

Helpful Troubleshooting Tools

This page serves as a reference guide for using tools to diagnose common Ignition issues. The tools listed below are broken into different categories based on the issue they address. Each tool contains a link and a description of what the tool is used for.

JVM Memory Issues

Tool	Purpose
Jmap	Take heap dumps to inspect memory usage at specific times. See Generating Java memory Dump on how to generate heap dumps.
JConsole	View and analyze Java memory usage and threads.
JProfiler	Advanced heap dump analyzer with visuals like “Biggest Objects.” To learn more, see JProfiler Basics .

Server CPU/Memory Issues (Including VMs)

Tool	Purpose	Example
Windows Task Manager	A quick way to visualize overall server performance. Observe system resources such as CPU, Memory, and Disk usage.	Server has 16GB RAM; Ignition also has 16GB allocated. No room for OS or other processes.
Resource Monitor	See detailed performance metrics, processes, and resource usage.	Determining which files and processes are responsible for Disk I/O activity. Observing network I/O information.

Files Missing/Quarantined by Antivirus

Tool	Purpose	Example
Procmon.exe (Process Monitor)	Check files for modification.	Determine if antivirus software might be deleting project files.

Network Diagnosis

Tool	Purpose
Wireshark	Capture and filter network traffic. It's helpful to generate .pcap files that include timestamps and the IP addresses of both endpoints to assist Support in troubleshooting connectivity issues. To learn more, see Wireshark Basics .
Clumsy	Simulate network drops, latency, and disconnects.

CPU Issues

Tool	Purpose
Kindling	View thread dumps, wrapper logs, Store & Forward data, and other performance diagnostics.

OPC UA / OPC COM Server Issues

Tool	Purpose
Matrikon OPC Explorer	Third-party tool used for testing connectivity to OPC DA servers. It also includes a client for testing connections to HDA servers.
OPC Expert	A more robust client for testing connectivity to OPC DA, HDA, and UA servers, which also provides diagnostics. A free trial is available.
UA Expert	Another free client used for testing OPC UA connections.
Kepware OPC UA	Third-party client that can serve as both an OPC client and server for connection testing purposes (similar to Ignition). See Connecting to Kepware OPC UA , for step-by-step instructions to connect to Kepware.

API Testing

Tool	Purpose
Bruno	An open source, file-based, and Git-friendly API client used to test API calls.
Postman	An easy-to-use, GUI-based API client for testing API calls.

Device Connection Testing

Tool	Purpose
YABE	Test BACnet device discovery and communication.
Modscan64	Read Modbus registers and validate device values.