



Common
Education
Data
Standards

CEDS & the SIF Specification

Objective



Agenda

CEDS Ontology
A4L & CEDS Presently
A4L & CEDS Future



- ☒ Wake up
- ☒ Make coffee
- ☒ Drink coffee
- ☐ Make more coffee

What is an Ontology

Ontology – A set of concepts and categories in a subject area or domain that shows their properties and the relations between them. – Oxford Languages

W3C Web Ontology Language – a Semantic Web language designed to represent rich and complex knowledge about things, groups of things, and relations between things. – W3C

What is an Ontology

Subject

Predicate

Object



What is an Ontology

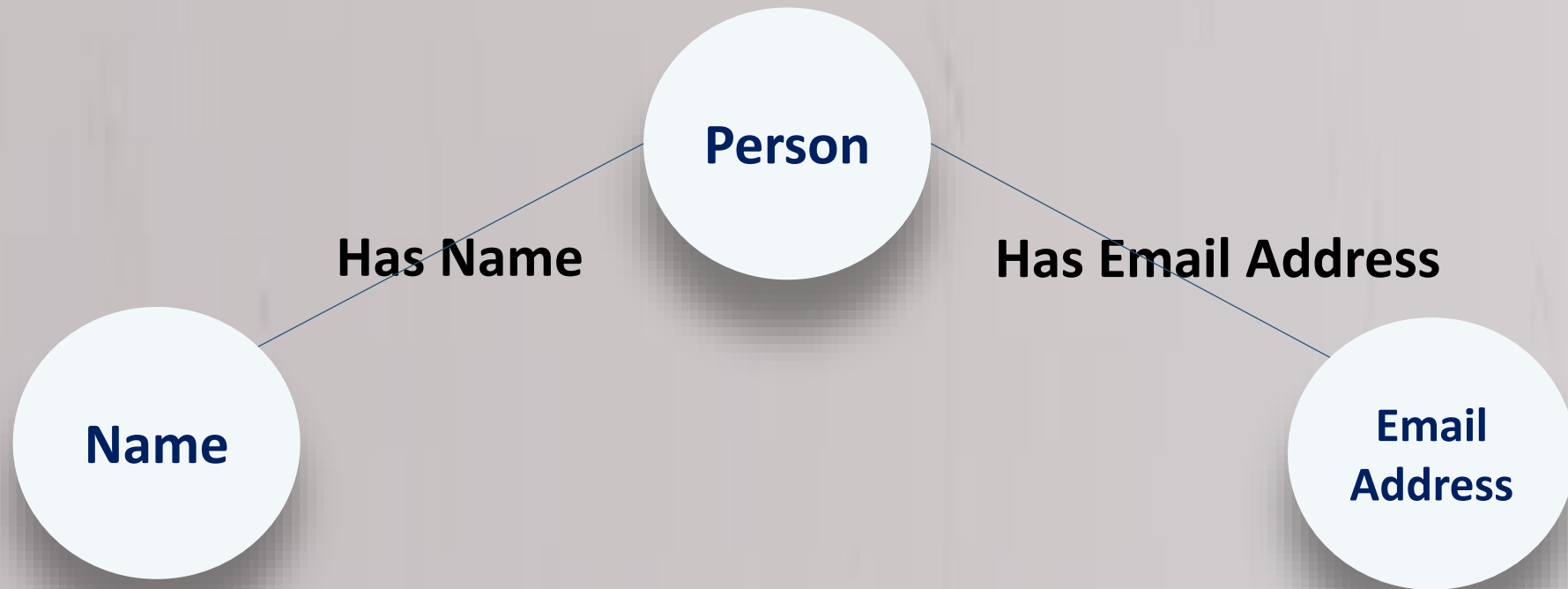
Duane

has

Email
Address



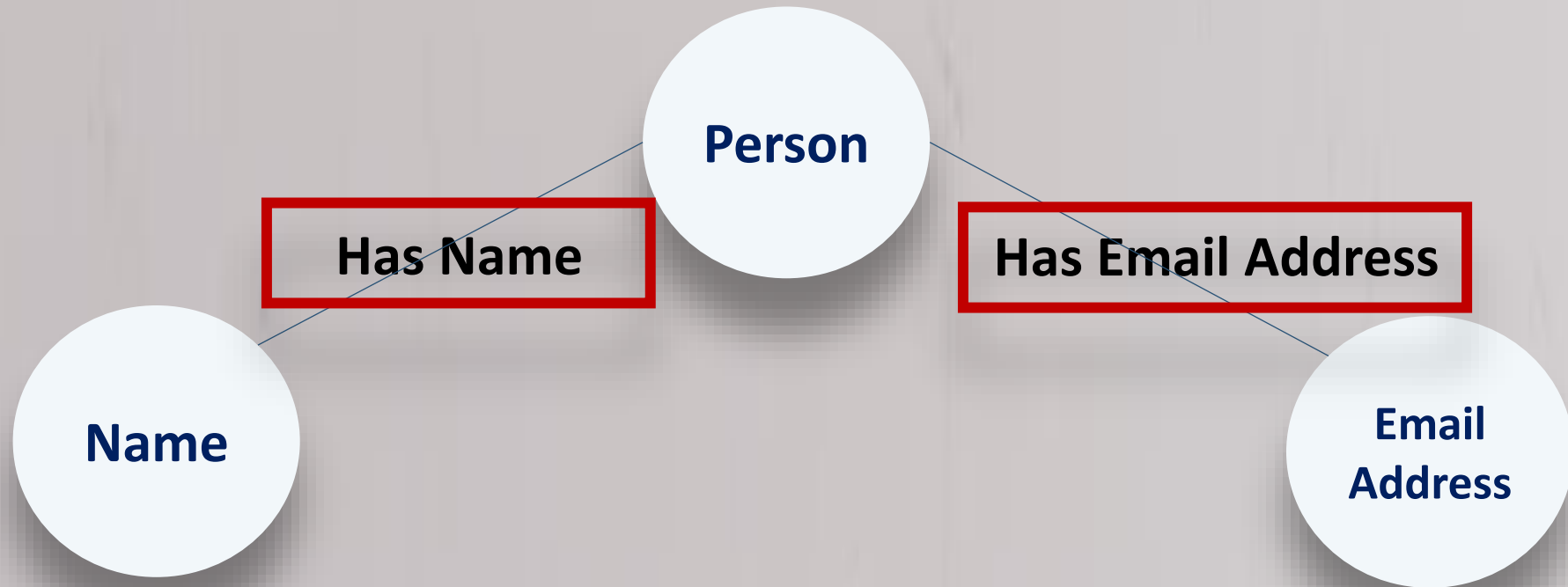
What is an Ontology



First Name - Duane
Last or Surname - Brown

Work - Duane.Brown@AEMCorp.com

What is an Ontology



First Name - Duane
Last or Surname - Brown

Work - Duane.Brown@AEMCorp.com

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Element Development (Transportation, Listed Status, Student Permissions)
Global ID Reference
Privacy Obligations Document

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Discussion – CEDS over the SIF Infrastructure

CEDS over the SIF Infrastructure

INFRASTRUCTURE

The 'HOW'

Defines the transport and messaging functionality over the "wire" where payloads are securely exchanged.



In use globally



Completely independent of the data model, can carry any data model



Incorporates marketplace utilized REST technology



Middleware Broker is optional, not required



Increased scalability

CEDS over the SIF Infrastructure

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Increased scalability

CEDS over the SIF Infrastructure

- Ontology can be represented in JSON, JSON-LD, and XML
- The value of JSON-LD (URL could be the SIF Endpoint based off SIF API namespaces)
- What would need to take place to move CEDS over SIF Infrastructure
 - Create the endpoints using the CEDS ontology
 - Common set of objects based off business use cases
 - Required SIF metadata
 - RefId (CPSI CEDS OSC ticket)
 - ReferenceIdentifier = RefId (synonym or CEDS technical name)
 - Other required SIF metadata?
 - Extension of the CEDS ontology released by SIF (or) work through the OSC to codify what would be an extension into CEDS
- Opportunity for new market areas?
 - CTE
 - Early Childhood
 - Workforce

Flexibility

What *might* that look like?

1. Service Name (Object Name): For any Service/Object, its name MUST be defined and unique within the current scope.

1. Example JSON: {"StudentPersonal":{}}

2. Resource Name (ID): Where a Service/Object can be found MUST be specified. We suggest using version one of the universally unique identifiers (UUID) scheme:

1. Example JSON: {"StudentPersonal":{"RefId":"e199fd0e-cbf5-11ec-9d64-0242ac120002"}}

2. Example Path: /StudentPersonals/e199fd0e-cbf5-11ec-9d64-0242ac120002

3. Collections: The standardized infrastructure *can* move actual data with each service call:

1. Example JSON: {"StudentPersonals":{"StudentPersonal":{}}}

2. Example Path: /StudentPersonals

4. Binary Data: The standardized infrastructure is designed to move text but can include a picture, but it should be Base64 Encoded and included in a data element along with the rest of the document and its metadata:

1. Encoded Example: VGhpcyBpcyBub3QgYSBwaWN0dXJlIQ==

Privacy

The result of common expectations!



End Users

*Here is the data we will give you and
details on how we want it treated*



Automated



Providers

*Here is how we have treated the data and
details on how we can prove it to you*



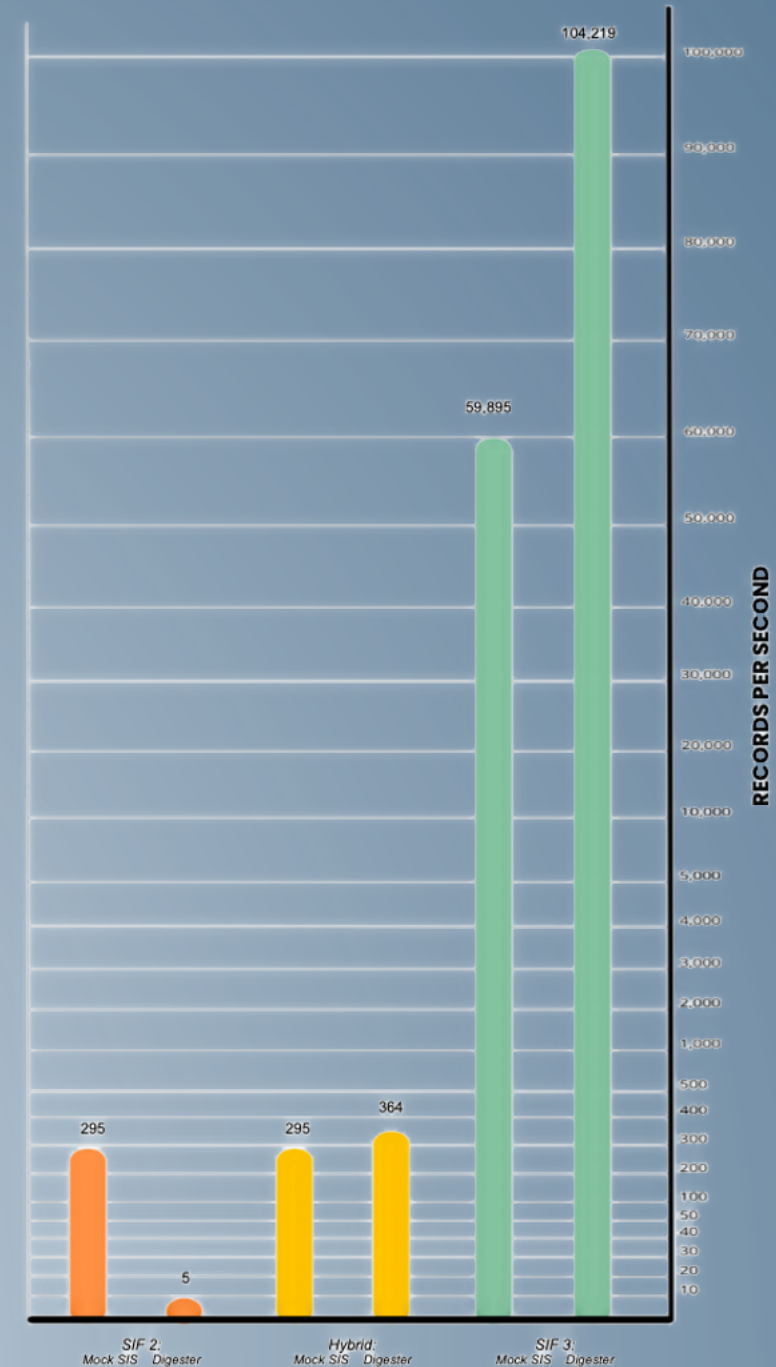
Scalability

Twenty-five years of lessons learned.

		Total Records	Records /Second
SIF 2 Infrastructure	Mock SIS	1,063,119	295
	Digester	19,697	5
Hybrid	Mock SIS	1,063,119	295
	Digester	1,311,408	364
SIF Infrastructure 3.4	Mock SIS	215,622,600	59,895
	Digester	375,188,400	104,219

<https://bit.ly/A4LEdDataTesting>

Note that these load test results were achieved using Cedar Labs technology. Real-world results may vary, depending on the capabilities of the technology implemented in your use case.





Questions

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CEDS Open Source Community Lead