Conformance Clauses

- ✅ review Chet and Paul's comments on conformance clauses, create an issue and propose a resolution

On Jun 7, I proposed the following to Chet:

A. Add conformance section at the end of the overview section

Add a conformance section based on guidance in http://docs.oasis-open.org/templates/TCHandbook/ConformanceGuidelines.html, at least in the core overview section that defines what we mean by conformance.

I see that is already in section 4. OSLC Core 3.0 Capabilities (http://docs.oasis-open.org/oslc-core/oslc-core/v3.0/csprd03/part1-overview/oslc-core-v3.0-csprd03-part1-overview.html#oslc-core-3.0-capabilities). But it could be called out in a separate section that applies to all the parts of the multi-part specification and be written more precisely.

Conformance section and clauses

1. Goes at the end, and summarizes conformance clauses as identified in the normative sections
2. implementation types must be listed
3. clause must be identified with a number
4. specify conformance target: e.g., OSLC server...
5. reference to normative content: either tags or section/subsection
6. related conformance clauses: functional roles, aggregate, levels, combination of roles, alternative clauses

Chet agreed, and provided a link to how the AMQP TC did that their multi-part spec -> http://docs.oasis-open.org/amqp/core/v1.0/os/amqp-core-overview-v1.0-os.html#section-conformance

AMQP Conformance Clauses

This document (an OASIS Standard) provide a Conformance section right before Acknowledgements towards the end of the document. Conformance simply summarizes the contents of each part with conformance focused on the relationship of that part in the whole specification, and not repeating all the detailed normative statements in the parts. There are no Conformance sections in the other multi-part specifications.

The other specifications in the multi-part specification do not have conformance sections, nor to they mark any paragraphs to indicate they are requirements that would be included in any conformance section, nor are they referenced in the overview document conformance section.

So AMQP Conformance section only provides a high-level summary of the conformance.

MQTT Conformance Clauses

MQTT has a similar section 7 Conformance that says that MUST level requirement must be supported as described in the listed chapters. Then Appendix provides a non-normative list of Mandatory normative statements that appears to be derived by copying paragraphs tagged throughout the document with things like: [MQTT-1.5.4-1]. For example:

Normative Statement Number	Normative Statement
[MQTT-1.5.4-1]	The character data in a UTF-8 Encoded String MUST be well-formed UTF-8 as defined by the Unicode specification [Unicode] and restated in RFC 3629 [RFC3629]. In particular, the character data MUST NOT include encodings of code points between U+D800 and U+DFFF.
[MQTT-1.5.4-2]	A UTF-8 Encoded String MUST NOT include an encoding of the null character U+0000.

The conformance clause summarized in the table appears to be the highlighted text preceding the tag.

The character data in a UTF-8 Encoded String MUST be well-formed UTF-8 as defined by the Unicode specification [Unicode] and restated in RFC 3629 [RFC3629]. In particular, the character data MUST NOT include encodings of code points between U+D800 and U+DFFF [MQTT-1.5.4-1]. If the Client or Server receives an MQTT Control Packet containing ill-formed UTF-8 it is a Malformed Packet. Refer to section 4.13 for information about handling errors.

A UTF-8 Encoded String MUST NOT include an encoding of the null character U+0000. [MQTT-1.5.4-2]. If a receiver (Server or Client) receives an MQTT Control Packet containing U+0000 it is a Malformed Packet. Refer to section 4.13 for information about handling errors.

MQTT therefore provides a high-level summary of conformance and also marks each normative clause and provides a table in a non-normative appendix listing all the mandatory normative statements (which would not necessarily correspond to the conformance clauses).

B. Mark each conformance clause in the normative sections

We can add ... (or something similar) around any text we want to specifically call out as a conformance clause. ReSpec currently marks these using:
<section id="discOptions"><h2 class="normalText">
...clause text...
</h2></section>
The section elements provide the numbering and anchor, the heading class or normalText seems to indicate this is a conformance clause.

Some of the core specifications already do this, some don't:

- **Attachments**: has an Implementation Conformance section and each requirement or possible conformance clause is marked in normalText headers.
- **Dialogs**: has an Implementation Conformance section and each requirement is marked in normalText headers.
- **Discovery**: marks the requirements in normalText headers, but doesn't organize them in a specific Implementation Conformance section
- **Core**: marks the requirements in normalText headers, but doesn't organize them in a specific Implementation Conformance section
- **Resource Preview**: has an Implementation Conformance section and each requirement or possible conformance clause

is marked in normalText headers.

- **Resource Shapes**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **Core Vocabulary**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **Query**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **TRS**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **Config Management**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **Versioned Resources**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **Configuration Specification**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.
- **RDF Vocabulary**: has no conformance section and doesn't mark any conformance clauses or rules. Only has normative sections and MUST, SHOULD, MAY requirements.

None of the vocabulary documents include any conformance clauses.

None of the domain specifications use the normalText headings to mark conformance clauses. But they do all have a base requirements section that could be used for Conformance.

This will take significant effort and additional review because we suspect not everyone will have the same idea what constitutes something that should be a conformance clause, and for what purpose: clarity in the document, highlighting implementation constraints, guiding automated testing, establishing specific test cases, etc.

Chet responded that It would be great if this could be done, but I understand limited resources so you'll be fine with just #1 above.

C. Generate a non-normative appendix that lists all conformance clauses

3. We can enhance ReSpec to collect these clauses into a non-normative appendix that provides the clause number, and a link from the table to the clause in the body of the text. It looks like MQTT did something like that to automate the creation of Appendix B.

Chet agreed this would be a lot of work and that #1 above would be sufficient. But note: **For CSs, they'll need to add conformance clause sections if they advance further to Candidate OASIS Standard.**

For changes to Core, we can treat the above as a public review comment from the TAB and apply the changes after the review.

Proposed actions to address conformance

Use the AMQP spec as a guide/model for OSLC.

OSLC Core multi-part specifications:

- ◯ **Core Overview**: Add a Conformance section to Core Overview summarizing the overall conformance for core capabilities in each multi-part specification, similar to AMQP Conformance Clauses. Place this before Acknowledgements
- ◯ Add a conformance clause to Core Conformance indicating servers MUST support the vocabulary
- ◯ **Attachments, Dialogs, Resource Preview**: Rename "Implementation Conformance" sections in to "Conformance"
- ◯ Discovery
- ◯ Resource Shapes
- ◯ Core Vocabulary

Other separate core documents:

Perhaps we can reorganize these documents to separate out the non-normative explanatory text and examples from the Conformance section like Core did with Attachments, Dialogs and Resource Preview.

Optionally we can mark the requirements paragraphs with sections and normalText headers.

- [ ] TRS: Needs to add a Conformance section
- [ ] Query: Needs to add a Conformance section

Configuration Management multi-part specifications

- [ ] **Configuration Management**: Add a Conformance section that summarizes the overall conformance of the configuration management capabilities in each multi-part specification
- [ ] Add a conformance clause indicating servers MUST support the vocabulary
- [ ] **Versioned Resources**
- [ ] **Configuration Specification**
- [ ] **RDF Vocabulary**:

OSLC Domain Specifications (all)

CM, RM and AM have been updated:

- [x] Move the Base Requirements Compliance subsection to before the first appendix
- [x] Add a column to the table to add a conformance clause number.
- [x] Add a conformance clause indicating servers MUST support the vocabulary and MUST support the mandatory requirements in the previous sections