# Machine Authentication

Return to Glossary

**Machine Authentication** is the authorization of an automated human-to-machine or machine-to-machine (M2M) communication through verification of a digital certificate or digital credentials.

Digital certificates used in machine authorization are like a form of digital passport providing trusted identification for the purpose of securely exchanging information over the Internet. Digital credentials are much like forms of machine-provided ID and Password.

Machine Authentication is used to authorize machine interactions on both wired and wireless networks to enable computers and other machines to interact and exchange information autonomously. The processes of Machine Authentication can be performed by simple devices such as sensors and meters in infrastructure.

Common applications of Machine Authentication include:

- Backup software updates and patches that must be conducted outside of business hours for optimal performance and reliability with minimal disruption.
- Telemedicine devices that enable doctors to monitor patients remotely.
- Smart grid technologies that allow components of the electric grid to both communicate.

M2M communication enables automated remote monitoring, as well as the capacity to trigger actions based on that monitoring. In product restocking, for example, a networked vending machine might message the distributor when a particular item is running low, automatically triggering an order. The technology is central to warehouse management, remote control, robotics, traffic control, logistic services, supply chain management (SCM) and fleet management.

Machine-to-machine communication is also a fundamental technology for the Internet of Things (IOT), in which almost any entity or object imaginable can be provided with a unique identifier (UI) and the capacity to exchange data automatically over a network. Internet of Things security and privacy are two crucial areas of concern in that scenario. Machine Authentication is integral to ensuring both.

Machine Authentication contrasts with user authentication, which is reliant upon the presence of a human user.

Source: https://internetofthingsagenda.techtarget.com/definition/machine-authentication