Application Programming Interfaces (APIs) & GSA

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Users Directly Accessing Your App
API = Application Programming Interface

Your App

REQUEST

API

RESPONSE

Their App
For this presentation, we’re talking about **Web APIs**

Web APIs Generally:
- Use HTTP to communicate
- Have a web-accessible address
- Use a request and response
- Typically transfer data in XML or JSON formats
An API is like a wall socket
An API can serve multiple consumers

Your Web Site or Application

Mobile Application

External web sites or applications
What other Government APIs are out there?

- Package tracking
- Postage price calculator
- Package pickup scheduling
- Address validation

https://www.usps.com/business/web-tools-apis/
Why create an API?

Your App
What GSA APIs are out there?

https://open.gsa.gov/api
What other APIs are out there?

Search “API directory”
API Strategy (w/ examples)

- **GSA API Strategy** developed and presented to leadership in March 2016
  - Objectives
  - Specifications
  - Recommendations

- Best place to start - [https://open.gsa.gov/api/](https://open.gsa.gov/api/)
  - **Standards**, **Feedback**
  - **City Pair Program** and **prototype**
API Interactions - External and Internal

Integrate and Create APIs
- Easily connect SOA, ESB, and legacy applications
- Aggregate data including NoSQL up to 10x faster
- Build scalable connections to cloud solutions
- Automatically create data APIs with live business logic

Secure the Open Enterprise
- Protect against threats and OWASP vulnerabilities
- Control access with SSO and identity management
- Provide end-to-end security for apps, mobile, and IoT

Accelerate Mobile/IoT Development
- Simplify and control developer access to data
- Build a wider partner or public developer ecosystem
- Leverage tools that reduce mobile app delivery time

Unlock the Value of Data
- Monetize APIs to generate revenue
- Build digital ecosystems to enhance business value
- Create efficiencies through analytics and optimization

Outside the Enterprise
- Internet of Things
- Mobile
- SaaS/Cloud Solutions (AWS, Google, SFDC...)
- Partner Ecosystems
- External Developers

Within the Enterprise
- Secure Data
- Application Portfolio
- ID/Authentication
- Reporting & Analytics
- Internal Teams
Follow-up

- Explore the documentation provided in this Tech Talk
  - Slides posted online at [tech.gsa.gov/techtalks](http://tech.gsa.gov/techtalks)
  - Reach out to Ryan and Joe with questions
  - Consider creating your own APIs

- Join our quarterly API Workgroup
  - Features APIs currently being developed at GSA
  - Features industry and government guest speakers