackers can get it.
- D6 specific - sorry! Wasn't able to focus in on D7

What are Services?

- Web services let websites talk to websites, websites talk to applications and applications talk to applications
- Using other services most common
 - every eCommerce transaction between shopping cart and authorize.net
 - getting your shipping quotes from FedEx
 - getting your Twitter posts from any software client

Hosting your Own Services

- Expose your site's data for others to consume in a defined, expected, machine-readable way
- Mobile device that can interact with Drupal site via an application? Services! Cool!

Services in Drupal

- Lots of moving parts!
 - External Frameworks (<http://drupal.org/node/763066>)
 - Servers
 - Services
 - Authentication
 - Input Formats
 - Output Formats

Server

- Server API (drupal.org/node/750032)
 - JSON, JSON-RPC, SOAP, AMF PHP, PLIST
 - REST
- REST is very flexible, designed to work as well as possible with HTTP
- Can return multiple formats based on file endings and Accept-headers (.xml, .json, etc.)

A little about REST

CRUD	CREATE	READ	UPDATE	DELETE
MySQL	INSERT	SELECT	UPDATE	DELETE
HTTP	POST	GET	PUT	DELETE

Looking for a 200 error code at the end to signal
“It’s all good!”

Services

- Built-ins: node, user, comment, taxonomy, etc.
- See <http://drupal.org/node/750036> for a whole list.
- Views tie ins: <http://www.slideshare.net/darrenmothersele/drupal-web-services> for a good example.

Authentication

- Lite Overview only!
- OAuth (<http://oauth.net/code>)
- Key Authentication (pre-created set of credentials passed around)
- Session-based + access checks (e.g. login, but still don't have access)

Input and Output Formats

- Separation of protocol used to tx data from the API that drives the data
- 6.x-3.x gets even more jiggy with it, allowing on the fly recognition at the same URL...
- I think this is where the power is!

Input Formats

- built in for `x-www-form-urlencoded`, `yaml`, `json`, `serialized PHP`
- can be extended by:
`hook_rest_server_request_parsers_alter()`
- Flexibility is key... encourage people to use it via whatever format they want!

Output Formats

- application/json
- application/xml
- can be extended by:
`hook_rest_server_response_formatters_alter()`
- Again, flexibility is key... encourage people to use it via whatever format they want!

Built-Ins Demo

- integration with: files, users, nodes, taxonomy, etc.
- So you can login to the site (`user.login`),
- Retrieve a node (`node.get`),
- and post a comment (`comment.save`) without having to use your browser or parse any HTML

Let's do it

- Base Drupal Installation
- Services module (<http://drupal.org/project/services>)
- Chaos tool suite module
- REST server now included
- Autoload

Configuration

- Set arbitrary end point in the menu system
- Individual server, services supported, and authentication for each one
- Nice thing about end points: can use services to expose an API and can expose with MULTIPLE APIs with different access!

What to use to Send Data and Debug?

- Poster (<https://addons.mozilla.org/en-US/firefox/addon/poster/>) (Note that you can still pass xdebug get args to kick off debugger even when sending POSTs)
- RestClient (<https://addons.mozilla.org/en-US/firefox/addon/restclient/>)
- XML Validator (<http://validator.w3.org/>)

Simple Demo Using Built-ins

- Node.get - DENIED
- User.login
- Node.get
- Comment.post
- User.logout

Custom Example

- <http://drupal.org/node/783460>

Resources

- Services Page: <http://drupal.org/project/services>
- Services Handbook: <http://drupal.org/documentation/modules/services>
- Views integration: <http://www.jefflinwood.com/2010/08/using-drupals-views-as-a-json-web-service-with-the-rest-server/>
- Calling from JQuery: <http://groups.drupal.org/node/78093>

- Overview of Drupal Services: <http://echodittolabs.org/blog/2010/07/drupal-services-module>
- Another good overview: <http://www.slideshare.net/darrenmothersele/drupal-web-services>
- Hugo's Talk: <http://blogs.goodold.se/tech/2009/11/12/talk-on-services-at-drupalcamp-stockholm-2009/> and http://goodold.se/sites/default/files/Services_-_Drupalcamp_Stockholm_2009_EN.pdf
- Hugo's Github: <http://github.com/hugowetterberg>

The End!

Any Questions?