Server to Server Service

Information on how to set up a TagProvider connection Server to Server.

TcpDataAccess TagProvider facilitates the Server to Server communication, allowing two solutions to interact directly with another, exchanging and synchronizing data efficiently. This is especially useful in scenarios where you need to relay data from one system to another without manual interventions, ensuring data continuity and real-time updates.

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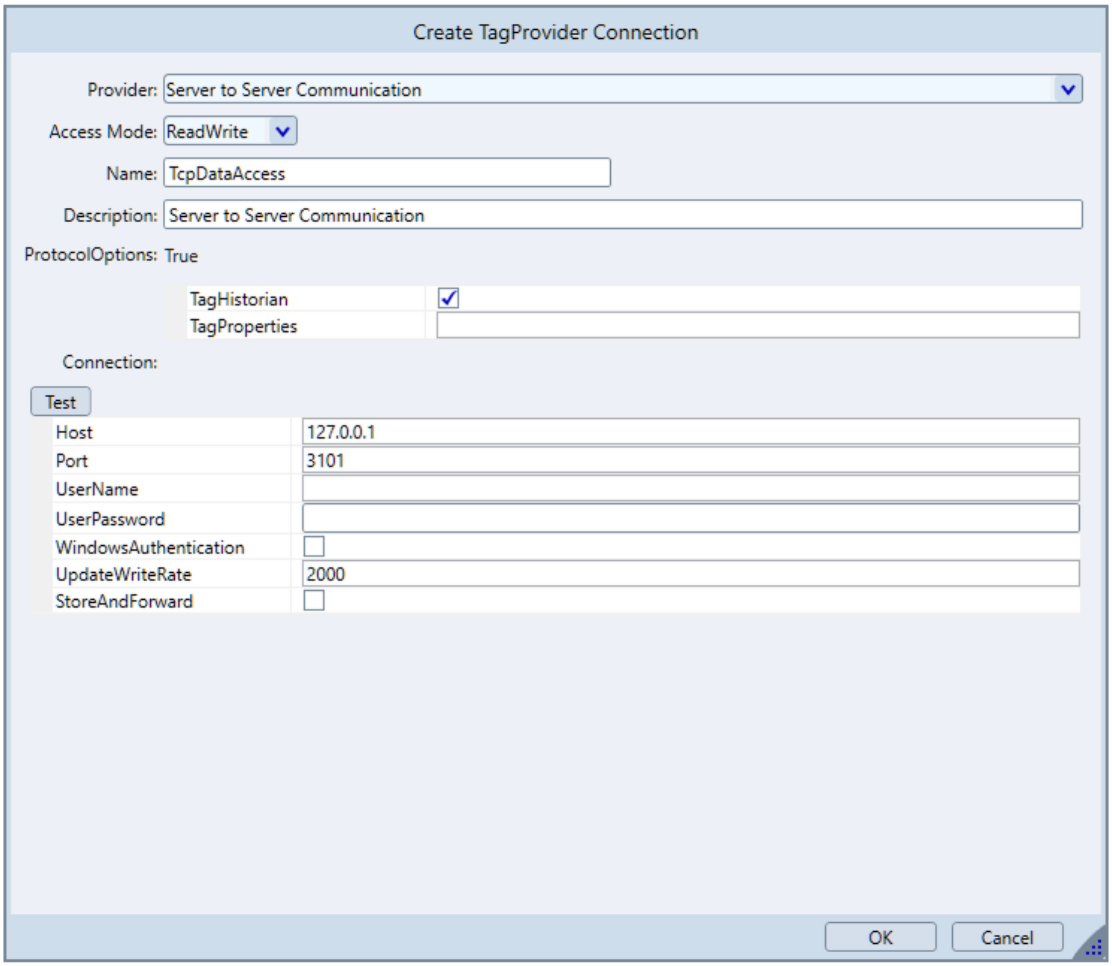
Configuration

To set up TcpDataAccess as a new TagProvider connection navigate to **Unified Namespace/TagProvider Connections** and press the add button to open the New TagProvider Connection dialog. You can also create your TagProvider Connection directly from the AssetTree. To do this, navigate to **Unified Namespace/Assets Tree** and press  to open the New TagProvider Connection dialog. In the configuration dialog, select the **Server to Server Communication** on the Provider field and insert the required connection parameters. After that, press the Ok button to finish the provider configuration. Creating the connection adds no folder to the Asset Tree. To use its data with Asset(), open **Unified Namespace / Assets Tree**, select a folder (create one first if needed) and click **Insert data from TagProvider** on the toolbar: the folder linked to the TagProvider is created inside the selected folder. A linked folder cannot sit at the root of the Asset Tree.



Connection Parameters

Field	Description
Provider	Specifies the system the TagProvider will interface with. In this case, it interfaces with Server to Server Communication.
Access Mode	Determines permissions for interacting with tags. **Read** allows data reading. **Write** permits data writing. **ReadWrite** enables both reading and writing.
Name	User-defined name for the TagProvider instance. Identifies the specific configuration in the system.
Description	Explains the TagProvider's purpose or the systems it interfaces with. Provides context for its usage.
ProtocolOptions	Defines specific communication settings for the connection to the device.
TagHistorian	Enables the TagHistorian feature for storing historical data.
TagProperties	Enables the TagProperties feature for managing tag metadata.
Connection	Defines connection settings for the server, including host, port, username, password, and additional options.

Station Parameters

The Test button verifies the connection settings to ensure successful communication with the specified server.

Field	Description
Host	Specifies the IP address of the Server system. It directs the client to connect to the specified server. Example: 192.168.1.1.
Port	Indicates the TCP/IP port of the Server system. It allows data transmission via the specified port. Example: 8080.
UserName	Identifies the username with ClientStart permission in the Server system. It authenticates the user attempting to access the server. This parameter is optional and defaults to the startup user. Example: admin_user.
UserPassword	Provides the password for the user. It secures the connection by verifying the user's identity. This parameter is optional and defaults to the startup user. Example: password123.
WindowsAuthentication	Enables Windows-based authentication. It allows users to authenticate using their Windows login credentials. Check the box to enable.
Update Write Rate	Specifies the frequency at which data updates are written or synchronized with the server. It helps manage bandwidth and ensures timely data relay. Example: 5 seconds.
StoreAndForward	Enables temporary data storage if the server is unreachable. It stores data locally and forwards it once the connection is re-established. Check the box to enable.

Data Access and Visibility

Not all tags on the remote server will be accessible by the TagProvider. The visibility of the data and its access permissions (read or write) are defined by the remote system, according to the Visibility property of the tags in the remote system.

The available options are:

- **Private:** The tag remains visible only to the local project and its redundant pair. Use this setting to restrict the tag's visibility, ensuring that only the local project and its backup can access the tag. Private tags will not be visible to remote servers using the TagProvider connection.
- **Protected:** The tag becomes visible to external connections for read-only operations. This setting allows external systems to read the tag's value without permitting any modifications, ensuring that the data remains unchanged. Protected tags are accessible to TagProvider connections for read-only operations.
- **Public:** The tag becomes visible to external connections for both reading and writing. This setting provides full access to the tag, allowing external systems to both read and modify the tag's value. Public tags are accessible by TagProvider for both read and write operations.

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