

Recommendation

ITU-T Y.4509 (03/2025)

SERIES Y: Global information infrastructure, Internet protocol aspects, next-generation networks, Internet of Things and smart cities

Internet of things and smart cities and communities –
Frameworks, architectures and protocols

Functional architecture of artificial intelligence-enabled collaborative services across device, edge and cloud environments for the Internet of things and smart cities

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Global information infrastructure, Internet protocol aspects, next-generation networks, Internet of Things and smart cities

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Recommendation ITU-T Y.4509

Functional architecture of artificial intelligence-enabled collaborative services across device, edge and cloud environments for the Internet of things and smart cities

Summary

The maturity of Internet of things (IoT) technology and the widespread deployment of network provide good infrastructure conditions for the application of artificial intelligence (AI) at the device, edge and cloud for IoT and smart cities. The requirements of AI models in IoT and smart cities are dynamic. Thus, having an AI system that is continuously, dynamically updated, and having the ability to infer and predict in real time, are essential to the application of AI in IoT and smart cities. The device-edge-cloud collaborative service enables collaborative inference, and the dynamic learning and updating of AI models on the device-edge-cloud architecture, so as to meet the needs of various current and future application scenarios.

Recommendation ITU-T Y.4509 specifies the functional architecture of AI-enabled device-edge-cloud collaborative services for IoT and smart cities.

History*

Edition	Recommendation	Approval	Study Group	Unique ID
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