oneM2M
The IoT Standard

We are the global community that develops IoT standards to enable **interoperable, secure,** and **simple-to-deploy** services for the IoT ecosystem.
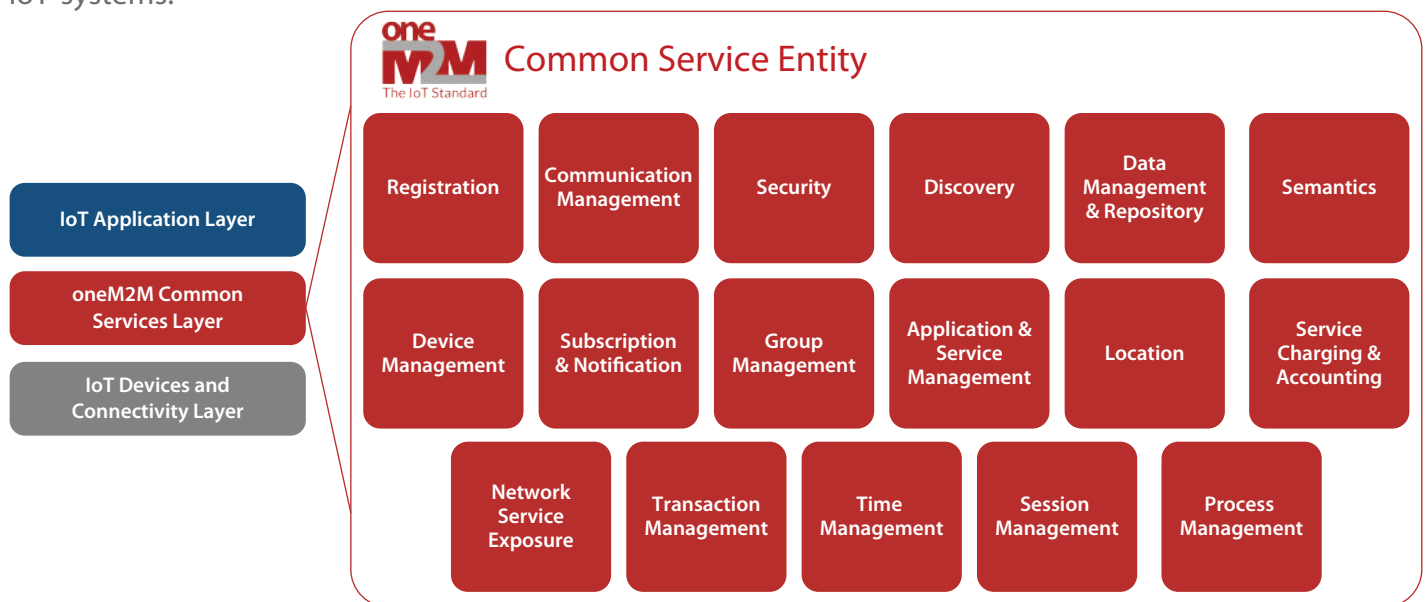
oneM2M standards are **open, accessible,** and **internationally recognized.**

oneM2M envisions a world of **Interoperable** and **Secure IoT services** where market adoption is easy and delivers benefits to society

oneM2M was launched in 2012 as a global partnership initiative between the world's preeminent standards development organizations: ARIB (Japan), ATIS (North America), CCSA (China), ETSI (Europe), TIA (North America), TTA (Korea), and TTC (Japan) and later joined by TSDSI (India), to develop technical specifications for the deployment of interoperable, scalable and secure machine-to-machine (M2M) and Internet of Things (IoT) systems

oneM2M Common Services "Toolkit"

oneM2M's horizontal architecture standardizes the middleware technology that sits below an IoT application layer and above a layer of communications networks and connected devices. The middleware layer provides a rich set of common services functions that can be used to design, deploy and manage end-to-end IoT systems.

oneM2M Common Service Entity

| IoT Application Layer |
| oneM2M Common Services Layer |
| IoT Devices and Connectivity Layer |

Registration	Communication Management	Security	Discovery	Data Management & Repository	Semantics
Device Management	Subscription & Notification	Group Management	Application & Service Management	Location	Service Charging & Accounting
	Network Service Exposure	Transaction Management	Time Management	Session Management	Process Management

oneM2M Common Service Functions (CSFs)

oneM2M's Roadmap and Release Cycle support the addition of CSFs as new requirements arise. By Release 4, oneM2M's Technical Specifications cover seventeen CSFs. Developers can use these functions progressively for their applications, beginning with the most frequently required ones such as device management, registration and security. More complex applications can incorporate features to support semantic interoperability and location services, for example.

How oneM2M operates

oneM2M brings together over 200 organizations from different geographies and business domains through its partner SDOs to develop a global and open Standard which is applicable across multiple industry verticals. It actively collaborates with sector-specific bodies to reuse existing standards and promote interworking.

oneM2M has a Steering Committee that provides strategic direction and management; and a Technical Plenary which has total responsibility for the full lifecycle of technical standardization activities spanning industry-needs analysis, technical specifications, interoperability testing and certification.

oneM2M's Technical Plenary comprises three working groups:

- The Requirements and Domain Models (RDM) Working Group focuses on the future roadmap
- The System Design and Security (SDS) Working Group defines oneM2M system architecture and management
- The Testing and Developers Ecosystem (TDE) Working Group defines test requirements for oneM2M Systems and related services, and supervises interoperability test events.

"oneM2M provides a very solid architectural foundation in terms of interfaces and data structures. It is built for interoperability and is very flexible."

Andre Dutra, Deutsche Telekom

"oneM2M has been evolving continually and solutions to common problems faced by the IoT industry are incorporated quickly in its specifications."

Anupama Chopra, C-DOT

"Using oneM2M, our data hub collects and links data for a hundred different services. We plan to export it to other local governments."

Seon-woo Yi, nTels

"We rewrote our proprietary system to use oneM2M's open standard and now operate at scale, meeting over 99% of our customers' reporting metrics and delivering over 3 billion meter reads daily"

Ray Bell, Aetheros

Release Timeline

oneM2M specifications are issued as releases, with new capabilities being added in each release that are developed under formally agreed workplans.

2015: Release 1
Provided a standardized, general-purpose architecture for operators and service providers to deploy IoT

2016: Release 2
Added an interworking framework enabling each service provider to support more types of devices on their IoT platform

2018: Release 3
Standardization of new oneM2M value added services to complement IoT capabilities in 3GPP standards

2022: Release 4
Unlocks new and enhanced vertical IoT implementations, such as the smart home, smart cities and industry 4.0

Resources

For a full list of resources, including published specifications, whitepapers, deployments with oneM2M, developer guides, membership and more, visit https://www.onem2m.org/home/working-documents or scan the QR code.

For membership enquiries,
please contact:oneM2M_Secretariat@list.onem2m.org