

DMTF CIM-RS Incubator Charter

Dated 2010-04-21

The information provided below is subject to change and reflects the current knowledge of the Incubator.

Management Problem(s) and Environment

A number of companies and organizations desire to use RESTful web services for systems management. Since this seems to be a rather broad trend in the industry, it is important that a way is provided for CIM instrumented resources to participate in this trend.

Often, these approaches look at JSON as a payload encoding for the RESTful web services, but XML based payloads are also used with RESTful web services.

Incubator Charter

The primary goal of the CIM-RS Incubator is to produce informational specifications that are intended to provide the basis for producing standard RESTful protocols for making requests and replies between CIM infrastructure components including CIM servers, CIM clients, and CIM listeners.

There are three primary areas of development:

- 1) Definition of protocol independent RESTful representations and identifiers for resources represented by CIM elements. This includes the definition of identifiers (URIs) for referencing CIM instances, classes, indications, and for invoking operations. It also includes specifications for acceptable standard representations.
- 2) Definition of data formats for exchange of RESTful resource representations. This may include specifications for the use of CIM-XML, WS-CIM, and JSON encodings.
- 3) Definition of a standard interface for communication between CIM Infrastructure components. This includes a mapping of Generic Operations to RESTFUL web services, (HTTP/HTTPS based.)

A second goal is to develop insight into the use of RESTful web services for systems management in the context of CIM, including to look at using RESTful approaches that are underway in other DMTF groups.

If after these goals are met and if the DMTF Board deems it necessary, a third goal will be to facilitate an industry learning period with the goal of gaining confidence in the directions set by these specifications and white paper.

Alliance Partnerships

- ECMA defines the ECMAScript standard (ECMA-262), which defines JSON (one payload encoding that is commonly used with RESTful services). It is not expected that changes to JSON are needed, though.
- SNIA should be involved early on.

Reliance/Coordination with other WG Models

Any requirements on underlying DMTF standards will be coordinated with the WGs owning these standards. An example for that would be WS-CIM owned by the WS-Management WG.

Results of the REST related work of the DMTF CMDBf WG and of the DMTF Cloud Incubator will be looked at, and coordination with these bodies will happen as needed.

Prior Work

- REST work of DMTF CMDBf WG.
- REST work of DMTF Cloud Incubator.
- DSP0004, DSP0223

Current Work – Overview, Deliverables and Timeline

Deliverables:

- 1) Informational specification defining protocol independent RESTful representation of CIM elements.
- 2) Informational specification defining a protocol specific RESTful representation of CIM elements, using the representations determined to be supported.
- 3) Informational specification defining mapping of Generic operations to RESTful web services.
- 4) White paper describing the relationship of RESTful web services to CIM based infrastructures.
- 5) Recommendations to the DMTF Process Committee for disposition.

Timeline:

- 9/2010 for public release of Work in Progress versions of the deliverables 1) to 4).
- 12/2010 for public release of the final versions of deliverables 1) to 4).
- 12/2010 for deliverable 5).

Link to Subteam Charter(s)

None

DMTF Contacts

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To join the DMTF, see <http://www.dmtf.org/join/index.php>.

To join the CIM-RS Incubator, see <http://www.dmtf.org/apps/org/workgroup/cim-rs/join.php>.