Software Message and Attributes for PA-TNC

draft-coffin-sacm-nea-swid-patnc-02

https://datatracker.ietf.org/doc/draft-coffin-sacm-nea-swid-patnc/

SACM Virtual Interim Meeting – IETF 95

October 13, 2016

Status

- Delivered version -02 on Sept 12
- Recently updated GitHub repository
  - https://github.com/sacmwg/software-identification
  - Currently 7 tracked issues

Issue #7: Nature of reported software

- Mailing list discussion in August identified 3 classes of endpoint software
  - Installed
  - Running
  - Installation packages
- All three classes are of interest to SACM
  - Question is which should be reported in SW M&A
- Currently (-02) SW M&A reports only installed software

Issue #2 – Include Software ID in all messages

- Currently, Software ID is not included if the full record is delivered
  - Software ID is derived from the full record
  - Doing so requires recipient to be able to parse full record
- Proposal to include Software ID as a separate field for each reported software (even if full record is delivered)
  - Redundant in company of a full record, but recipient no longer needs to parse the record.

Issue #3 – Include Installation Location in all messages

- Installation location might or might not appear in a full record
  - Even if present, message recipient needs to be able to parse to discover
- Statement made that location (+ Software Identifier) are necessary for many use cases
  - E.g., patching – Software ID = “whether to patch”; location = “where to patch”
- Proposal is to have a designated Installation Location field for each reported piece of software

Issue #6: MTI Data Models

- Currently SW M&A identifies 2 data models
  - ISO SWID 2015 XML
  - ISO SWID 2009 XML
  - Other data models can be added
- Should there be one or more MTI data models?
- What does MTI mean here?
  - We cannot necessarily control how data sources will report
  - Only technical dependency is that endpoints need to be able to derive a Software ID from the full record (expressed in a recognized data model)

Issue #4: User-defined data models

- The current design does not support identification of data models except through references defined in an IANA table
- Proposal: add way to support vendor/user-defined data models

- One proposal: currently, Data Model Type is 8 bits
  - Most Significant Bit → 0 = IANA table, 1 = non-standardized
  - 2nd Most Significant Bit → 0 = User-defined, 1 = Vendor defined
  - Vendor, and user can each define 64 data models; IANA can define 128
  - Agreement on meaning of non-standardized data models left to implementers

Issue #1: Identification of data sources
Issue #5: Servers MUST accept all data

- Issue #1
  - In IETF 94 there were many in favor of adding a field to track the source of reported information

- Issue #5
  - SW M&A servers have no requirement to be able to parse delivered records
  - Proposal: explicitly state that SW M&A servers MUST accept any data model received without error

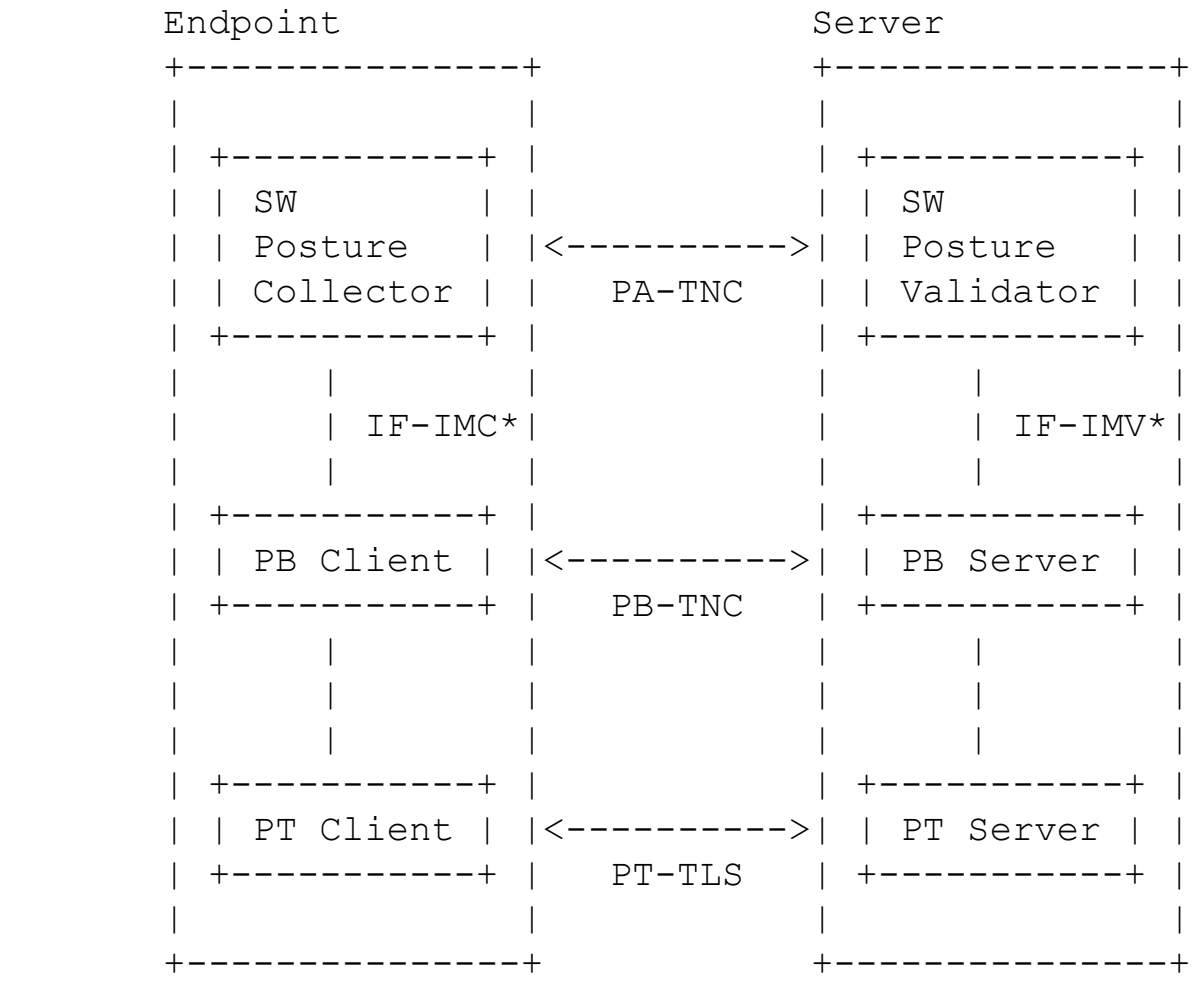
Next Steps

- Any other issues?

- -03 by 10/31 (pending consensus on open issues)

BACKUP

NEA Architecture

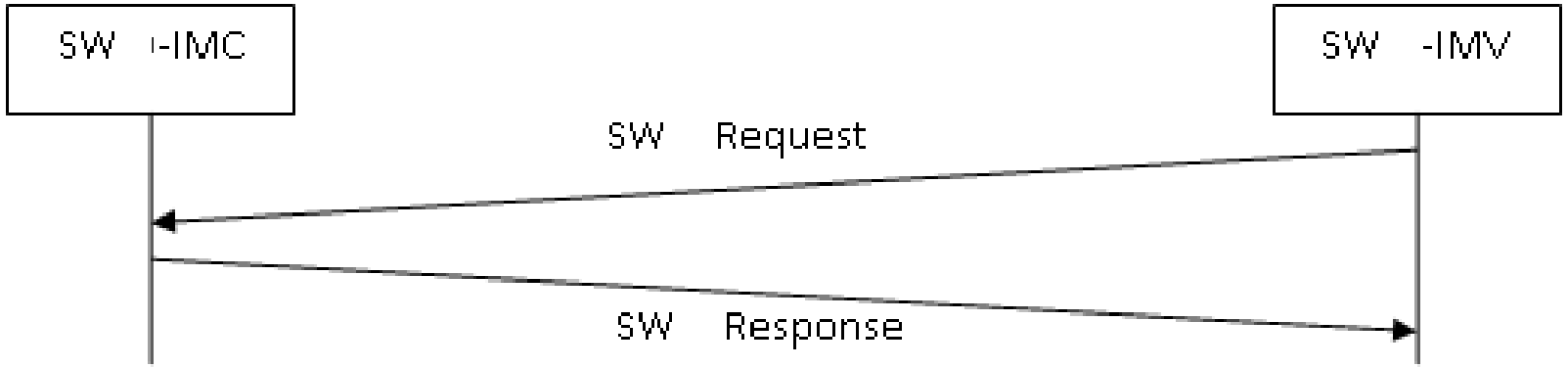


* Not currently part of NEA, but part of the compatible TNC architecture

Change Tracking in SW M&A

- Posture Collectors MUST monitor their software information sources for changes
  - Can be real-time or periodic monitoring
- Each change is assigned a unique, sequential “event number”
- All event numbers have an associated “event epoch”
- Within an epoch, event numbers fully order all change events
- All inventories are reported along with the event number and epoch of the last recorded event at time of inventory
  - Given this and a list of subsequent events, on can track all changes just using deltas
  - Epoch changes represent discontinuities – no way to track across

SW M&A Message Flows: Demand-Driven (Pull)



- 4 types of Response attributes depending on Request parameters
  - SW Inventory – Complete or targeted inventory expressed in data model
  - SW Identifier Inventory – Complete or targeted inventory using software IDs
  - SW Events – Changes since a given event number using in data model
  - SW Identifier Events – Changes since a event number using software IDs

SW M&A Message Flows: Event-Driven (Push)