Advanced Simulator Driver Help

© 2014 Kepware Technologies

Table of Contents

Table of Contents	2
Advanced Simulator Driver Help	3
Overview	3
External Dependencies	3
Driver Setup	4
Data Source Settings	4
Data Source Setup	5
Tables	9
Timing	9
Running as an NT Service	10
Connecting Remotely as an NT Service	10
Data Source Authentication	10
Setting Up SQL Authentication	11
Data Types Description	
Address Descriptions	21
Error Descriptions	
Address Validation	
Missing address	22
Device address ' <address>' contains a syntax error</address>	
Data Type ' <type>' is not valid for device address '<address>'</address></type>	23
Device address ' <address>' is Read Only</address>	
Array support is not available for the specified address: ' <address>'</address>	23
Device Status Messages	23
Write request rejected on read-only item reference ' <channel name=""><device name=""><address>' \dots</address></device></channel>	
Advanced Simulator Driver Specific Messages	
Unable to retrieve table names	24
Unable to retrieve table column names	24
Unable to retrieve table row count	24
Unable to connect to data source on channel ' <channel name="">'</channel>	
Data source ' <data name="" source="">' is configured as Read Only (all writes will be rejected)</data>	
Unable to open recordset on device ' <device name="">'</device>	
Unable to query recordset on device ' <device name="">'</device>	
Unable to retrieve database value for tag ' <tag address="">' on device '<device name="">'</device></tag>	
Unable to read internal tag <tag address="">' on device '<device name="">'</device></tag>	
Unable to write to internal tag ' <tag address="">' on device '<device name="">' (Reason: ODBC Specific</device></tag>	Error)26
Index	27

Advanced Simulator Driver Help

Help version 1.016

CONTENTS

Overview

What is the Advanced Simulator Driver?

Driver Setup

How do I configure the Advanced Simulator Driver to communicate with ODBC data sources?

Data Types Descriptions

What data types are supported by this driver?

Address Descriptions

How do I address a data location in the ODBC data source?

Error Descriptions

What error messages are produced by the Advanced Simulator Driver?

Overview

The Advanced Simulator Driver plugs into the industrial-based OPC Server, which supplies reliable data access to any HMI, SCADA, Historian or Enterprise application supporting OPC, DDE, FastDDE and SuiteLink. The Advanced Simulator driver provides single-point access to multiple ODBC data sources via ODBC. It simulates live data by traversing through all the records in a selected table at a rate set by the user.

Note: For information on general server topics, refer to the OPC server's help documentation.

External Dependencies

This driver has external dependencies. It requires Microsoft Data Access Components (MDAC), which consist of several core components that provide various database technologies (including ODBC and its drivers).

3

Driver Setup

Supported ODBC Data Sources

The Advanced Simulator Driver supports any ODBC-compliant data source, including the following:

Microsoft Access Microsoft SQL MySQL* Oracle Sybase

*If the project uses a MySQL data source, select **MySQL** from the **Model** drop-down list when creating a device. The driver will accommodate the MySQL-specific data handling requirements. Users should make sure that the MyODBC driver is installed for the PC that is running the OPC server.

Note: The Advanced Simulator Driver also supports the following:

- Multiple connection sessions to multiple ODBC data sources.
- Automatic tag generation from the ODBC data source.
- OPC DA.
- Drag and drop editing.
- CSV import and export for easy manipulation of many tags.
- New tags that can be added to the application at any time (including Runtime).
- Running as a Windows NT Service.

Communication Protocol

ODBC API

Maximum Channels and Devices

The maximum number of channels supported by this driver is 100. The maximum number of devices is 4096 per channel.

Data Source Settings

The Data Source Settings tab is used to configure various data source settings. It is located in Channel Properties.

Channel Properties	×
General Write Optimizations Data Source Settings	
Data Source Selection	- I.
Data source: pubs	
User name:	
Password:	
<u>C</u> onfigure DSN	
Login timeout: 15 📑 seconds	
OK Cancel Apply Help	

Data Source

This parameter is used to select a Data Source Name (DSN). A DSN must be created and configured for a data source before it will appear in this list and the ODBC database. For information on how to do so, follow the instructions below.

- 1. To start, click Configure DSN to open the Microsoft® ODBC Data Source Administrator.
- 2. Select either the **User DSN** or **System DSN** tab. Data source types are local to the computer: the User DSN is user-dedicated, whereas the System DSN can be accessed by any user with privileges.
- 3. Next, map an ODBC data source to a data source name.
- 4. Once a DSN has been configured successfully, it will appear in the Data Source drop-down menu.

Note: For more information, refer to Data Source Setup.

User Name and Password

The User Name and Password settings are only needed if required by the data source. For example, these fields are required when using SQL server authentication.

Note: Some data sources allow Windows NT Authentication to be used in order to gain access to the data source. When used, the data source will ignore the User Name and Password specified in the Data Source Settings tab and will use the network Login ID instead. For more information, refer to **Data Source Authentication**.

Login Timeout

This parameter specifies the number of seconds that the server will wait for a response before timing out when attempting to connect to the ODBC data source. The default setting is 5 seconds. The range is 1-99999 seconds.

Data Source Setup

For information on setting up a data source in the OPC server using the Advanced Simulator driver, refer to the instructions below.

Important: Users can configure a DSN using the Microsoft® ODBC Data Source Administrator launched from the operating system's Start menu. Because the server is a 32 bit application, it is necessary that the 32 bit version of the administrator be used when configuring a System DSN. A 64 bit operating system will launch the 64 bit version of the administrator by default; therefore, users may need to browse to the SysWOW64 directory to access the 32 bit version.

Note: If using MySQL, the MyODBC driver must be installed on the PC that is running this OPC server.

1. To start, create a channel in the OPC server project. Then, right-click on that channel in the OPC server application and select **Properties**.

2. In the **Data Source Settings** tab, click **Configure DSN**.

Channel Properties	×
General Write Optimizations Data Source Settings	
Data Source Selection	
Data source: pubs	
User name:	
Password:	
<u>C</u> onfigure DSN	
Login timeout: 15 📑 seconds	
OK Cancel Apply Help	

3. In this example, System DSNs are used because they are local to the computer and not user-dedicated. Users may choose to select User DSNs as well, which are local to the computer and only accessible to the current user. Click **Add**.

۲	ODBC Da	ta Source Administrator	? ×
ſ	Jser DSN	System DSN File DSN Drivers Tracing Connection Pooling A	bout
	<u>S</u> ystem Da	ata Sources:	
	Name	Driver Add.	<u> </u>
		<u>R</u> emo	ve
			are
	•		
		An OPPC Content data annual data à formation alternation	
		An UDBC system data source stores information about now to connect the indicated data provider. A System data source is visible to all use	st to
	-	on this machine, including INT services.	
		OK Cancel Apply H	lelp

6

4. Next, select the desired data source. In this example, the **SQL Server** data source is used.

Create New Data Source			×
Create New Data Source	Select a driver for which you want to Name Microsoft Excel Driver (*.xls) Microsoft FoxPro VFP Driver (*.dbf) Microsoft ODBC for Dracle Microsoft Paradox Driver (*.db) Microsoft Text Driver (*.txt; *.csv) Microsoft Visual FoxPro Driver SOL Server	set up a data source. Version ▲ 4.00.5303.01 6.01.8629.01 2.573.6526.00 4.00.5303.01 4.00.5303.01 6.01.8629.01 2000.80.194.00	×
	< Back Finis	sh Cancel	_

5. Name the ODBC data source and then select the **SQL Server** to which it will be connected. Then, click **Next**.

Create a New Data Sourc	te to SQL Server
Select a diwer we me of Access i of dB ase i how of Access i of dB ase i how of Access i how o	This wizard will help you create an ODBC data source that you can use to connect to SQL Server. What name do you want to use to refer to the data source? Name: pubs How do you want to describe the data source? Description: Which SQL Server do you want to connect to? Server: SOL
	Finish <u>N</u> ext > Cancel Help

6. Ensure that the **Windows NT Authentication** default is selected. Click **Next**.

Note: If planning to use the OPC server in NT Service mode, refer to Running as an NT Service.

Create a New Data Sourc	ce to SQL Server	×
Selaci a dirver ror me off Access of off dBase of soft Excel by prosent For off ODBr by prosent For by prosent For For For For For For For For For For	How should SQL Server verify the authenticity of the login ID? • With Windows NT authentication using the network login ID. • With <u>SQL</u> Server authentication using a login ID and password entered by the user. • To change the network library used to communicate with SQL Server, click Client Configuration. • Client Configuration • Client Configuration options. • Login ID: • Login ID: • Login ID:	
	< Back Next > Cancel Help	

7. Next, change the default database to the one for the desired connection. If the specific database is unavailable, select the default instead.

Create a New Data Sour	ce to SQL Server	×
Select a driver row me cold Access of out dBase for solt Excel for boot Excel for for Boot Excel for for Boot Excel for for Boot Excel for fo	 Change the default database to: Pubs Attach database filename: Attach database filename: Create temporary stored procedures for prepared SQL statements and drop the stored procedures: Only when you disconnect. When you disconnect and as appropriate while you are connected. Use ANSI quoted identifiers. Use ANSI nulls, paddings and warnings. Use the failover SQL Server if the primary SQL Server is not available. 	
	< <u>B</u> ack <u>N</u> ext > Cancel Help	

- 8. Continue through the Wizard, keeping the defaults as the remaining settings.
- Test the data source connection at the end by selecting Test Data Source. If the connection is good, users will receive the message Test Successful.

DDBC Microsoft SQL Server Setup	×
A new ODBC data source will be created with the following configuration:	
Microsoft SQL Server ODBC Driver Version 03.85.1132	A
Data Source Name: Pubs Data Source Description: Server: SQL Database: (Default) Language: (Default) Translate Character Data: Yes Log Long Running Queries: No Log Driver Statistics: No Use Integrated Security: No Use Integrated Security: No Use Regional Settings: No Prepared Statements Option: Drop temporary procedures on disconnect Use Failover Server: No Use ANSI Quoted Identifiers: Yes Use ANSI Null, Paddings and Warnings: Yes Data Encryption: No	
Test Data Source OK Canc	el

Tables

Selecting Tables

This parameter is used to specify a table from which data will be accessed. All table names available from the ODBC data source are available for selection.



A number of tags are automatically generated in the server's tag database depending on the number of fields in the selected table. An internal control tag is also generated in order to access data.

Internal Control Tag	Access	Description
MoveTo	Read/Write	This internal tag moves forward or backward to the specified record number. It will continue updating the tags from its new position at the specified record selection interval.*

*For more information, refer to **Timing**.

Timing

The driver simulates live data by traversing through all the records in the selected table at a rate set by the user. The tags are initialized to the data contained in the first record. The driver automatically selects the next record in the table at the set interval. The tags contain the data from the selected record. When the last record in the table is reached, users have the option to automatically start with the first record.

Record Selection Interval

This parameter specifies the time interval for the driver to read the next record from the selected table. The driver updates the tags at these intervals. The valid range is 100 milliseconds to 99999999 milliseconds.

Automatically Move to the First Record When the Last Record is Reached

When checked, this parameter causes the driver to start reading from the first record when the last record is reached. When unchecked, the driver will stop at the last record.

Running as an NT Service

An OPC server that only supports stand alone program operation is usually forced to shut down when its host machine experiences a user login or logout. This server, however, can continue to supply OPC data across user login sessions by running as an NT service. This is crucial for many applications where the server must provide data to OPC clients via DCOM. For these applications, the loss of a DCOM connection cannot be tolerated.

Note: For more information, refer to the OPC server help file located in the server application under **Help** | **Server Help**.

See Also: Connecting Remotely as an NT Service

Connecting Remotely as an NT Service

This ODBC communications application supports running as a service under Windows NT. When set to NT service mode, this application will use the system account (anonymous user) instead of a user account by default. This may pose a problem when trying to use Windows NT Authentication to connect to the remote data source. An error message may appear stating "Login failed for user NT AUTHORITY\ANONYMOUS LOGON" in the OPC server.

It is recommended that SQL Authentication be used when the OPC server is running in NT service mode because it provides a secure connection. It is possible, however, to set the data source to allow anonymous logon. In this case, Windows NT Authentication may be used but will not provide a secure connection.

See Also: Setting Up SQL Authentication and Data Source Authentication.

Data Source Authentication

Windows NT Authentication

The SQL server is configured to use authentication for security. It can authenticate with Windows NT authentication by default through the use of the network Login ID. This makes SQL server logon transparent and eliminates the need for a user name and password.

SQL Server Authentication

The SQL server has its own authentication method. In order to connect the OPC server to the SQL server using SQL authentication, users must first set the authentication method in the SQL server to allow SQL authentication. They must also define a Login ID and Password. Once completed, users may enter the user name and password within the OPC server under the Channel Properties' Data Source Setting dialog.

See Also: Setting Up SQL Authentication and Running as an NT Service.

Channel Properties	×
General Write Optimizations Data Source Settings	
Data Source Selection	
Data source: Pubs	
User name: john	
Password:	
Configure DSN	
Login timeout: 15 💼 seconds	
OK Cancel <u>A</u> pply Help	

Setting Up SQL Authentication

Refer to the instructions below for information on how to setup SQL authentication. This is only necessary when attempting to connect remotely to SQL server while running as an NT service.

See Also: Running as an NT Service, Connecting Remotely as an NT Service and Data Source Authentication.

1. In the **SQL Manager**, right-click on the SQL server icon in the tree and then select **Properties**.

🚡 Console Root\Microsof	New Window fro
<u>Action View</u> <u>T</u> ools	Refresh
Tree	Export List
Console Root	Properties
E Microsoft SQL Servers	
🖻 付 SQL Server Group	Help -
🖻 🚮 SQL (Windows	NT)
吏 🧰 Databases	
🗄 📄 Data Trans	formation Services
🗄 💼 Manageme	nt

2. Open the Security tab and then select the mixed authentication mode SQL Server and Windows.

SQL Server P	roperties (Configure) – k	(EP_SQL	×
Server Setti General	ings Database Settings Memory Processor	Replication Security	Active Directory
- Security-	SQL Server provides auther accounts and a named SQL Authentication: © SQL Server and Win © Windows only Audit level: © None © Success	ntication based on Server login ID a ndows Failure All	Windows nd password.
Startup s	ervice account Start and run SQL Server in O System account O This account Password:	the following acco Administra	ount: ator
	ОК	Cancel	Help

3. In the tree menu, right-click on the **Security** folder. Click **Logins** and then select **New User**.

🚡 Console Root\Microsoft S	5QL Serve				
] <u>A</u> ction ⊻iew <u>T</u> ools] <	⊨ → [
Tree					
🦲 Console Root					
🖻 🗐 Microsoft SQL Servers					
📄 📑 SQL Server Group					
🗄 🚮 SQL (Windows NT)					
🗄 🚞 Databases					
🔃 🧰 Data Transformation Se					
🕂 💼 Management					
E Security					
Logins					
Server R	oles				
📋 🕀 👯 Linked Se	ervers				
≦ [∎] Remote S	Servers				
🗄 🕀 🛄 Support Serv	rices				
📄 🕀 🔃 🕀 🗄 🗄	ervices				

4. In the **New Login** dialog, select the **General** tab. Define a user name and password.

SQL 9	Serve	r Login Proper	ties - New Login	×
Ge	neral	Server Roles [Database Access	
6				
Q	- Ç	Name:	John	
A	uthent	ication		.
		O Windows Au	uthentication	
		Domain:	v	
		Security acc	cess:	
		💿 Gran	t access	
		O Deny	access	
		SQL Server.	Authentication	
		Password:	XXXXX	
D	efault:	S	with the second state and for this larging	
6		specily the deta	iuk language anu uakabase tor knis login.	
Ļ	Ē	Database:	nubs 💌	
		1		
		Language:		

5. Next, open the **Database Access** tab and select the database to which the user will connect.

6. Select a role for the database. In this example, **Public** is used. When finished, click **Properties**.

s	QL Serve	r Login Pr	operties - N	lew Login		X
	General	Server Rol	es Databas	se Access		
		Specify v	vhich databa:	ses can be	accessed by this l	ogin.
	<u> </u>	Permit	Database	User		▲
			Northwind			
			master			
			model			
			msdb			
		🗹 😰	pubs	john		
			tempdb			
		Database	e roles for 'pu	bs':		
		Permit in	Database R	ole		
		🗹 🕵 р	ublic			
		🗆 🖸 🕵 d	b_owner			
		🗆 🖸 🕵 d	b_accessadr	min		
		🗆 🖸 💭 d	b_securityad	min		
		🗆 🖸 🖸	b ddladmin			
					Pr	operties
				OK	Cancel	Help

7. Under Database Role Properties, click on Permissions....

Database I	Role Properties - public	×
General		
5 2	Name: public Permissions	ון
SQL Ser contain	rver supports two types of database roles: standard roles, which members, and application roles, which require a password.	
Databas	e role type:	
	Standard role	
	User	
	🕵 dbo	
	👷 guest	
	💱 pubsGroup	
	Add Remove	
	O Application role	
	Password	
	OK Cancel Apply Help	

8. Check the boxes of the objects that the user will be able to access. In this example, the user is allowed to perform "Select" queries on the "author" table.

List all objects List only objects with permissions for this role. bject Owner SELECT INSERT UPDATE DELETE EXEC DRI III ID dbo ID ID <t< th=""><th>e</th><th>Database role:</th><th></th><th>public</th><th></th><th></th><th></th><th>-</th><th>]</th><th></th></t<>	e	Database role:		public				-]	
List only objects with permissions for this fore. bject Owner SELECT INSERT UPDATE DELETE EXEC DRI III dbo Image: Select in the objects with permission of this fore. Image: Select in the objects with permission of this fore. Image: Select in the objects with permission of this fore. IIII dbo Image: Select in the objects with permission of this fore. Image: Select in the objects with permission of the objects withe objects with permission of the objects withe	 List List 	all objects	Pormioniono	for this role						
ID dbo ID dbo ID ID <thid< th=""> <thid< th=""> ID <th< th=""><th>Object</th><th>Conly objects with</th><th>Owner</th><th>SELECT</th><th>INSERT</th><th>UPDATE</th><th>DELETE</th><th>EXEC</th><th>DRI</th><th></th></th<></thid<></thid<>	Object	Conly objects with	Owner	SELECT	INSERT	UPDATE	DELETE	EXEC	DRI	
BumpAllPar dbo Image: Conservation of the constraint of		ID	dbo							
Image: Constraint of the state of the s	2	_BumpAllPar	dbo							
Image: Sector Value dbo Image: Sector Value dbo Image: Sector Value	2	_OneParameter	dbo							
StringToNu dbo □ Image: TwoParameter dbo □ authors dbo □ byroyalty dbo Image: Transmission of the second seco	2	_ReturnValue	dbo							
Image: Second secon	_	_StringToNu	dbo							
image: authors dbo ✓ □ □ □	2	_TwoParameter	dbo							
🚰 byroyalty dbo 🗹 🗹		authors	dbo	V						
_	2	byroyalty	dbo					S		-
	• T									ŕ

- 9. At this point, the Data Source Name (DSN) should already be set up. If not, refer to **Data Source Setup** before continuing.
- 10. In the OPC server, select **Tools** | **Options**. Open the **Service** tab and then check **Automatically Start** as a **Windows NT Service**.

Options	x
General View Service Event Log OPC Settings OPC Compliance DDE	
Startup Automatically start as a Windows NT service	
OK Cancel Apply H	elp

11. Return to the OPC Server application and then right-click on the channel and select **Properties**. Open the **Data Source Settings** tab and click **Configure DSN**.

Channel P	roperties		×
General	Write Optimizations	Data Source Settings	
_ Data	Source Selection		
	Data source:	os 🔽	
	User name:		
	Password:		
	Con	figure DSN	
<u>L</u> ogin	timeout: 15	seconds	
	OK Cance	el <u>A</u> pply Help	

12. Select the System DSN that was created and then click **Configure**.

🔇 ODBC Data Source Administrator	<u>? ×</u>
User DSN System DSN File DSN Drivers Tracing Connection	Pooling About
<u>System Data Sources:</u>	
Name Driver	A <u>d</u> d
pubs SQL Server	<u>R</u> emove
	<u>C</u> onfigure
An ODBC System data source stores information about ho the indicated data provider. A System data source is visib on this machine, including NT services.	w to connect to ble to all users
OK Cancel Apply	Help

13. Next, confirm both the data source name and the server name. Then, select **Next**.

Create a New Data Sour	ce to SQL Server	×
Select a driver run me off dB ase f soft Access f soft Acc	This wizard will help you create an ODBC data source that you can use I connect to SQL Server. What name do you want to use to refer to the data source? Name: pubs How do you want to describe the data source? Description: Which SQL Server do you want to connect to? Server: SOL	
	Finish Next > Cancel Help	

- 14. Check With SQL Server Authentication using a login ID and password entered by the user.
- 15. Check **Connect to SQL Server to obtain default settings for the additional configuration options**. Then, enter the user name and password for the user defined in the SQL Server.

Microsoft SQL Server DSN	Configuration	×
Select a driver nor me off dB ase off dB ase off cosoft FoxPit rocott FoxPit rocott FoxPit rocott FoxPit rocott FoxPit	How should SQL Server verify the authenticity of the login ID? ○ With Windows NT authentication using the network login ID. ○ With SQL Server authentication using a login ID and password entered by the user. To change the network library used to communicate with SQL Server, click Client Configuration. Client Configuration. Image: Connect to SQL Server to obtain default settings for the additional configuration options. Login ID: john Password: *****	
	< <u>B</u> ack <u>N</u> ext > Cancel Help	

16. Continue through the Wizard, keeping the default settings for the remaining parameters. Test the data source connection at the end by selecting **Test Data Source**. If the connection is good, users will receive the message **Test Successful**.

ODBC Microsoft SQL Server Setup	×
A new ODBC data source will be created with the following configuration:	
Microsoft SQL Server ODBC Driver Version 03.85.1132	
Data Source Name: Pubs Data Source Description: Server: SQL Database: (Default) Language: (Default) Translate Character Data: Yes Log Long Running Queries: No Log Driver Statistics: No Use Integrated Security: No Use Integrated Security: No Use Regional Settings: No Prepared Statements Option: Drop temporary procedures on disconnect Use Failover Server: No Use ANSI Quoted Identifiers: Yes Use ANSI Quoted Identifiers: Yes Use ANSI Null, Paddings and Warnings: Yes Data Encryption: No	4
OKCanc	el

Data Types Description

Data Type	Description
Boolean	Single bit
Byte	Unsigned 8 bit value
	bit 0 is the low bit
	bit 7 is the high bit
Char	Signed 8 bit value
	hit () is the low hit
	hit 6 is the high hit
	bit 7 is the sign bit
Word	Unsigned 16 hit value
Word	onsigned to bit value
	bit 0 is the low bit
	bit 15 is the high bit
Short	Signed 16 bit value
	bit 0 is the low bit
	bit 14 is the high bit
	bit 15 is the sign bit
DWord	Unsigned 32 bit value
	bit 0 is the low bit
	bit 31 is the high bit
Long	Signed 32 bit value
	bit 0 is the low bit
	bit 30 is the high bit
	bit 31 is the sign bit
Float	32 bit Floating point value.
	The first state has a second in the bit we sister as a Floridian
	The driver interprets two consecutive 16 bit registers as a rioaung
	point value by making the second register the high word and the first
	register the low word.
Double	64 bit Floating point value
String	Zero terminated character array. This driver limits string lengths to
	256 characters.

Note: The default data type is String.

Address Descriptions

Tag validation will only occur when a tag is requested by a client application. If a link to the ODBC data source cannot be made by the driver or the address that the tag references cannot be resolved by the driver (meaning that the address cannot be mapped to the data set in the ODBC data source) then the tag's data quality will be set to bad. The appropriate error message will be placed in the OPC server's event log. For more information, refer to **Error Descriptions**.

Error Descriptions

The following error/warning messages may be generated. Click on the link for a description of the message.

Address Validation

Missing address Device address '<address>' contains a syntax error Data Type '<type>' is not valid for device address '<address>' Device address '<address>' is Read Only Array support is not available for the specified address: '<address>'

Device Status Messages

Write request rejected on read-only item reference '<channel name><device name><address>

Advanced Simulator Driver Specific Messages

Configuration Unable to retrieve table names Unable to retrieve table column names Unable to retrieve table row count

Runtime

Unable to connect to data source on channel '<channel name>' Unable to open recordset on device '<device name>' Unable to query recordset on device '<device name>' Unable to retrieve database value for tag '<tag address>' on device '<device name>' Unable to read internal tag <tag address>' on device '<device name>' Unable to write to internal tag '<tag address>' on device '<device name>' Data source '<data source name>' is configured as Read Only (all writes will be rejected)

Address Validation

The following error/warning messages may be generated. Click on the link for a description of the message.

Address Validation

Missing address Device address '<address>' contains a syntax error Data Type '<type>' is not valid for device address '<address>' Device address '<address>' is Read Only Array support is not available for the specified address: '<address>'

Missing address

Error Type: Warning

Possible Cause:

A tag address that has been specified statically has no length.

Solution:

Re-enter the address in the client application.

Device address '<address>' contains a syntax error

Error Type: Warning

Possible Cause:

A tag address that has been specified statically contains one or more invalid characters.

Solution:

1. Re-enter the address in the client application if the address is dynamic.

2. Re-enter the address in the server application if the address is static.

Data Type '<type>' is not valid for device address '<address>'

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically has been assigned an invalid data type.

Solution:

Modify the requested data type in the client or server application.

Device address '<address>' is Read Only

Error Type:

Warning

Possible Cause:

A tag address accessed by the client has requested an access mode that is not compatible with what the data source supports for that address.

Solution:

Change the access mode in the client application, Device Properties or under the actual tag in the server's tag database.

Note:

Some data sources do not support Write access, whereas others support it for specific items only.

Array support is not available for the specified address: '<address>'

Error Type:

Warning

Possible Cause:

A tag address that has been specified statically contains an array reference for an address type that doesn't support arrays.

Solution:

1. Re-enter the address in the client application in order to remove the array reference.

2. Correct the address type.

Device Status Messages

The following error/warning messages may be generated. Click on the link for a description of the message.

Device Status Messages

Write request rejected on Read Only item reference '<channel name><device name><address>

Write request rejected on read-only item reference '<channel name><device name><address> '

Error Type: Serious

Possible Cause:

A tag that has been specified as Read Only cannot be written to.

Solution:

N/A

Advanced Simulator Driver Specific Messages

The following error/warning messages may be generated. Click on the link for a description of the message.

Advanced Simulator Driver Specific Messages Configuration

Unable to retrieve table names Unable to retrieve table column names Unable to retrieve table row count

Runtime

Unable to connect to data source on channel '<channel name>' Data source '<data source name>' is configured as read-only (all writes will be rejected) Unable to open recordset on device '<device name>' Unable to query recordset on device '<device name>' Unable to retrieve database value for tag '<tag address>' on device '<device name>' Unable to read internal tag <tag address>' on device '<device name>' Unable to write to internal tag '<tag address>' on device '<device name>'

Unable to retrieve table names

Error Type:

Serious

Possible Cause:

1. The ODBC data source is not available.

2. The ODBC data source does not contain any tables.

Solution:

1. Verify that the ODBC data source is configured properly and that it is accessible by the user or from a remote machine.

2. Verify that the ODBC data source contains at least 1 table.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Unable to retrieve table column names

Error Type:

Serious

Possible Cause:

1. The ODBC data source is not available.

2. The ODBC data source table does not contain any columns.

Solution:

1. Verify that the ODBC data source is configured properly and that it is accessible by the user or from a remote machine.

2. Verify that the ODBC data source table contains at least 1 column.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Unable to retrieve table row count

Error Type:

Serious

Possible Cause:

1. The ODBC data source is not available.

2. The ODBC data source table does not contain any records.

Solution:

1. Verify that the ODBC data source is configured properly and that it is accessible by the user or from a remote machine.

2. Verify that the ODBC data source table contains at least one record.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Unable to connect to data source on channel '<channel name>'

Error Type:

Serious

Possible Cause:

1. The ODBC data source is not available.

2. The ODBC data source is not accessible based on user name and password.

Solution:

1. Verify that the ODBC data source is configured properly and that it is accessible by the user or from a remote machine.

2. Verify that the authentication settings are properly configured in the data source (if applicable).

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

See Also:

Data Source Authentication

Data source '<data source name>' is configured as Read Only (all writes will be rejected)

Error Type:

Serious

Possible Cause:

The ODBC data source is configured such that writes are not allowed.

Solution:

This should not create any trouble as all the tags are Read Only.

Unable to open recordset on device '<device name>'

Error Type:

Serious

Possible Cause:

- 1. The ODBC data source is not available.
- 2. The ODBC data source is not accessible based on user name and password.
- 3. The table or query specified by the device no longer exists.

Solution:

1. Verify that the ODBC data source is configured properly and that it is accessible by the user or from a remote machine.

2. Verify that the table or query is supported by the data source.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Unable to query recordset on device '<device name>'

Error Type:

Serious

Possible Cause:

The ODBC data source is no longer available.

Solution:

Verify that the ODBC data source is accessible by the user or from a remote machine.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Unable to retrieve database value for tag '<tag address>' on device '<device name>'

Error Type:

Serious

Possible Cause:

1. The ODBC data source is no longer available.

2. The tag represents an address that can not be resolved into a value available from the data source.

Solution:

1. Verify that the ODBC data source is accessible by the user or from a remote machine.

2. Verify that the tag represents an address that is supported by the data source and/or access method.

Unable to read internal tag <tag address>' on device '<device name>'

Error Type:

Serious

Possible Cause:

The internal tag depends on a successful response from the ODBC data source which is no longer available.

Solution:

Verify that the ODBC data source is still accessible by the user or from a remote machine.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Unable to write to internal tag '<tag address>' on device '<device name>' (Reason: ODBC Specific Error)

Error Type:

Serious

Possible Cause:

The internal tag depends on a successful response from the ODBC data source which is no longer available.

Solution:

Verify the ODBC data source is still accessible by the user or from a remote machine.

Note:

The ODBC Specific Error returned by the ODBC data source driver contains specific information on the cause of the problem.

Index

Α

Address Descriptions 21 Address Validation 22 Advanced Simulator 3 Advanced Simulator Driver 3-4 Advanced Simulator Driver Help 3 Advanced Simulator Driver Specific Messages 22-23 Array support is not available for the specified address: '<address>' 23

С

Communication Protocol 4 Configure DSN 6 Connecting Remotely as an NT Service 10

D

Data source '<data source name>' is configured as Read Only (all writes will be rejected) 25 Data Source Authentication 10 Data Source Settings 4 Data Source Setup 5 Data Type '<type>' is not valid for device address '<address>' 23 Data Types Description 20 Device address '<address>' contains a syntax error 22 Device address '<address>' is Read Only 23 Device Status Messages 22-23 Driver Setup 4 DWord 20

Ε

Error Descriptions 22 External Dependencies 3 Н

Help Contents 3

М

MDAC 3 Microsoft Data Access Components 3 Missing address 22

0

ODBC API 4 Overview 3

Ρ

Possible Cause 22-23

R

Record Selection Interval 9 Running as an NT Service 10

S

Setting Up SQL Authentication 11 String 20 Supported ODBC Data Sources 4 System DSN 6

Т

Tables 9 Timing 9

U

Unable to connect to data source on channel '<channel name>' 25 Unable to open recordset on device '<device name>' 25 Unable to query recordset on device '<device name>' 25 Unable to read internal tag <tag address>' on device '<device name>' 26 Unable to retrieve database value for tag '<tag address>' on device '<device name>' 26 Unable to retrieve table column names 24 Unable to retrieve table names 24 Unable to retrieve table names 24 Unable to retrieve table row count 24 Unable to write to internal tag '<tag address>' on device '<device name>' (Reason: ODBC Specific Error) 26

W

Write request rejected on read-only item reference '<channel name><device name><address> 23

29