



shaping tomorrow with you

The Linked Data Platform to Address, Describe and Interact with Things

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- “Simple approach for a read-write Linked Data architecture, based on HTTP access to web resources that describe their state using the RDF data model.”
- Candidate recommendation in June 2014
- Typical scenarios
 - <http://www.w3.org/TR/ldp-ucr/>

3. User Stories

- 3.1 Maintaining Social Contact Information
- 3.2 Keeping Track of Personal and Business Relationships
- 3.3 System and Software Development Tool Integration
- 3.4 Library Linked Data
- 3.5 Municipality Operational Monitoring
- 3.6 Healthcare
- 3.7 Metadata Enrichment in Broadcasting
- 3.8 Aggregation and Mashups of Infrastructure Data
- 3.9 Sharing Payload of RDF Data Among Low-End Devices
- 3.10 Sharing Binary Resources and Metadata
- 3.11 Data Catalogs
- 3.12 Constrained Devices and Networks
- 3.13 Services Supporting the Process of Science
- 3.14 Project Membership Information
- 3.15 Cloud Infrastructure Management

Our LDP journey

Linked
Data
Platform



■ APIs for Cloud management

■ Issues at that time

- XML vs. JSON, Consistency, Uniform interaction semantics, Lifecycle, History

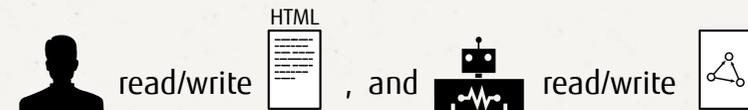
■ Solution: Dynamic Information Management (read/write Linked Data)

- REST + Linked Data

• Appreciated benefits

- Silo-breaking, API-of-APIs, etc ...

- Address, Description (links), Interactivity → **Generic Client**



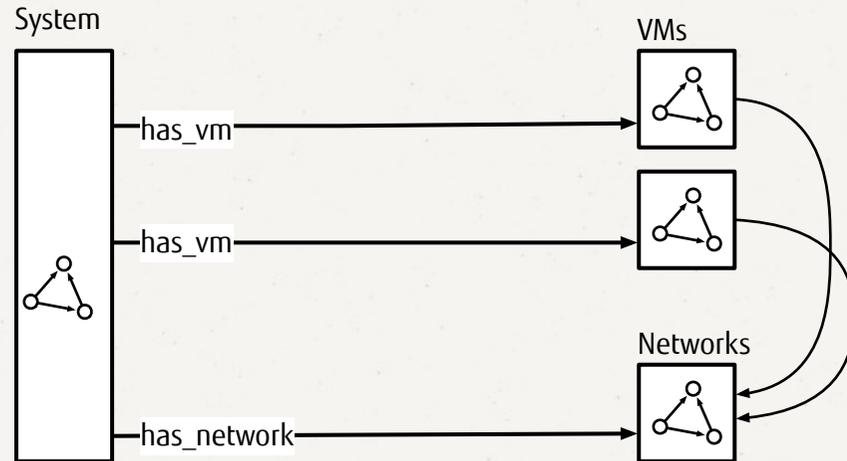
■ Linked Data Platform (LDP) standard at W3C

■ Now considering application to other scenarios

- e.g. sensing use-cases in healthcare

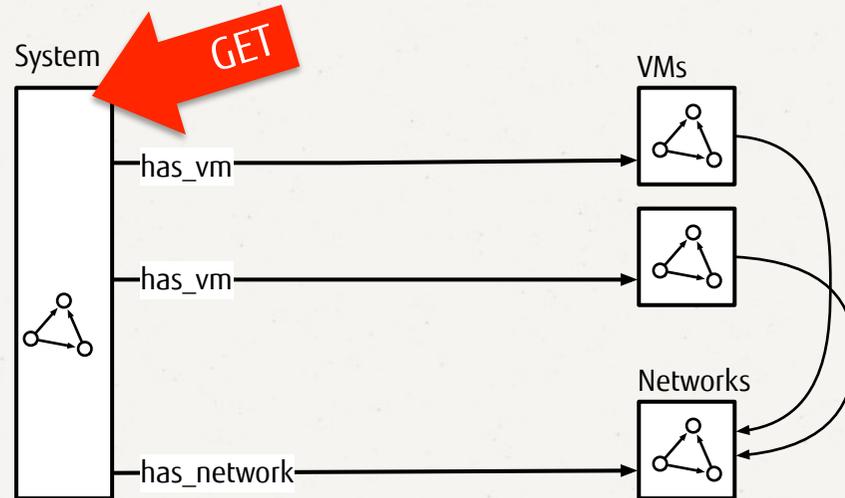
- Seeing some new challenges ...

Reading



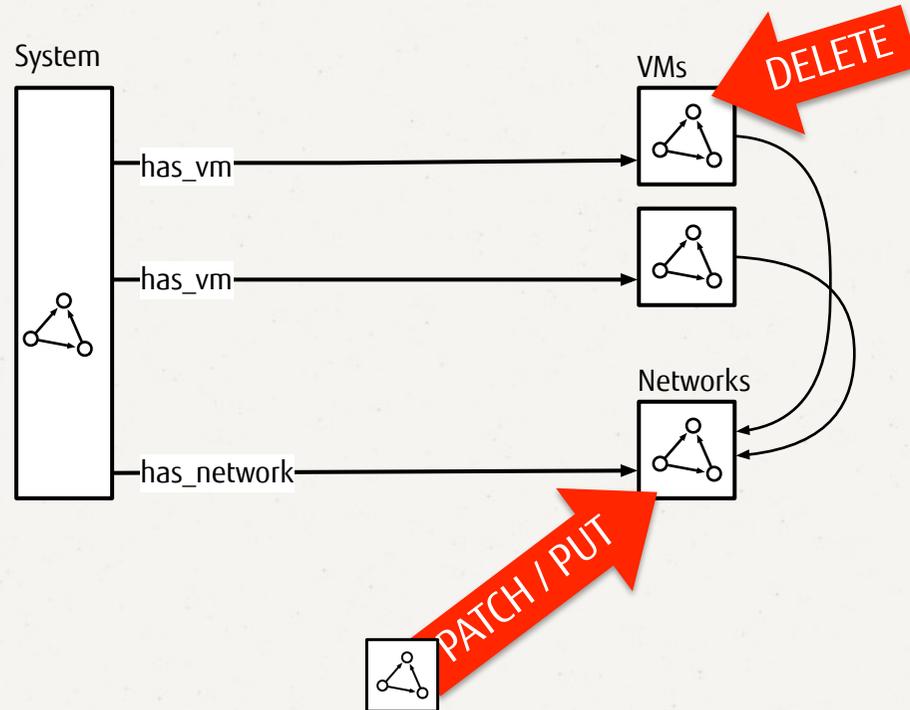
Addressable documents
i.e. projections of underlying resources/things

Reading



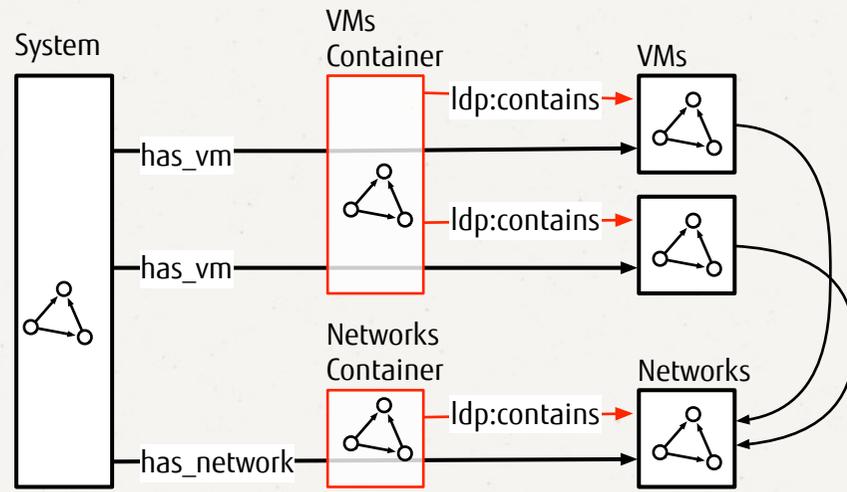
Uniform data processing model

Writing



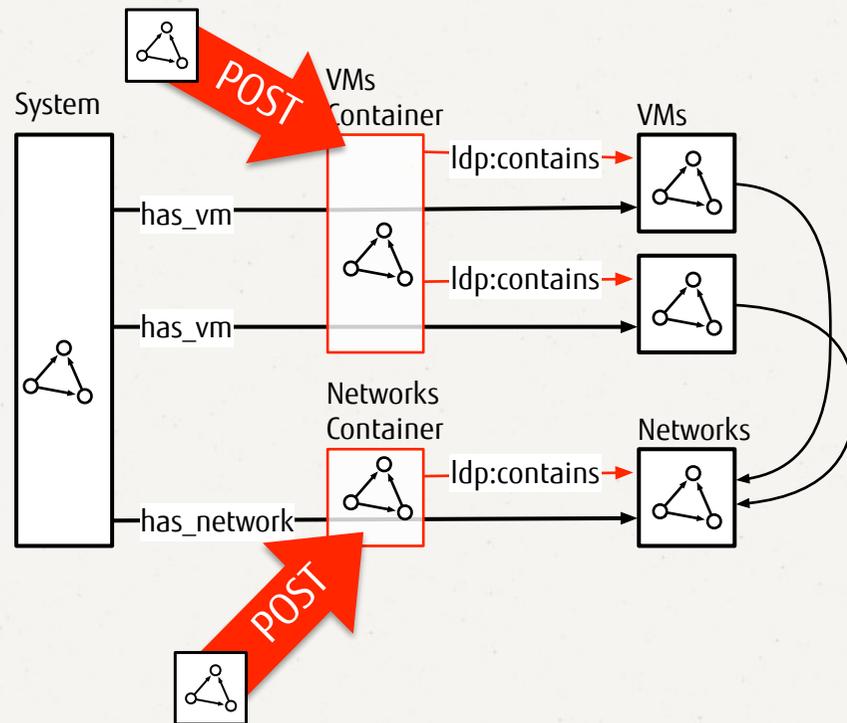
Updates and Deletes

Writing



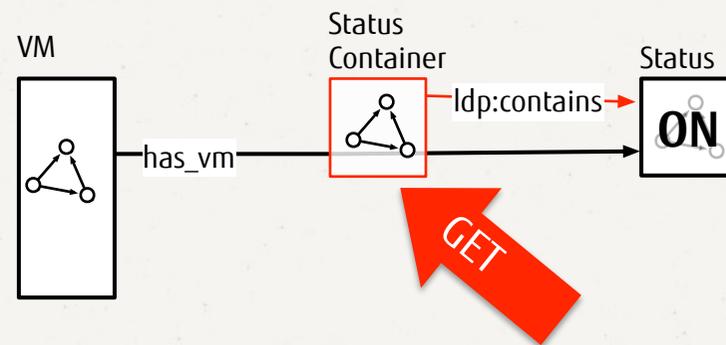
Containers

Writing



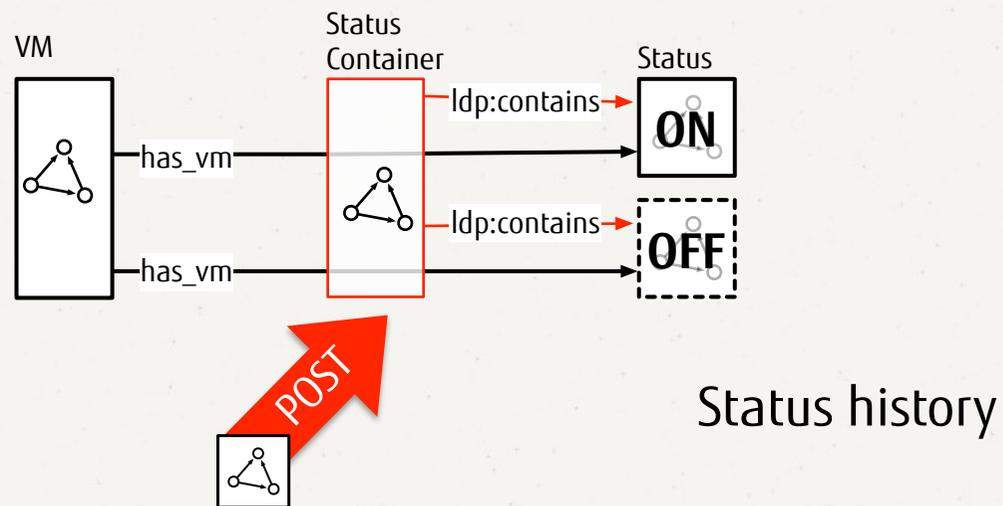
Creation

Writing



Introspection

Writing

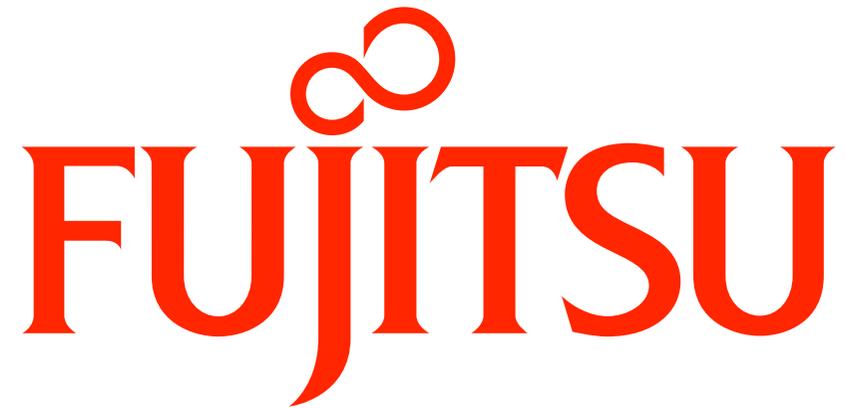


Benefits

- **Universality. Generic client**
 - Address
 - Description
 - linking
 - data processing model
 - Interaction
 - introspection
 - clear semantics
- **API of APIs**
 - Linking between APIs
- **SPARQL'ing the Cloud**

WoT ?

- LDP good
 - Container can be a receiver of streamed updates
 - Cloud Management of Sensors
 - i.e. "the Proxy approach"
 - discovery, pairing
 - pushing directions
- But
 - LDP.next
 - Form language ? RDF constraints ?
 - Pagination
 - Filtering large collections
 - ...
 - Also
 - Cloud -> Gateway push ?
 - Websockets, MQTT, etc ?
 - 'streaming' container as a specialization of container
 - associated to a special processing semantic
 - 'upgrade' to a Websocket ?
 - works for read, write, or read/write ...
 - Alternative encodings of RDF (CSV-LD, ...)



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