iSCSI and SAM-4

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iSCSI

- RFC 3720, updated by RFC 3980, RFC 4850, RFC 5048
- SCSI "Transport Protocol" running on top of TCP, per SCSI Architecture concepts
  - So really an "application protocol" for TCP
- Based on the SCSI Architecture Model-2 (SAM-2) reference

SAM

- SCSI Architecture has evolved over the years
  - RFC 3720 was published 5 years ago (in April 2004), and the WG finished with its work even before that
- SAM-4 is the latest published SCSI Architecture Model, and SAM-5 is already work in progress

iSCSI for SAM-4

- As O/S storage I/O stacks and storage system firmware moves up to be SAM-4-compliant, iSCSI needs to keep up

- Three areas of focus
  - SCSI Task Management Function enhancements – Query Task/Task Set/event functions
  - Validating, Mapping and Conforming to SAM-4 UML class models
    - May also feed enhancements/updates into ongoing SAM-5 work
  - Mapping the iSCSI terminology to the latest SAM-4 lexicon to provide guidance to the implementers
    - E.g. Initiator Task Tag → SAM-5 command identifier

Update Options

- iSCSI-related RFC Consolidation is a potential (and independent) work item for WG charter

- Depending on where we land on that item, there are two alternative tracks for SAM-4 compliance updates
  A. If RFC Consolidation is not in the charter: RFC 3720 will be SAM-2-focused and the new SAM-[2,3,4,5] extensions and compatibility modes will be in a separate draft
  B. If RFC Consolidation ends up in the charter: Integrate RFC3720 with its other updates, *and* the new SAM-4 compliance updates
     - Will be a single document based on SAM-4 (or even SAM-5, work in progress) with "compatibility modes" for SAM-[2, 3, 4 5] (text indicating how a backward compatible version should operate – wherever appropriate)

Recommendations

- Sanction the proposed STORM WG
- Add “iSCSI mapping to SAM-4” to the STORM WG charter so we can start tackling this in right earnest!
- If RFC Consolidation is in the Charter, add SAM-x compliance text/modes to the new single consolidated draft