

GETTING STARTED

Windows services and the tray app

The three services, startup and crash recovery, the system tray manager, running without a logged-in user.

Online: mergenhub.envest.com.tr/docs/services

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MergenHub is installed as three Windows services and a small system-tray manager. Services run in the background under the *Local System* account, start at boot and keep running when nobody is logged in — an operator PC, a server in a cabinet or a virtual machine all behave the same.

The three services

SCM NAME	DISPLAY NAME	PROCESS	WHAT STOPS IF IT IS DOWN
MergenHub	MergenHub Runtime (OPC UA + Config API)	MergenHub.exe	Everything: device scanning, OPC UA, web UI, REST API, alarms, SCADA
MergenHubDataBridge	MergenHub Data Bridge	MergenHub.IoTGateway.exe	Outbound MQTT/REST agents and the Data Bridge REST server
MergenHubHistorian	MergenHub Historian	MergenHub.Historian.exe	Writing tag history (values are still live; nothing is logged)

The two auxiliary services **depend on** the core service (`depend= MergenHub`): Windows starts the core first, it writes an internal token, then the others connect to the core over the local REST API. Splitting them into processes means a failure in a cloud connector or a database driver can never take the OPC UA server down.

Settings > Services – status, uptime, restart counters and controls for every runtime service

Startup and crash recovery

- All three services are set to **Automatic** start. On the installer's *Service startup behaviour* page you can switch to *Automatic (delayed)* or manual.
- Recovery** is configured for each service: if the process crashes, Windows restarts it after the delay you chose (default a few seconds). Inside the core, every driver channel runs under a supervisor as well; a dead channel worker is recreated within seconds without restarting the service.
- The core also has a **runtime restart** that restarts the scan engine in-process (used by the trial window and by *Settings > Services*). It does not touch the Windows service.

Managing services

Settings > Services in the web UI shows each runtime service with start/stop/restart and the auto-restart switch. From an administrator prompt:

```
sc query MergenHub
sc stop MergenHub
sc start MergenHub
sc qc MergenHubHistorian
```

or with PowerShell: `Get-Service MergenHub*` , `Restart-Service MergenHub` .

Note Stopping the core stops the dependent services too; starting the core does not start them automatically until their own start command runs (Windows handles this at boot).

The system-tray manager

`MergenHub.Tray.exe` is registered to start at logon for all users and sits next to the clock as *MergenHub Administration*.

- Shows the service state (green/yellow/red) and the trial countdown when unlicensed.
- **Restart runtime** — restarts the scan engine in-process (new trial window, reloads drivers) without stopping the Windows service.
- **Start / Stop / Restart service** — the Windows services (requires elevation).
- **Open web UI, Open data folder, Event log**, version and license summary.

The tray application is optional; the services run without it.

Running without a logged-in user

Nothing needs a desktop session. After a reboot the services start and devices are scanned before anyone signs in. Only the tray icon requires a user session.

Resource usage

Memory grows with the tag count: roughly 250–350 MB for a few thousand tags, 2–3 GB at 450K tags with many OPC UA subscribers. CPU is dominated by the drivers' scan rates. *Settings* › *Services* and the dashboard show CPU, RAM and disk of the machine; a capacity banner warns when RAM gets tight.

Service accounts and permissions

The services run as *Local System* by default and need write access to `C:\ProgramData\MergenHub`. If you switch them to a dedicated account (for example to reach a network share for ODBC logging), grant that account **Modify** on the data folder and *Log on as a service*.

Windows Event Viewer

Service start/stop and unhandled crashes are also written to *Windows Logs* › *Application* with source *MergenHub*. MergenHub's own detailed logs are described in [Logs and diagnostics data](#).