

Aumtech Enhanced Self Services (ESS) Portal Overview

1. Introduction

The *Aumtech Enhanced Self Services (ESS) Portal* provides the ideal foundation for your IP Multimedia Subsystem (IMS), Automatic Speech Recognition (ASR) and Text to Speech (TTS) applications. The platform is fully VoiceXML compliant, runs seamlessly in PSTN and VoIP-capable networks, and incorporates best-in-class speech recognition and TTS capabilities.

It provides a robust, server-based environment for developing and deploying speech recognition and IMS applications for carriers and businesses. The ESS Portal is available in both board-based and board-less configurations and interface with a comprehensive set of telecommunications services with native support for VoIP and IMS services. With centralized operations, administration, and maintenance (OA&M), this highly scalable platform has been proven in more than 50,000 ports worldwide, including enterprise, service provider, and network carrier customers.

2. Architectural Overview

ESS Portal is a completely distributed, network-based architecture whereby the ESS Media Server and Applications Server can reside on the same or different machines. Figure 1 shows one possible configuration for the ESS Portal. The architecture allows for deployment of multiple Media and Applications servers for greater capacity and higher performance.

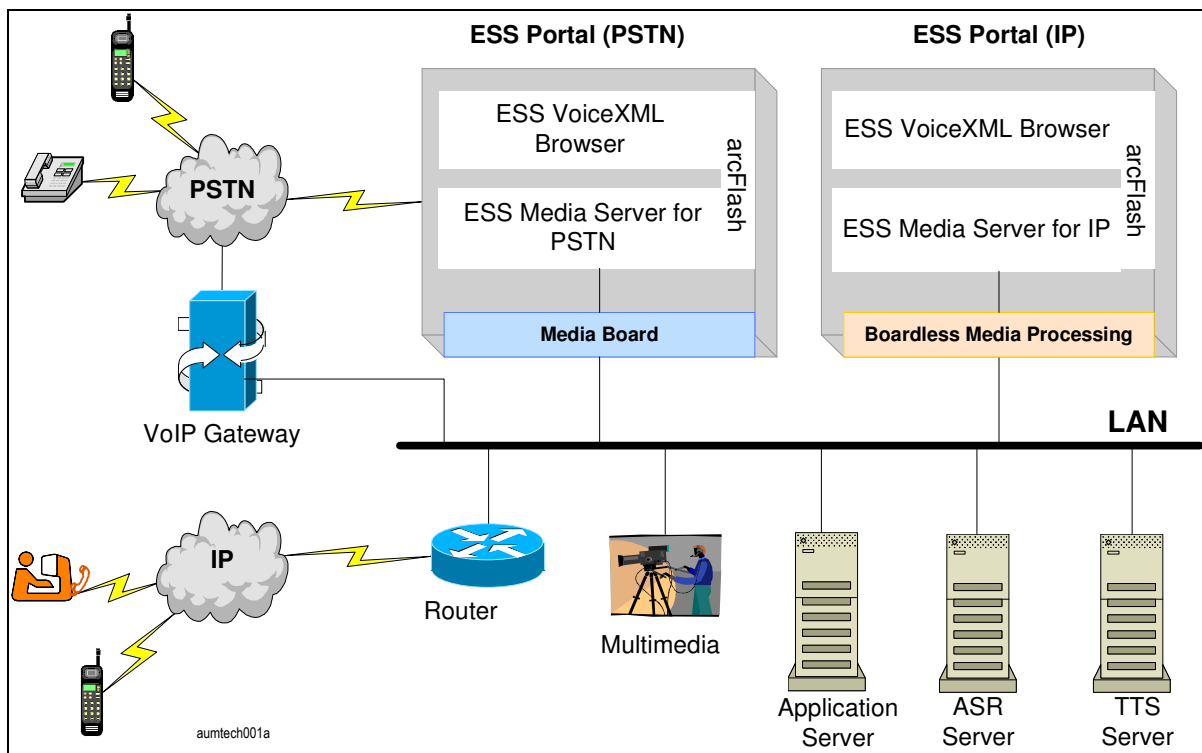


Figure 1: Aumtech ESS Portal Architectural Overview

The ESS Media Server is at the heart of the ESS Portal. It uses a board-based configuration with PSTN (Public Switched Telephone Network). The SIP-based configuration is entirely software-based and does not require any telecommunications boards.

Designed for modular and extensible telephony voice user interface applications, the ESS Portal includes more than 100 custom properties and service extensions. Web developers can economically leverage existing web-based technologies and infrastructure to rapidly build, customize, and deploy voice-enabled solutions.

ESS Media Server

The ESS Media Server has a high-density, compact footprint allowing 240 sessions on a single server. It also supports load balancing with multiple servers as well as integrated Media Resource Control Protocol (MRCP) support for speech servers from Nuance, Microsoft, and AT&T.

ESS VXML Browser

The ESS Portal with ESS VXML Browser is a complete solution for advanced IVR applications. The ESS VXML Browser extensions include:

- Call control with immediate and scheduled outbound calls
- Answer-on-demand and reject answer
- Script-controlled logging
- SNMP alert generation
- Transaction-based CDR generation and custom-event records for reporting
- Script-controlled SR/TTS, DTMF parameter manipulation
- Inbound, outbound, receive-on-demand, and scheduled fax control
- Cisco AVVID Call Manager

ESS arcFlash

ESS arcFlash provides centralized administrative access to reporting, statistics, provisioning, alarms and monitoring functions for the EES Portal. ESS arcFlash is Web-based tool with graphical access to configuration and scheduling control files and reports. An administrative hierarchy allows the creation of user and group ownership of processes, adding an extra layer of security to the platform.

ESS Portal Technical Specifications

Network compatibility

PSTN

- Analog
- T1-ISDN
- T1-Robbed Bit
- E1
- CAS and SS7
- Intel Dialogic DMV board family,

- Global Call SR 6.1

VoIP

- SIP and H.323
- IP Multimedia Subsystem
- Media Gateway Control Protocol
- Utilizes industry standard hardware
- Compact footprint -- supports up to 240 media processing endpoints on one RU box

Speech Recognition - MRCP

- Nuance OSR 3.0
- Microsoft

Text-to-Speech - MRCP

- Nuance
- Scansoft Speechify
- AT&T Natural Voices
- Loquendo

Fax

- Intel Dialogic ViaFax and SoftFax
- T30 and T38 Support

Video

- Software-based video resource server
- H261, H263, and MPEG4

OAM

- SNMP RFC 1157 compliant traps

CTI Connectors

- Cisco AVVID Call Manager

Service Creation Tools

- IBM Websphere Application Development Studio Platform
- Eclipse Foundation's Voice Tools Project
 - Open source extensible, standards-based VXML development platform
 - Common tools and architecture for applications development

Hardware/Software Requirements

SIP Configuration

Hardware Requirements

Media Server

The Media Server has the Aumtech Telecom Services and the ESS VXML Browser installed on it. The minimum hardware recommendation for the Media Server is as follows.

Component Name	Specification
Server hardware platform	Linux certified Pentium processor 2 GHz or better
Memory	2 GB or higher
Hard Disk	100 GB or higher
CD/ DVD Drive	Any

Software Requirements

- Red Hat Linux, AS3.0
- Optionally: 3rd party Text-to-Speech (TTS) and Automated Speech Recognition (ASR) servers if your IVR application needs them.

PSTN Configuration

Hardware Requirements

Media Server

The media server has the Aumtech Telecom Services and the VXML browser installed on it. The minimum hardware recommendation for the media server is as follows.

Component Name	Specification
Server hardware platform	Linux certified Pentium processor 2 GHz or better with an available PCI slot
Memory	2 GB or higher
Hard Disk	100 GB or higher
CD/ DVD Drive	Any

Telephony Board

One of the following Dialogic telephony network boards must be installed:

- DMV480A 2T1 PCI
- DMV960A 4T1 PCI
- DMV600B TEP
- DMV1200 BTEP
- JCTD480 2T1
- DMIP

Software Requirements

- Red Hat Linux, AS3.0
- Intel Dialogic software System Release 6.1 (SR 6.1)
- Optionally: 3rd party Text-to-Speech (TTS) and Automated Speech Recognition (ASR) servers if your IVR application needs them.