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ITU-T F.743.30 (03/2025)

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Recommendation ITU-T F.743.30

Architecture for cloud computing platforms supporting a video surveillance system

Summary

Recommendation ITU-T F.743.30 defines a cloud computing platform architecture that supports video surveillance systems. Cloud computing is a widely adopted paradigm that aims at providing various computing services over the network. By leveraging virtualization technology, cloud computing realizes a ubiquitous, flexible and scalable shared resources pool within the cloud environment which can be rapidly provisioned and released with minimal management effort based on user needs. Cloud computing offers flexible, efficient, reliable and distributed computing services for the large-scale surveillance video processing. This Recommendation describes the architecture, entities, reference points and service control flows of a cloud computing platform supporting a video surveillance system.

History*

Edition	Recommendation	Approval	Study Group	Unique ID
1.0	ITU-T F.743.30	2025-03-16	21	11.1002/1000/16226

Keywords

Architecture, cloud computing, entity, reference point, service control flow, video surveillance.

* To access the Recommendation, type the URL https://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID.

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FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Recommendation ITU-T F.743.30

Architecture for cloud computing platforms supporting a video surveillance system

1 Scope

This Recommendation defines the architecture, functional entities, reference points and service control flows of a cloud computing platform supporting a video surveillance system, which meets the requirements defined in [ITU-T F.743.8].

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T F.743.8] Recommendation ITU-T F.743.8 (2019), *Requirements for a cloud computing platform supporting a visual surveillance system*.

[ITU-T H.626] Recommendation ITU-T H.626 (2019), *Architectural requirements for video surveillance system*.

[ITU-T H.627] Recommendation ITU-T H.627 (2020), *Signalling and protocols for a video surveillance system*.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation defines the following terms:

3.1.1 central control server [b-ITU-T H.626.3]: A device located at the central part of the visual surveillance system. It is used for centralized system management, service operation management, and access control.

3.1.2 centre management unit [ITU-T H.626]: A device located at the main part of a video surveillance system. It is used for centralized system management, service operation management, etc. The main functions include management, authorization, accounting, charging, location and presence.

3.1.3 cloud computing [b-ITU-T Y.3500]: Paradigm for enabling network access to a scalable and elastic pool of shareable physical or virtual resources with self-service provisioning and administration on-demand.

3.1.4 customer unit [ITU-T H.626]: A device located at the customer part of a video surveillance system and used to present multimedia information (such as audio, video, image, alarm signal, etc.) to the end user.

3.1.5 media distribution unit [ITU-T H.626]: A device located at the centre part of a video surveillance system. It is used to transport media from the PU (premises unit) to the CU (customer unit). The main functions include media receiving, media processing, media routing, media transmission, media forwarding and media replication.

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