

# Information Model Update

SACM WG Virtual Interim Meeting

10/13/2016

# Agenda

- Status
- Open issues
- Next steps

# Status

- Made a call for WG review and feedback<sup>1</sup>. Issues discussed today are from on-list feedback<sup>2</sup>.
- Jim posted an HTML view of the IEs<sup>3</sup>
- Henk and Jim are looking into a way we can auto-generate the IE section from a more user-friendly format
- DM-001 was rewritten and is available in draft-ietf-sacm-requirements-14<sup>4</sup>

1. <https://www.ietf.org/proceedings/interim-2016-sacm-05/minutes/minutes-interim-2016-sacm-05>

2. <https://https://www.ietf.org/mail-archive/web/sacm/current/msg04445.html>

3. <https://sacmwg.github.io/draft-ietf-sacm-information-model/im.html>

4. <https://datatracker.ietf.org/doc/draft-ietf-sacm-requirements/>

# Issue #1: difference between subjects and attributes<sup>1</sup>

- Attributes<sup>2</sup>: ...attributes are "atomic" IEs and an equivalent to attribute-value-pairs. Attributes can be components of subjects.
- Subject<sup>2</sup>: a composite IE. Like attributes, subjects have a name and are composed of attributes and/or other subjects. Every IE that is part of a subject can have a quantity associated with it...The content IE of a subject can be an unordered or an ordered list.
- Are attributes and subjects really the same thing just one represents simple data and the other represents structured data?

1. <https://https://www.ietf.org/mail-archive/web/sacm/current/msg04445.html>

2. <https://github.com/sacmwg/draft-ietf-sacm-terminology/blob/master/draft-ietf-sacm-terminology.md>

# Issue #2: circular subjects

- There is a concern that the circular nesting of subjects could be problematic
- The max-depth IE can potentially guard against infinitely traversing the circular nesting of subjects
- Examples where circular subjects could be useful include:
  - Network paths
  - Symbolic links
  - Etc.

# Issue #3: attribute and subject names

- Are the names unique based on the attribute or subject? Or, are they unique to the instance of that attribute or subject?
- The names are unique based on the attribute or subject with respect to the IM IEs
- DM implementers are free to name the elements that represent attributes and subjects however they want as long as they can provide a mapping from the DM back to IM

# Issue #4: metadata information elements

- Are we explicitly calling out metadata IEs as doing so may result in a number of redundant metadata and data IEs?
- Also, why is there a metadata field in some of the IM IEs?
- What about IEs that are always metadata? How are they identified? This is especially important if only implementing a DM for a subset of the IM (e.g. SWID)?

# Issue #5: categories

- Do we need categories? Are categories just subjects?
  - Categories have an implicit IS-A relationship
  - Subjects have an implicit HAS-A relationship
- Categories represent a type-choice among different IEs
  - Example: a `networkAddress` can be either a `macAddress`, `ipv4Address`, `ipv6Address`, or `typedNetworkAddress`
  - We may want to introduce a new IM structured datatype
    - `category(macAddress|ipv4Address|ipv6Address|typedNetworkAddress)`
- Do we expect categories to be represented in a DM or is it invisible and one of the choices will be included in the DM during serialization?

# Issue #6: assorted data model questions

- There are many existing collection mechanisms and DMs
  - SNMP, NETCONF, WMI, PowerShell, Apple MDM & Config. Profiles, OVAL, etc.
- Do we need new DMs? Or, do we just need to describe how to leverage these existing DMs?
- Do we need a single unifying DM? Or, do we simply provide a framework for communicating information expressed in any available DM?

# Other minor issues and feedback (1)

- Does Section 7 Information Model Elements define attributes, subjects, or both?
- Are SACM Statements and Content Elements IEs?
- Where are the relationships between IEs and what they mean defined?

# Other minor issues and feedback (2)

- Figure 1 contains an attribute and subject
  - Edit it such that it states which is the attribute and which is the subject
  - Improve preceding text to better explain what an attribute and subject are
- Need to separate the IEs so there is a distinction between IEs used for SACM Component communication and IEs used for capturing endpoint information

# Next steps

- Resolve questions on-list and integrate feedback into the next revision of the IM
- Review information from MILE (e.g. indicators) to make sure we have it covered in our IM. Any volunteers?
- Send out a proposal to the list for dealing with the large number of IEs