Data Servers

Expose the Unified Namespace to external clients, AI systems, and other FrameworX solutions.

Modules Data Foundation Data Services (Concept) | How-to | Reference

Overview

FrameworX includes built-in services that expose your Unified Namespace (UNS) to external systems. These services run alongside your solution and provide standardized access to live data without additional infrastructure.

FrameworX as Client or Server
Available Services
OPC UA Server
MQTT Broker
MCP for Runtime
Configuration Location
Data Servers Links
See Also
See Also

FrameworX as Client or Server

Connection	Module	FrameworX Role
UNS External	TagProvider Services	FrameworX UNS connects to PLCs, brokers, third-party servers
External UNS	Data Servers	External Client connects to FrameworX Data Servers

TagProvider Services: You connect TO external systems

Data Servers: External systems connect TO you

See TagProvider Services for connecting to external data sources

Available Services

Service	Protocol	Purpose
OPC UA Server	OPC UA	Expose UNS to enterprise systems and other SCADA platforms
MQTT Broker	MQTT	Publish/subscribe access for IoT devices and cloud platforms
MCP for Runtime	MCP	Enable AI/LLM models to query live solution data
DataHub Service	TCP	Synchronize data between multiple FrameworX solutions

OPC UA Server

Expose your UNS to external OPC UA clients using industry-standard protocols.

Capabilities:

- Browse and subscribe to any tag in the UNS
- Read/write access with configurable security
- Historical data access (if Historian configured)
- Alarm and event subscriptions

See UNS Data Servers Reference for configuration details

MQTT Broker

Built-in MQTT broker for publish/subscribe messaging without external infrastructure.

Capabilities:

- Full MQTT 3.1.1 and MQTT 5.0 support
- Sparkplug B compatibility
- Topic-to-tag mapping
- QoS 0, 1, and 2 support
- WebSocket transport option

See UNS Data Servers Reference for configuration details

MCP for Runtime

Enable AI language models to query live solution data through Model Context Protocol.

Capabilities:

- Query tag values from the UNS
- Retrieve alarm status and history
- Access historian data for trend analysis
- Extend with custom tools via Script Classes

How It Works

AI Model (Claude) MCP Protocol RuntimeMCP.exe TServer.exe

[Live UNS Data Access]

See AI MCP for Runtime Connector for setup and configuration

DataHub Service

Distributed data aggregation for multi-solution architectures.

Capabilities:

- Multi-solution data synchronization
- Centralized UI solution consuming data from multiple edge solutions
- Shared alarm management across solutions
- Scalable distributed architecture

Architecture Pattern:

```
EDGE 1          EDGE 2          EDGE 3
 (Publish)       (Publish)       (Publish)
     ?               ?               ?
     ????????????????????????????????????
                     ?
              ??????????????????
              ? UI Solution ?
              ?  (DataHub)  ?
              ??????????????????
```

See Data Hub Communication Service for configuration details

Configuration Location

Designer: Unified Namespace Data Servers

Each service has its own configuration dialog accessible via the edit icon.

Data Servers Links

Explanation - to understand concepts
You are here

How-to Guides - to accomplish specific tasks
How to Enable Data Servers

Reference - technical details
UNS Data Servers Reference — All settings and configuration options
AI MCP for Runtime Connector — MCP setup and tutorial
Data Hub Communication Service — Multi-solution architecture details

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See Also

- TagProvider Services — Connect to external systems (FrameworX as client)
- Data Foundation — UNS overview
- AI Integration — AI capabilities overview

Contact Tatsoft for partner API access and documentation.

See Also

- TagProvider Services — Configure built-in services
- AI MCP for Runtime Connector — AI integration details
- Data Hub Communication Service — Multi-solution architecture
- Data Foundation — UNS overview