oneM2M Resources for IoT Developers

Andreas Kraft, Deutsche Telekom

oneM2M standards are relevant to many audiences in the IoT ecosystem. The purpose of this document is to describe the various resources that users can access. The standards are accessible through <u>sets of documents organized by Release</u>. At the time of writing, oneM2M is in the process of formalizing Release 4. The Release 5 documents are works in progress and show oneM2M's continuous standardization roadmap in action. A good place to start is the <u>Technical Specification documents</u> TS-0001:Functional Architecture and TS-0004:Service Layer Core Protocol.

The oneM2M web site caters to different interests through three groups of information:

- Here is the oneM2M introduction for business executives and product managers
- This is the starting point for organizations wishing to develop oneM2M systems
- And here is <u>the starting point for organizations that wish to deploy IoT systems based on oneM2M</u> without necessarily building the underlying components

Support for oneM2M Developers

oneM2M maintains a set of resources where member organizations can share information. To align with oneM2M's governing rules, contributors must be registered members of oneM2M. Anybody, including non-members, can follow the active work in the open.

- <u>oneM2M WiKi</u> this site lists community-building, developer, and teaching materials about oneM2M. The "Issues/Questions" section is a useful time-saver.
- <u>oneM2M GitLab</u> this is a site where developers can find oneM2M schema definitions and other artefacts that accompany the specifications.

There exists a second set of resources where third parties can contribute without having to belong to the membership ranks of one of oneM2M's regional standards development partners. These are as follows:

- <u>oneM2M Tutorials on GitHub</u> this is an educational resources that houses a set of tutorials to help developers gain hands-on experience with oneM2M. These tutorials are routinely used at oneM2M hackathon events. As an open forum, all developers, including those that do not belong to oneM2M member organizations, can post information and questions.
- oneM2M on StackOverflow this is a question-and-answer site for software developers where developers can exchange questions, answers, and discussions on specific technical details
- oneM2M on Hackster.io this is a hardware-oriented site containing descriptions of multiple oneM2M device and application implementations. About twenty of the most recent contributions come from a 2021 international hackathon event involving students from six countries around the world.

Future Directions

A new set of developer resources is being finalized as part of oneM2M's Testing and Developer Ecosystem Working Group activities. During 2022, there will be updates to the developer resources.

About oneM2M

oneM2M is the global standards initiative that covers requirements, architecture, API specifications, security solutions and interoperability for Machine-to-Machine and IoT technologies. oneM2M was formed in 2012 and consists of eight of the world's preeminent standards development organizations: ARIB (Japan), ATIS (U.S.), CCSA (China), ETSI (Europe), TIA (U.S.), TSDSI (India), TTA (Korea), and TTC (Japan), together with industry fora and consortia (GlobalPlatform) and over 200 member organizations. oneM2M specifications provide a framework to support applications and services such as the smart grid, connected car, home automation, public safety, and health. oneM2M actively encourages industry associations and forums with specific application requirements to participate in oneM2M, in order to ensure that the solutions developed support their specific needs. For more information, including how to join and participate in oneM2M, see: www.onem2m.org.