i3 Systems
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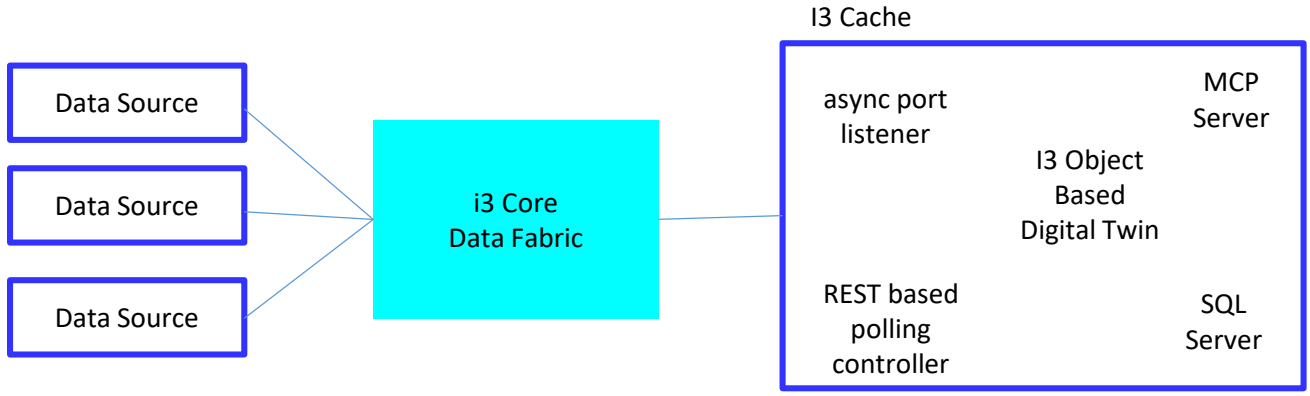
i3 Cache

Data at the Ready when and where you need it

----- Currently Under Development -----

Many data sources are based on REST protocols that require a GET request to retrieve the latest data. In these situations, when an application is in need of data, it must first poll the data infrastructure to request the needed data and then wait for the data to be updated. In autonomous systems, data sources produce data and issue it immediately hoping the application is ready for a data update. Such data handshaking can lead to performance impacting delays, result in the loss of key data, and create update cycle uncertainty. The i3 Cache system overcomes these hurdles by providing an application cache that is auto-updated based on data source specific polling intervals that actively register the latest data in a digital twin data model. Applications then access the data cache to quickly obtain the latest report data model values.



Why i3 Cache?

Improves Performance	Stop collecting terabytes of redundant business information and make better use of the data you are already collecting. By treating data as an asset that can be leveraged across the organization the ROI for data is increased.
Serves as Data integration Test Point	Apply data to improve the customer's complete journey. Customer experiences are shaped by organizational experiences rather than one of transactions and this requires access to many data sources.
Self-Adapting Object Registration	New Objects are self-registered reducing the operating and maintenance costs associated with expansion and maintenance of the data network.
MCP and SQL adaption layers	The i3 Caching system supports both Model Context Protocols (MCP) and Structured Query Language (SQL) interfaces simplifying the complexities often associated with LLM and relational database interfaces.
Improves Network Efficiency	Non-cached systems often result in duplicated and overlapping data queries that can be eliminated completely through local resolution of a cached system that is auto-updated by the network.

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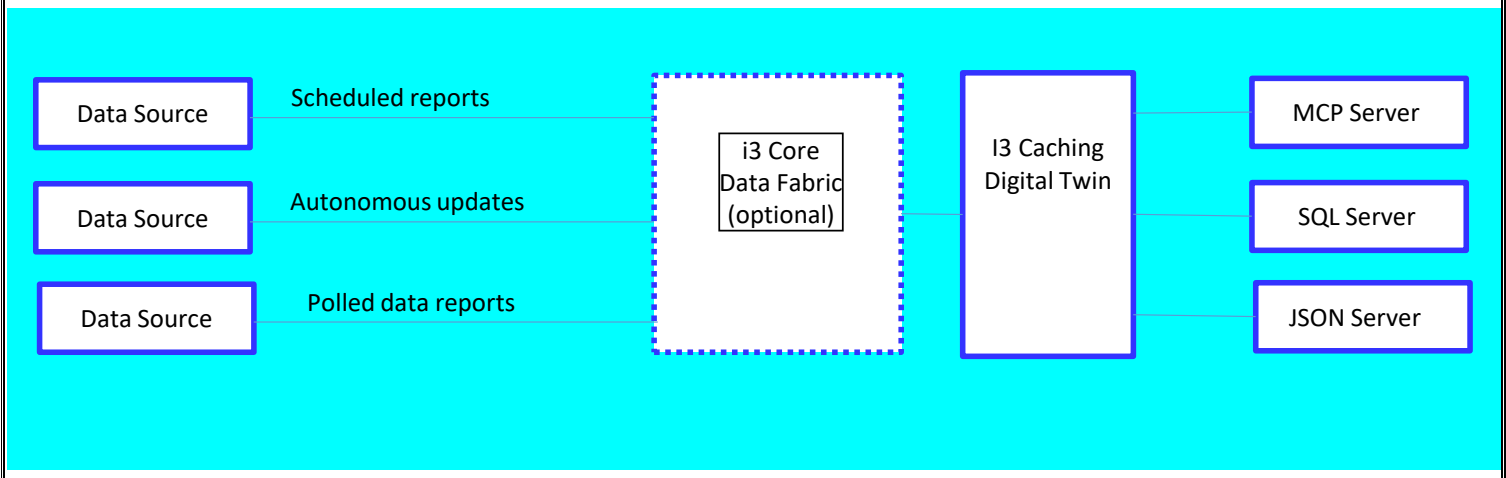
Data Where and When it is Needed

Object oriented data systems are often built based on a series of interconnected handshaking protocols that require segmented information restructuring though a series of data handoffs. The interconnected components of such systems are difficult to maintain, complicated to support, and results in unnecessary wait times between compartmentalized interactions. The i3 Caching systems eliminates these wait times by caching a digital twin representation of current data objects close to the application. A cached virtual representation of data eliminates wait times associated with data retrieval thereby improving overall system performance.



i3 Cache Features

- Object Oriented Digital Twin Registery
- Json based messaging interface for object updates
- SQL interface for relational database integration
- MCP interface for integration with Large Language Model Systems.
- Administrative interfaces for resolution of competing object identifiers
- Runs in cloud, hosted, or edge environments.