IMS Core Switch

AI Overview

An IMS core switch refers to the central components of an IP Multimedia Subsystem (IMS) that manage signaling, session control, and subscriber services for multimedia and voice over IP networks.Overview of IMS CoreThe IP Multimedia Subsystem (IMS) is a standardized framework designed by 3GPP to deliver voice, video, messaging, and other multimedia services over IP networks, supporting technologies like VoLTE, VoWiFi, and 5G Voice (VoNR) . The IMS core acts as the backbone of modern telecom networks, enabling operators to transition from traditional circuit-switched systems to all-IP networks while maintaining interoperability across devices and vendors .Key Components of the IMS CoreCall Session Control Function (CSCF)P-CSCF (Proxy CSCF): The first point of contact for IMS terminals, handling SIP signaling, subscriber authentication, and security associations via IPsec or TLS .I-CSCF (Interrogating CSCF): Routes incoming requests to the appropriate S-CSCF and interacts with the HSS for subscriber location and profile information .S-CSCF (Serving CSCF): Central session controller that manages registration, session setup, and routing of SIP messages to application servers .Home Subscriber Server (HSS)A master database storing subscriber profiles, authentication credentials, and service-related information. It supports session control and ensures proper routing and authorization .Media Resource Function (MRF)Handles media-related tasks such as conferencing, announcements, and media mixing, working in conjunction with the CSCF .Application Servers (AS)Provide value-added services like call forwarding, messaging, and Rich Communication Services (RCS), invoked by the S-CSCF during session setup .Session Border Controller (SBC)Protects the network and IMS terminals, manages signaling security, and ensures proper interworking with external networks .Functionality of an IMS Core SwitchThe IMS core switch is not a single physical device but a logical collection of functions that can be deployed on separate nodes or combined in a sin...

Article Content

IMS Core Network Explained: Architecture, Key

Learn how the IMS Core Network works — from CSCF and SBC to MRF and HSS — powering VoLTE, VoWiFi, and 5G communication services.

SESSION BORDER CONTROL IN IMS

1.3.1 IMS Core The “IMS Core” contains the core switching functions, as shown in the diagram below. These functions are standardized by 3GPP.

AN INTRODUCTION TO IMS

A combination of IMS network and PSTN Emulation Subsystem should provide a complete solution for Class 5 switch replacement, enabling expensive TDM infrastructure to be retired while migrating the

Understanding the IMS Core Network Architecture: Key

Explore the IMS Core Network architecture — from CSCF and SBC to MRF and HSS — and learn how each function enables seamless multimedia

Spark Selects Metaswitch Virtual IMS Core for VoLTE Proof-of-Concept

Metaswitch''s Clearwater IMS core provides a foundation for complete wireline and wireless IP communications while removing the typical cost barriers to deploying IMS-centric VoLTE.

Media Gateway Control Function

Media Gateway Control Function MGCF for IMS Core Networks The IP Multimedia Subsystem (IMS) is ready to deliver on its promise of all-IP telephony, tran-sitioning operators from being facilities-based

Understanding CS, PS, EPS, and IMS Core Networks

□□ Demystifying Core Networks: CS, PS, EPS & IMS □□ I''ve put together a clear and concise overview of Circuit-Switched (CS), Packet-Switched (PS), Evolved Packet System (EPS), and IP ...

IMS (IP Multimedia Subsystem): Definition & functions | NFON UK

The IP Multimedia Subsystem, IMS for short, refers to the standard for a telecommunication system which controls multimedia services accessing different networks. The IP Multimedia Subsystem is

Introduction to the IP Multimedia Subsystem (IMS)

This chapter introduces the IP Multimedia Subsystem (IMS), which is the core network of Voice over LTE (VoLTE). It then focuses on IMS architecture, IMS core network elements, and the IMS core

What is an IP Multimedia Subsystem (IMS)?

What is Cloud-Native IMS? Cloud-Native IMS is an advanced version of the IP Multimedia Subsystem designed to operate in cloud environments, which

IP Multimedia Subsystem (IMS)

The IPLOOK''s virtualized IP Multimedia Subsystem (vIMS) is a system consisting of virtual and cloud native network functions. Supporting VoLTE and VoNR functions.

IMS (IP Multimedia Subsystem)

A reference architecture defined by 3GPP that comprises all 3GPP/3GPP2 core network elements providing IP multimedia services that support audio, video, text, and...

IMS Core Network Explained: Architecture, Key

Discover how the IMS Core Network enables voice, video, and data services over IP. Explore its architecture, main components like CSCF, SBC,

IMS Core & VoLTE Calls: An Overview

By shifting from traditional circuit-switched voice technology in 2G/3G to all-IP LTE networks, VoLTE delivers superior call quality, faster setup times,

Clearwater Core IMS

Alianza''s Clearwater Core IP Multimedia Subsystem is the industry''s first and most proven cloud native IMS - pioneering NFV and setting the standard for scalable,

Understanding the IMS Core Network Architecture: Key

Learn how the IMS Core Network works, its main components like CSCF, SBC, HSS, and MRF, and how it supports VoLTE and 5G communication

White Paper IMS -IP Multimedia Subsystem

Preface IMS – IP Multimedia Subsystem – is an international, recognized standard; it specifies interoperability and roaming; and it provides bearer control, charging and security. What is more, it is

Metaswitch Reference material | IP Multimedia Subsystem (IMS)

IP Multimedia Subsystem (IMS) | Learn more about the technologies we use

IP Multimedia Subsystem (IMS) – Telecom R & D

IP Multimedia Services Switching Function (IM-SSF) Open Service Access Gateway (OSA-GW), and so on. IMS Architecture The IMS standalone

Introduction of IP Multimedia Subsystem Part 1

Description: The Rx interface serves as a bridge between the IMS Network and the Packet Core. It operates between the P-CSCF and the PCRF,

Contact Us

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