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REGIONAL ENGLISH MATERIAL · HIGHBYTE INTELLIGENCE HUB 4.5 BETA FOCUS

Architecture Playbook: UNS, i3X, Edge-to-Cloud

A clean reference architecture for multi-site industrial data products with Central Hub, Namespaces, Pipelines, and governed APIs.

HighByte | ASP Dijital | Industrial AI | MCP | i3X

- Separate source integration, semantic modeling, delivery channels, and enterprise governance; avoid one-off point-to-point integrations.
- Use Namespaces and Smart Query to make distributed modeled data discoverable, then publish through MQTT/UNS, REST Data Server, i3X Server, or MCP Services.
- Use Central Hub for distributed configuration, remote hub visibility, namespace federation, and multi-site operating patterns.

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EVIDENCE

Architecture Playbook: UNS, i3X, Edge-to-Cloud

A clean reference architecture for multi-site industrial data products with Central Hub, Namespaces, Pipelines, and governed APIs.

- The solution brief describes Central Hub as both configuration management and data exchange with remote hubs.
- HighByte materials describe Namespaces as a dedicated space to organize datasets and relationships and to govern a UNS or destination hierarchy.
- The user guide documents servers for REST Data, i3X, and MCP Services, plus Central Hub setup, manage configuration, central data, and tunneling.

4.5
BETA

Edge
NATIVE

OT + IT
COLLABORATIVE

AI
READY

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4.5 ADDITIONS TO EMPHASIZE

HighByte Intelligence Hub 4.5 Beta focus

i3X JSON Schema exports now include Model and Attribute descriptions, improving downstream semantic clarity.

Git deployments can import multiple files per fragment and support JSON Schema plus UANodeSet model import.

HA can be configured and started via Docker environment variables, with liveness/readiness checks for orchestration.

OpenTelemetry hub display names and custom OTel agent properties improve observability for multi-hub fleets.

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REFERENCE FLOW

A clean reference architecture for multi-site industrial data products with Central Hub, Namespaces, Pipelines, and governed APIs.

OT

PLC, SCADA, Historian, MQTT, OPC UA, SQL, files

Industrial DataOps

Connect, model, transform, govern, observe

IT / AI

UNS, REST, i3X, MCP, cloud, BI, AI agents

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90-DAY ROLLOUT

Recommended play

01

Define canonical models for the asset, process, product, or role being standardized.

02

Design the namespace before the output protocol, so the same semantic structure can serve MQTT, historian, REST, i3X, and AI tools.

03

Treat each pipeline as a governed data product with owner, SLA, quality checks, and observability signals.

04

Promote configurations through Git-backed deployment patterns and verify HA behavior before production cutover.

Good architecture makes the next integration easier. The goal is not one successful pipeline; it is a reusable data operating model for every site.

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SOURCE BASIS

Prepared by ASP Dijital for regional HighByte conversations

- HighByte Intelligence Hub Version 4.5 Beta release notes, published June 08, 2026.
- HighByte User Guide pages for MCP Services, i3X Server, AI connections, Flow triggers, Smart Query, and Central Hub.
- Local HighByte 2025/2026 partner materials, brand guidelines, solution brief, messaging document, and customer case studies.
- ASP Dijital brand media kit and local ASP Dijital logo assets.

Official URLs

highbyte.com/resources/release-notes/version-4-5-beta
guide.highbyte.com/configuration/servers/mcp/
guide.highbyte.com/configuration/servers/i3x/
guide.highbyte.com/configuration/connect/connections/ai/openai/

Positioning guardrail

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