



IGNIS

System Requirements

SERVER & CLIENT · MINIMUM & RECOMMENDED · VERSION 1.2 · 2026

Deployment Architecture

IGNIS runs on a single **server machine** as four Windows services; operators and administrators connect to the system over the network with a **web browser (client)**. Field data is read from the fire detection panel's **OPC DA** interface. All components are deployed **self-contained with their own runtimes** — no separate .NET installation is required on the server.



Server (1 unit)

IGNIS_Web, IGNIS_OPC, IGNIS_License and (optional) IGNIS_ONVIF services + database. The panel's OPC DA server is installed on this machine too.



Client (multiple)

Just a modern web browser. No installation needed; connects to the server over HTTP (port 5000).



OPC DA Panel

The fire detection panel's OPC DA server (Bosch: FSM-5000-OPC, with an OPC license on the panel). Must be installed locally on the IGNIS server; it reaches the panel network over Ethernet.

Server Requirements

Server hardware scales with the number of points, map (DXF) size and continuous camera-recording usage. The **Minimum** values below are for small-facility / pilot installations; the **Recommended** values are for

medium-to-large production installations.

Server — Hardware & Operating System

Component	Minimum	Recommended
Processor (CPU)	4 cores / 2.4 GHz (Intel Core i5 6th gen or AMD Ryzen 5)	8+ cores / 2.5 GHz+ (Intel Xeon / Core i7 or AMD EPYC / Ryzen 7)
Memory (RAM)	8 GB	16 GB (32 GB for large DXF + many cameras)
Disk	120 GB SSD	500 GB+ SSD (RAID 1 recommended) + separate/additional disk for camera recording
Network	1 Gbps Ethernet (LAN)	1 Gbps Ethernet (LAN), managed switch
Operating System	Windows 10 Pro / Enterprise (64-bit)	Windows Server 2019 / 2022 (64-bit)
Power	—	UPS (recommended for safe shutdown)

64-bit is required. Installation is performed only on 64-bit Windows 10 and later. OPC DA reading requires a 32-bit COM component; this component runs without issue on 64-bit Windows (the relevant service is published in 32-bit mode). Linux and macOS are not supported.

Server — Software & Prerequisites

All components below are **embedded in the installation wizard** and installed automatically when needed;

no internet connection is required (fully offline installation).

Automatically Installed Prerequisites

Component	Version	Description
.NET Hosting Bundle	10.0	Web server runtime (comes with the installer)
Visual C+ + Redistributable	2015–2022 (x64)	For map / image conversion components
PostgreSQL	17 (x64)	Recommended database — installed silently (if PostgreSQL is selected)
MediaMTX	Embedded	Camera streaming bridge (if the ONVIF component is selected)

Database Options

Option	Requirement	Suitability
PostgreSQL 17 Recommended	Comes automatically with the installer (no extra license/server needed)	All installations; high event volume, reporting
Microsoft SQL Server	Existing SQL Server 2019 / 2022 instance (provided by the organization)	Enterprise — those with centralized DB infrastructure
JSON (file-based)	No additional component	Demo / pilot / very small installation

Important: Installation must be performed with **administrator privileges** — registering Windows services, creating firewall rules and installing the database all require this privilege.

Client (Operator Workstation) Requirements

No installation is performed on the client side; the operator connects to the server's address with a modern web browser. However, the client is not a "thin" terminal: to make floor switching instantaneous, IGNIS **preloads all DWG/DXF floor plans into the client's memory (RAM) at startup** and renders the

plans **on the graphics card via WebGL**. For this reason the client computer's memory and graphics capability should scale with map size and the number of cameras viewed simultaneously.

Client — Hardware

Component	Minimum	Recommended
Processor (CPU)	4 cores / 2.0 GHz (DXF parsing + video decoding)	6+ cores / 2.5 GHz+
Memory (RAM)	8 GB (all DXF plans load into browser memory)	16 GB (for many/large plans + many cameras)
Graphics (GPU)	WebGL 2.0 -capable integrated graphics (hardware video decoding recommended)	Discrete GPU or strong integrated graphics (large plans + 8–16 cameras hardware decoding)
Screen Resolution	1366 × 768	1920 × 1080 (Full HD) or higher
Network	100 Mbps LAN	1 Gbps LAN (for live camera viewing)
Operating System	Windows / macOS / Linux — any platform that can run a modern WebGL 2.0-capable browser	

Why does the client need 8 GB+ RAM? To avoid any wait when switching floors, IGNIS **parses all DXF floor plans into the client's memory in the background at startup** (a 6-layer cache pool). When a large plan is parsed it can hold a few hundred MB of memory; this is a deliberate design choice that makes plan transitions almost **instant**. On low-memory machines the browser tab may slow down or be forced to reload the plans.

Client — Supported Browsers

Browser	Minimum Version	Note
Google Chrome	90+	Recommended
Microsoft Edge	90+	Recommended (Chromium-based)
Mozilla Firefox	88+	Supported
Safari	14+	Supported

- ✓ **WebGL 2.0** — required for rendering interactive DWG/DXF floor plans on the graphics card
- ✓ **Hardware video decoding** — recommended for smoothness in 8–16 camera live grids
- ✓ **WebSocket** — required for instant (live) display of alarms and state changes
- ✓ **Cookies / local storage** — for session, theme and language preference

Network & Port Requirements

Most inter-service communication happens **inside the server (localhost)** and is not exposed externally. Ports that must be opened to clients and cameras are **defined automatically** in the firewall during installation.

Ports

Port	Service	Scope	Firewall
5000	Web interface (client access)	LAN	Opened (automatic)
8889	Camera live stream (WebRTC)	LAN	Opened (if ONVIF component present)
8888	Camera live stream (HLS fallback)	LAN	Opened (if ONVIF component present)
5010	OPC service (internal communication)	localhost only	Closed
5020	Camera service (internal communication)	localhost only	Closed
5432	PostgreSQL database	localhost only	Closed

Works fully offline. IGNIS requires no internet connection; all libraries, fonts and the map engine are local on the server. The client browser only needs access to the server (LAN).

Scaling & Capacity Notes

Consider the following load factors to size hardware correctly. These are practical guidelines derived from production behavior.



Map (DXF) Size

Large DWG/DXF plans (e.g. ~75 MB) are parsed into memory on first open; subsequent opens come instantly from cache. If many large plans will be used, raise RAM to 16 GB and above.



Event History

For roughly 5,000 points the event log grows by about ~1 GB per year. Plan ~5 GB of additional database space for 5 years of audit history (the recommended disk covers this comfortably).



Continuous Camera Recording

Camera recording is the most disk/RAM-intensive component. A **separate/additional disk** is recommended based on camera count, resolution, bitrate and retention period. Capacity is monitored live from the in-product panel.



Concurrent Clients

Web clients are lightweight; most load is on the server side. Keep LAN bandwidth at 1 Gbps if many operators watch live cameras simultaneously.

License capacity is separate. Hardware requirement and the licensed number of points/cameras are different concepts. Size the hardware according to the **actual number of points and cameras** you will license.

Quick Installation Checklist

Server

- ✓ Windows 10/11 or Server 2019/2022 (64-bit)
- ✓ Min. 8 GB RAM (16 GB recommended)
- ✓ Min. 120 GB SSD (500 GB+ recommended)
- ✓ Administrator privileges
- ✓ The panel's OPC DA server on this machine (Bosch: FSM-5000-OPC)

Client

- ✓ Modern browser (Chrome/Edge 90+, Firefox 88+, Safari 14+)
- ✓ WebGL 2.0 + WebSocket support
- ✓ Min. 8 GB RAM (16 GB recommended), 1366×768 screen
- ✓ WebGL 2.0-capable GPU (large plans + many cameras)
- ✓ LAN access to the server (port 5000)
- ✓ No installation required

