

Architectural Reference Working Group

Meeting Minutes

17 June 2020

Attendees: Adam Montville, David Lemire, Michael Stair, Russ Warren, Forrest Hare, Stephen Wood, Jason Keirstead, Michael Herring, Jory Burson, Joe Brule, Duncan Sparrell, David Kemp

Agenda: Discuss the current architecture drawing from Jason and Adam (covers SCAP mapped to OCA); Discuss OpenC2 and OpenDXL ontology and current status on alignment

Summary of Discussion:

Topic 1: Architecture drawing discussion

Adam reviewed the SACM (IETF) model and how SCAP 2.0 aligned with it. The drawing reflects collecting state from resources, evaluating them against a known good or expected result. SCAP focuses on providing a posture evaluation/assessment from the information collected. OCA has a larger focus (taking actions) so SCAP would be a part of the overall OCA architecture.

Jason discussed his overlay of the OCA projects on top of Adam's diagram. The SD Fabric represents the federation of security data (query/response). The Integration service represents the Open DXL ontology. Discussion on how these two services should be a single component with these two interfaces. Jason will follow up with an updated diagram to re-represent these services. Jason added the Positive Attribute Repository to capture asset information. Discussion also covered the boxes (some services, some products) and the arrows and identified the inconsistency and need for similar entities be represented vs mixed.

Discussion on our goals for the architecture were to interoperate with SACM and IACD so the architecture picture for OCA should align with theirs. Jason was going to overlap the IACD architecture on our current drawing so as to capture this goal. There is a desire for our drawing to reflect, via the arrows, all the interfaces between components and this would define our work efforts for Open DXL ontology, STIX, and SCAP and OpenC2. The desire is to cover all the arrows with current existing work as well as define new work items to cover the rest.

Topic 2: OpenC2 and Open DXL ontology

David Lemire prepared a set of charts to cover the scope of OpenC2 and take a look at how OpenDXL ontology currently positions with it. OpenC2 has 3 focus areas: a language, an actuator profile and implementations. OpenC2 is focused on acting/response. This is positioned as the acting phase of IACD (OODA loop). OpenC2 used JSON for its definitions. OpenDXL ontology is a messaging fabric containing actions and notifications. Open DXL ontology expects to support other open standards and there has been an OpenC2 messaging over Open DXL prototype built.

OpenC2 does have an approved schema shown in the form of property tables in the document; they haven't published it in the form of a separate artifact under OASIS. But the schema does exist at <https://github.com/oasis-tcs/openc2-usecases/blob/master/Cybercom->

Plugfest/Schemas/Combined/IDL/oc2ls-v1.0.1_gen.jidl (and in the machine-readable JADN form used to generate the published property tables).

For version 1.1 OpenC2 anticipates both being able to query devices for their supported schemas and providing them in the form of OASIS artifacts.

The discussion was that OpenC2 and OpenDXL ontology overlap and we should request an effort from our TSC to

- Ensure that our objective is to align OpenDXL ontology with OpenC2 (to clearly state this as a goal and ensure we have actions in place to keep the alignment current)
- Examine the action defined by OpenDXL ontology and OpenC2, identify the overlaps or gaps (David pointed out two actions that seem to be the same that could be aligned: Deny vs Block/Blacklist and Contain vs Quarantine).
- Ensure the schema being used for OpenDXL ontology and OpenC2 are current. Discussion surfaced 2 needs
 - OpenC2 currently does not have an approved schema; this is being worked on
 - OpenDXL ontology has an older version of the schema.

Our actions identified:

- Meet next week to discuss and review the modified architecture drawing. JK took the action to modify the drawing and make available by Wednesday this week.
- An action was identified to ask the TSC to look into the OpenC2/ OpenDXL ontology areas identified above and come back with recommendations