Back to the Future
In the beginning...

• Back before Y2K
  • Event Driven/Real Time
  • Guaranteed Message Delivery
  • Open Standard – adopted by agencies and vendors alike
  • Data Model driven by use cases
Stable is good...right?

- “Mission Critical” has its downsides
  - XML over HTTP – not fun to work with
  - Tool support for emerging patterns
  - Didn’t want to break

- Eventually, other options forced a recalibration
  - But what to do with 2 decades of investment?
SIF 3 Infrastructure

A brief introduction SIF3 Infrastructure and why it’s important
Easy On-ramp

• RESTful API
  • What modern developers expect
  • Great tool support
  • Fantastic documentation

• Consistent patterns

• Divorced the “what” (data model) from the “how” (infrastructure)
Powerful extensions

- Batch POSTs
  - With record-level status
- Batch Events
- Queue Improvements
  - As many as you want
  - Multi-threaded consumers
  - “Pop and Get Next”
“Up”cycle

Moving forward – quickly and safely - without throwing away decades of investment
Migration Path Concepts

- Seamless
- Incremental
- Value at every step
- Solves real-world use-cases
Blueprint

- Using a hybrid SIF 2/3 Zone
  - SIF 2.x Providers (SIS)
  - SIF 3.x Consumers (Apps)
- No changes from SIS
- Huge performance benefits (see load test session)
- App developers demand REST/JSON
Zero (ish)-touch Migration
Real world results

• Multiple state-wide implementations have been doing this
  • Successfully
  • For Years
  • And they are not stagnant (new integrations going on constantly)
Load Test Overview

• See next session 😊
Pushing Forward

What’s next on the infrastructure roadmap?
Service Providers

• What is a “Service Provider”? 

• Original expectations of a Service Provider
  • Synchronous
    • GET’s
    • POST’s
• Why is the Synchronous requirement an Unreasonable Ask?
Three biggest reasons

- Security
- Load Control
- Variable process times

AND A BONUS!

- Other standards don’t force that requirement!
Original delayed flow

1. Get Students (DELAYED)
2. Accepted (HTTP-202)
3. Get Students (IMMEDIATE)
4. Students Response (HTTP-200)
5. Put Students Response on Queue
6. Get Next Message
7. Students Response

- Step 3, 4 & 5 are repeated by the broker until no more students are retrieved (batch operation).
- Step 6 & 7 are repeated by the consumer until there are no more messages on the queue.
- The HTTP connection between Step 3 & 4 remains open (synchronous request) until the request is processed!
New delayed flow

- Step 6 & 7 are repeated by the provider until all student responses are sent to broker (batch operation).
- Step 8 is repeated for each response sent by the provider.
- Step 9 & 10 are repeated by the consumer until there are no more messages on the queue.
- The time taken between Step 5 (get the request) & 6 (provide responses) no longer matters as there is no open connection.
Surprisingly low impact

• New stanza in the “Provider Registry”

• New error code (HTTP Status Code: 405 - Method not allowed)

• Queue Subscription tweaks

• New Connector Endpoint: Response Connector

• Specification is 95% complete
Questions

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