

OCF 2.0 – oneM2M Translation – Bridging TG CR 2561

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***** **Change #1** *****

3 Normative references

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<http://www.zigbee.org/zigbee-for-developers/zigbee-3-0/>

Zigbee 075123, *Zigbee Cluster Library Specification*, January 2016
<http://www.zigbee.org/zigbee-for-developers/zigbee-3-0/>

OCF Core Specification, *Open Connectivity Foundation Core Specification*, Version 1.3
https://openconnectivity.org/specs/OCF_Core_Specification_v1.3.0.pdf

OCF Resource Type Specification, *Open Connectivity Foundation Security Specification*, Version 1.3
https://openconnectivity.org/specs/OCF_Resource_Type_Specification_v1.3.0.pdf

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https://openconnectivity.org/specs/OCF_Security_Specification_v1.3.0.pdf

IETF RFC 4122, *A Universally Unique IDentifier (UUID) URN Namespace*, July 2005
<https://www.rfc-editor.org/info/rfc4122>

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***** **Change #2** *****

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

3.1.1 Symmetric, Asymmetric Bridging

In symmetric bridging, a bridge device exposes OCF server(s) to another ecosystem and exposes other ecosystem's server(s) to OCF.

In asymmetric bridging, a bridge device exposes OCF server(s) to another ecosystem or exposes another ecosystem's server(s) to OCF, but not both.

3.1.14 Asymmetric Server Bridge

An asymmetric server bridge exposes another ecosystem devices into the OCF ecosystem as Virtual OCF Servers.

How this is handled in each ecosystem is specified on a per ecosystem basis in the current specification.

3.1.15 Asymmetric Client Bridge

An asymmetric client bridge exposes another ecosystem clients into the OCF ecosystem as Virtual OCF Clients. This is equivalent to exposing OCF servers into the other ecosystem.

How this is handled in each ecosystem is specified on a per ecosystem basis in the current specification.

3.1.16 oneM2M Application

In an OCF-oneM2M asymmetric bridge environment, the oneM2M application represents the oneM2M control point (i.e. client) being mapped to a virtual OCF client.

***** **Change #3** *****

7 oneM2M Translation

7.1 Operational Scenarios

The purpose of the OCF-oneM2M Bridge is to enable access by the oneM2M ecosystem to select OCF Servers. This is accomplished by creating Virtual OCF Clients to represent the necessary access levels to the OCF servers that are exposed to the oneM2M ecosystem. The OCF-oneM2M bridge then exposes native oneM2M entities that map to those Virtual OCF Clients.

The OCF-oneM2M Bridge is an asymmetric client bridge.

The mapping between the OCF data models and the oneM2M data models is specified in the OCF-oneM2M Data Model Mapping Specification. Programmatic (i.e. On-the-fly) data model translation is not supported.

Figure 1 shows the use case for a oneM2M light switch and an OCF light bulb.

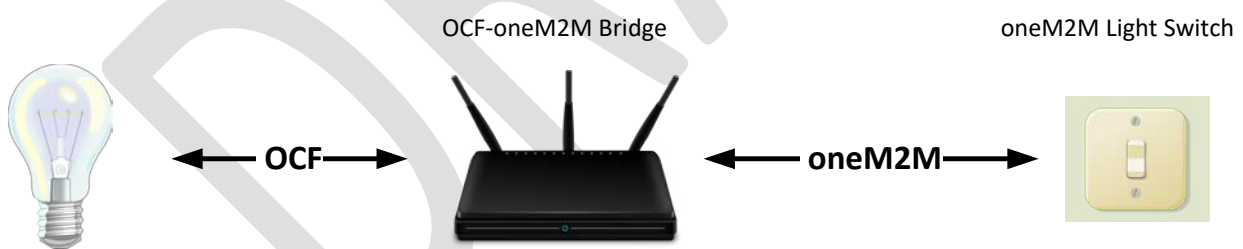


Figure 1 oneM2M Light Switch and OCF Light Bulb

Figure 2 shows an overview of an OCF-oneM2M Bridge device and the topology between the OCF and oneM2M ecosystems.

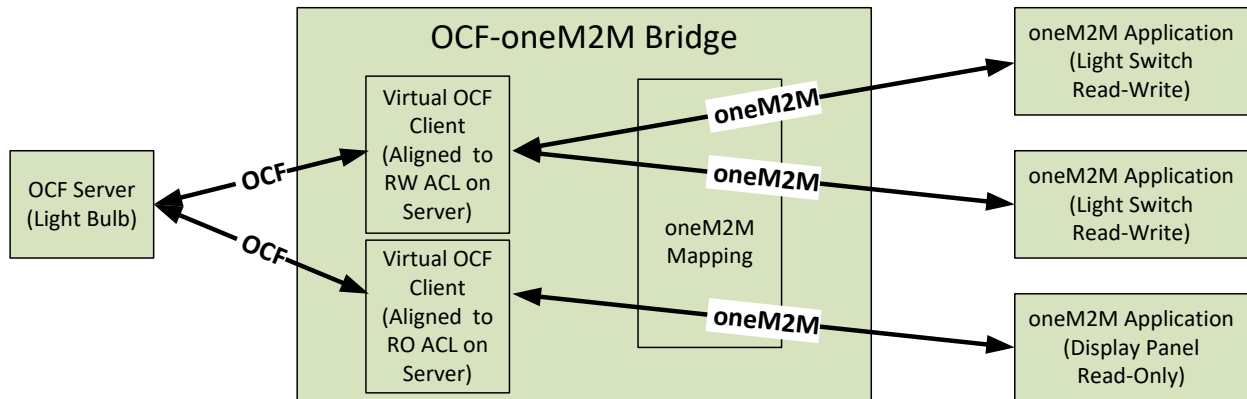


Figure 2 OCF-oneM2M Bridging Topology

7.2 Enabling oneM2M Application access to OCF Servers

Each level of oneM2M application access for OCF servers is modelled as a Virtual OCF Client. In this way, oneM2M application access can be appropriately restricted and enforced by the OCF security capabilities.

7.3 Enabling OCF Client access to oneM2M Devices

This capability is not supported.

7.4 On-the-fly Translation

All devices and resources have been aligned between the OCF and oneM2M ecosystems, so on-the-fly translation is not required.

If new OCF devices are not reflected into the oneM2M ecosystem by updates to the oneM2M specifications, the bridge will not provide a successful translation of those devices.

***** **End of Changes** *****