

ENTERPRISE CALL ACCOUNTING SYSTEM

SYSTEM REQUIREMENTS

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1. OVERVIEW

The Enterprise Call Accounting System (ECAS) consists of three server-side components installed on a single Windows server:

- Collection Service Windows Service for PBX connectivity
- Web API ASP.NET Core 8 REST API (IIS-hosted)
- Web UI Blazor WebAssembly frontend (IIS-hosted)

All three components communicate through a shared PostgreSQL database. No direct network communication between the Collection Service and the Web API is required.

2. SERVER REQUIREMENTS

OPERATING SYSTEM

Minimum: Windows Server 2019 (64-bit)
Recommended: Windows Server 2022 (64-bit)
Also supported: Windows 10 / Windows 11 (64-bit)

.NET RUNTIME

Required: .NET 8.0 Runtime (ASP.NET Core + Desktop)
The automated installer includes .NET 8 — no manual download required for new installations.

IIS (INTERNET INFORMATION SERVICES)

Required: IIS 10 or later
Required: ASP.NET Core Module v2 (ANCM)
Required: .NET 8 Hosting Bundle (installed by setup)

HARDWARE — MINIMUM

CPU: 2 cores (x64)
RAM: 4 GB
Disk: 20 GB available (application + database + logs)
NIC: 1 Gbps Ethernet recommended

IIS must be enabled on the server before running the installer. The setup wizard configures application pools, bindings, and directory permissions automatically.



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2. SERVER REQUIREMENTS (Cont)

HARDWARE — RECOMMENDED (PRODUCTION)

CPU: 4 cores or more (x64)
RAM: 8 GB or more
Disk: 50 GB+ SSD (grows with call volume and retention)
NIC: 1 Gbps Ethernet

Note: For deployments collecting from 5 or more PBX systems or managing multiple tenants, use the Capacity Planning Calculator (available on the Resources page) to size appropriately.

3. DATABASE REQUIREMENTS

PRIMARY DATABASE (DEFAULT)

Engine: PostgreSQL 17 or later
Recommended: PostgreSQL 17 (included in automated installer)
Default port: 5432
Location: Local (same server) — recommended for performance
Character set: UTF-8

ENTERPRISE DATABASE OPTION

Engine: Microsoft SQL Server 2019 or later
Editions: Standard, Enterprise, or Developer
Note: SQL Server must be installed and configured separately before running the ECAS installer.

DATABASE SIZING

A typical deployment stores approximately 1 KB per call record (including indexes). Estimate:

$500 \text{ calls/day} \times 365 \text{ days} \times 5 \text{ years} = \sim 900,000 \text{ records} \approx 1 \text{ GB}$

Raw SMDR data is stored separately with a configurable retention period (default: 365 days).

Use the ECAS Capacity Planning Calculator for detailed sizing.

4. NETWORK REQUIREMENTS

PBX COLLECTION PORTS

The Collection Service listens on the following TCP ports to receive CDR/SMDR data from PBX systems. Open these ports on the server firewall based on the PBX systems deployed:

PBX System	Mode	Default Port
Mitel MiVoice Business	TCP Pull	1752
Mitel MX-ONE	TCP Push	2020
Mitel OpenScape 4000	TCP Push	1202
Mitel OpenScape Voice T	CP Push	7000
Mitel OpenScape Business	TCP Push	1040
Mitel MiVoice Office 400	TCP Push	1080
Avaya Aura CM	TCP Push	5001
Avaya IP Office	TCP Pull	5000
Cisco CME / CUBE	TCP Push	514 (syslog)
Cisco CUCM	SFTP/File	N/A (outbound to SFTP)
Alcatel OXE	TCP Push	2533
Alcatel OXO	TCP Push	2533
Alcatel OpenTouch	TCP Push	2533
Alcatel 4400	TCP Push	2533

WEB ACCESS PORTS (IIS)

Port 80 TCP	HTTP access to the web interface (redirects to HTTPS in production)
Port 443 TCP	HTTPS access to the web interface (recommended for production)

DATABASE PORT

Port 5432 TCP	PostgreSQL (localhost only — no external access required)
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Note: Ports are configurable per PBX system from the admin interface. Only open ports for PBX systems actually deployed.



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4. NETWORK REQUIREMENTS (Cont.)

SFTP / FILE COLLECTION

For Cisco CUCM and Mitel OpenScape Voice (SFTP mode):
The Collection Service connects OUTBOUND to the SFTP server.

Port 22 (SSH/SFTP) must be allowed outbound from the ECAS server.

Local folder polling mode is also supported and requires no additional firewall rules.

5. CLIENT (BROWSER) REQUIREMENTS

The ECAS web interface runs in any modern browser. No plugins, extensions, or desktop clients are required.

Supported Browsers:

- Google Chrome 90+ (recommended)
- Microsoft Edge 90+
- Mozilla Firefox 90+
- Apple Safari 14+

6. PBX CONNECTIVITY REQUIREMENTS

TCP PUSH (PBX → ECAS Server)

The PBX initiates a TCP connection to the ECAS server and streams CDR/SMDR records in real time.

Requirements:

- PBX must have network access to the ECAS server IP
- ECAS server firewall must allow inbound TCP on the relevant port (see Section 4)
- PBX SMDR/CDR output must be enabled and configured to point to the ECAS server IP and port

SFTP / LOCAL FOLDER

Requirements:

- SFTP mode: ECAS server must have outbound access to the SFTP server on port 22
- Local folder mode: A shared network folder or local path where the PBX drops CDR files

SMTP (OPTIONAL — FOR SCHEDULED REPORTS)

Port 587 TCP SMTP with TLS (recommended)
Port 465 TCP SMTP with SSL
Port 25 TCP SMTP plain (not recommended)

Supports direct SMTP, Office 365 (OAuth 2.0), and Google Gmail (OAuth 2.0) for scheduled report delivery.

Browser Requirements:

- WebAssembly (WASM) support — enabled by default in all modern browsers
- JavaScript enabled
- Cookies enabled (for authentication)
- Minimum screen resolution: 1280 × 720

No VPN or special network configuration is required for browser access as long as port 80/443 is reachable.

TCP PULL (ECAS Server → PBX)

The ECAS Collection Service initiates a TCP connection to the PBX and retrieves CDR records.

Requirements:

- ECAS server must have network access to the PBX IP
- PBX firewall must allow inbound TCP from the ECAS server
- PBX SMDR service must be running and accessible



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7. INSTALLATION SUMMARY

The automated installer (CallAccountingSetup.exe) handles:

- ✓ .NET 8 Runtime installation
- ✓ PostgreSQL 17 installation and configuration
- ✓ IIS application pool and site creation
- ✓ Windows Service registration (Collection Service)
- ✓ Database initialization and schema creation
- ✓ JWT secret key generation (unique per installation)
- ✓ SuperAdmin account creation

Installation time: approximately 5–10 minutes on a prepared Windows Server with IIS already enabled.

Pre-installation checklist:

- Windows Server with IIS role enabled
- Administrator account on the server
- Static IP address assigned to the server
- Firewall rules planned for PBX connectivity
- License key obtained from MeeraApps Technology

8. SIZING GUIDELINES

Deployment Size	PBX Systems	Users	RAM	Disk
Small	1–2	1–20	4 GB	20 GB
Medium	3–5	20–100	8 GB	50 GB
Large	6–10	100–500	16 GB	100 GB
Enterprise	10+	500+	32 GB	200 GB+

For multi-tenant deployments (service providers), use the ECAS Capacity Planning Calculator available on the Resources page of our website.

9. SUPPORTED PLATFORMS SUMMARY

Component	Requirement
Server OS	Windows Server 2019 / 2022 (64-bit)
.NET Runtime	.NET 8.0
Web Server	IIS 10+ with ASP.NET Core Module v2
Database	PostgreSQL 17+ or SQL Server 2019+
Browsers	Chrome, Edge, Firefox, Safari (modern)
PBX Protocols	TCP Push, TCP Pull, SFTP
Supported Vendors	Mitel, Avaya, Cisco, Alcatel-Lucent



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