Verifiable Credentials HTTP API

Enabling automated Verifiable Credential Workflows
In this session, we will discuss:

- Problem Statement for VC HTTP API
- Origin of the VC HTTP API
- Implementations of VC HTTP API
- Use Cases and Current Challenges
- Next Steps
VC HTTP API Problem Statement

Provide an HTTP API to issue and verify data used in the Verifiable Credentials Ecosystem for use by servers and clients.

Examples of data include: Verifiable Credentials, Verifiable Presentations, Derived Credentials
Architecture Example using VC HTTP API

Issuer

Credential Data

Application Backend

Application Website

Browser

Wallet

Wallet Infrastructure

Organization Infrastructure

Verifier

VC HTTP API

CHAPI VP Request / Response
The Origin of the VC HTTP API
DHS Science & Technology Directorate

SILICON VALLEY INNOVATION PROGRAM

Interoperability Plugfest #1

VC/DID Multi-Platform/Multi-Vendor Interoperability Showcase/Demo

May 2020
VC HTTP API Test Suite

Test environment

Test objectives

Role of the Test suite
Tests core issuance and verification capabilities for a variety of different credential types against different DID methods and signature suites. “Backend-level testing”
<table>
<thead>
<tr>
<th>Verifiable Credential Features</th>
<th>Venna Issuer</th>
<th>Treanum8e</th>
<th>Secure Key</th>
<th>Spethly</th>
<th>Matti</th>
<th>Mesuro</th>
<th>Danube Tech</th>
<th>Mavenet</th>
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VaxCert Tests Went From 0 to 1,624 in 1 Week
Seems good, why the fuss?
VC HTTP API: Current Challenges

- Just a Open API Specification YAML file
- No Use Cases document
- No Specification document
- No documented data flows
- No agreement on document structure
- No Lead Editor
Proposal: Create a use cases and requirements document.
Proposal: Create between 1-3 ReSpec specifications in addition to the existing OAS file(s).
Proposal: Create documented data flow diagrams and place them in the Use Cases document.
Proposal: Restructure the document into 1 document with three sections (Issuer, Verifier, Holder) or 3 separate documents with an Overview document.
Proposal: Identify a Lead Editor and 1-2 supporting Editors for Issuer, Verifier, and "Holder" APIs.