

The IP Call Server General

The 5060 is on one box, but is made up of many functions that offer a huge portion of the IMS control functionality. It houses the entire SIP chain of signalling communication for an IMS network as well as a few other functions.

These include:

The 5450 IP Session Controller

The 5420 Converged Telephony Server

The 5060 Media Gateway Controller 8

Includes the Media Gateway Control Function (MGCF)

Includes the Media Resource Function (MRF)

The Internal Home Subscriber Server (iHSS)

The Internal Charging Collection Function (iCCF)

The Internal Access Gateway Control Function (iAGCF)

Each of these functions are further broken down into sub-functions that provide IMS functionality.

The Internal Home Subscriber Server (iHSS)

The Internal HSS, a variant of the external HSS, provides a database of home subscriber information including:

Subscriber Identity (Public and Private ID's)

Service Profile

Location of the Subscriber

This information is provisioned by using the 1360 COM.

The IP Session Control Function (ISC)

The IP Session Control Function is the on board suite that let's the ICS control the signaling SIP flow for call setup. It includes:

The Proxy CSCF

The Interrogating CSCF

The Serving CSCF

The Emergency CSCF

The Break-out Gateway Control Function

This is what handles calls that must exit the IMS core, due to any manner of errors.

The Service-based Policy Decision Function

The IMS Gateway Function This performs inter-working between the Serving-CSCF and an Offline Charging System.

Each of these functions interacts with other higher (Application Layer) or lower (Media Layer) functions and servers.

The Internal Access Gateway Function (iAGF)

The iAGF is *technically* apart of the IP Session Controller Functionality. It is used to talk with the 7510 Media Gateway's Centralized Access Gateway to provide media translation of POTS / PSTN phones.

The iAGF will appear as a Proxy-CSCF, in getting to the IMS core. It 'speaks' H.248 to the 7510's C-AGW, and SIP to the other IMS CSCF's.

The 5420 Converged Telephony Server

The 5420 CTS is an Application Server that is on board that 5060 IP Call Server.

It works in the "Application Layer". It provides voice services such as:

Number Translation

Number Normalization

Caller-ID Features

Call Return/Blocking

Ring-back Tones

Anonymous Call Blocking

Black Listing

Call Parking

Authorization Codes

Call Conferences

Call Trace

Web Portal GUI Management

Integrated Charging Function

Many, Many More...

The Media Gateway Controller Function-8

The Media Gateway Controller, as the name implies, controls the 7510 MGW, using H.248 signaling. It's other functions include much to do with SS7 signaling, including:

SS7 Termination

Border Control for other carrier's SIP networks

Service Based Policy Decision for other carrier's IP networks. It will control the 7510 MGW's Interconnect Border Gateway Function (IBGF) to do this

