Wonderware Operations Integration – Supervisory AutomationDirect DOMORE Server (G-1.2 Series)

Schneider Electric

Contents

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This document describes the technical specifications and configuration options for the Wonderware® Operations Integration - Supervisory AutomationDirect DOMORE Server (or DOMORE OI Server, for short).

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Legal Information

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For comments or suggestions about the product documentation, send an e-mail message to ProductDocumentationComments@schneider-electric.com.

Technical Support

Wonderware Technical Support offers a variety of support options to answer any questions on Wonderware products and their implementation.

Before you contact Technical Support, refer to the relevant section(s) in this documentation for a possible solution to the problem. If you need to contact technical support for help, have the following information ready:

- The type and version of the operating system you are using.
- Details of how to recreate the problem.
- The exact wording of the error messages you saw.
- Any relevant output listing from the Log Viewer or any other diagnostic applications.
- Details of what you did to try to solve the problem(s) and your results.
- If known, the Wonderware Technical Support case number assigned to your problem, if this is an ongoing problem.

Introduction to the DOMORE OI Server

These are the technical specifications for Wonderware Operations Integration - Supervisory AutomationDirect DOMORE Server.

Requirements

DOMORE OI Server requires Wonderware Operations Integration – Core G-1.2 or later.

Supported hardware and software

This OI Server enables TCP/IP Ethernet communication with AutomationDirect Do-more H2 Series Programmable Logic Controllers (PLCs).

To program your PLC, you can use the Do-more Designer Programming Software from AutomationDirect. For more information, go to: support.automationdirect.com/products/domore.html

Conformance

The following hardware and software was used for conformance testing of this OI Server:

- Equipment: H2-DM1E
- UDP Port: 28784

Configuring the DOMORE OI Server

Each server instance has its own hierarchy of objects, and each object has parameters that you need to configure in order to establish communication between the OI Server and individual devices on the network.

You can view a DOMORE server instance's configuration hierarchy under its **Configuration** node.

This section only describes how to configure object parameters for a DOMORE server instance. For more general information about adding and configuring objects, see "Configuring Your OI Server" in the *Operations Integration Server Manager Help*.

Configuring a Channel's Communication Settings

Configure the communication settings for a selected channel to ensure uninterrupted communication with the device network.

Advanced

Click this button to open the *Advanced Settings* dialog box, which provides access to additional communication settings such as timeouts, retries, and buffer sizes. You might need to change these settings if the OI Server behaves unexpectedly during run time, but the default settings should work for most network configurations. For more information about these settings, see "Advanced Settings" in *Operations Integration Server Manager Help*.

Setting a Device's Station ID

Set the station ID for a selected device so that the OI Server can identify and communicate with it on the network.

Syntax

The station ID for a target device must use the following syntax:

```
[CSV File Name:]<IP Address>[:Port Number]
```

The following syntax diagram shows all of the possible options:
{ | *CSV File Name*: }*IP address*{ | :*Port Number* }

CSV File Name

The name of the CSV file exported by Do-more Designer. This is required only when accessing the user-defined blocks, heap items, or nicknames.

This parameter is optional.

To export the file from Do-more Designer:

1. On the **File** menu, click **Export** > **Element Documentation**. A new window is displayed.
2. Select **C-More Do More Driver Format**, and then click **Save**.

IP address

The IP address of the PAC.

Port Number

This is the UDP port number.

This parameter is optional. If not specified, the driver will use the default UDP port 28784.

Examples

Examples of valid station IDs:

```
192.168.110.101

192.168.110.101:28785

192.168.110.101:28785

C:\TagFile.csv:192.168.110.101:28785
```

DOMORE OI Server Reference

Use item references to access data stored in memory registers in connected devices, as well as to access standard system items in the OI Server itself.

This section only describes the item reference syntax and options for the DOMORE server. For more general information about item references, see "Managing Device Items" and "Item Reference Descriptions" in the *Operations Integration Server Manager Help*.

Item Reference Syntax

Item references in this OI Server use the following syntax.

Specify the variable you want to communicate with. The element can be a memory block, a heap item or a nickname. Please notice that user defined memory blocks or heap items and nicknames will require the CSV file in the station field.

Atomic Memory Blocks (non-structure)

They are accessed by specifying the name of the block followed by an index variable. The index should be within the valid range of values configured for that memory block. User defined blocks require the CSV file in Station field. The syntax is as follows:

```
<BlockName><Index>
```

BlockNameIndex

BlockName

The name of the memory block which can be either a System memory block or a User defined block.

Index

The index of the element to be accessed.

Structure Memory Blocks

They are accessed by specifying the name of the block followed by an index and an element. The index should be within the valid range of values configured for that memory block. User defined blocks require the CSV file in Station field. The syntax is as follows:

```
<BlockName><Index>.<ElementName>
```

BlockNameIndex.*ElementName*

BlockName

The name of the memory block which can be either a System memory block or a User defined block.

Index

The index of the element to be accessed.

ElementName

The name of the element in the struture that is being accessed.

Heap Items

They are accessed by giving the name of the heap item and the name of the element of the structure to be accessed, without giving any index. User defined heap items require the CSV file in Station field. The syntax is as follows:

```
<HeapItemName>.<ElementName>
```

HeapItemName.ElementName

HeapItemName

The name of the Heap item being accessed which can be either a Built-in or User defined item.

ElementName

The name of the element in the struture that is being accessed.

Nicknames

Nicknames can be created in the programming software for any element that can be accessed. Nicknames require the CSV file in Station field. The syntax is as follows:

```
<Nickname>
```

Nickname

NickName

The nickname assigned to the element being accessed.

String Structure

The String structure can be created by the programming software and it can be accessed by its name. The syntax is as follows:

```
<StringName><Index>.[Optional ElementName]
```

StringNameIndex{ | .*ElementName*}

StringName

The name assigned to the element being accessed.

Index

The index of the element to be accessed.

ElementName

The name of the element in the struture that is being accessed. For example for String we have the MaxLen and the Length elements. This parameter is optional.

Examples of Item References

These are examples of valid item references for this OI Server. For more information about the referenced addresses, see the manufacturer's documentation for your device.

Controller Address	Item Reference
D10	D10
V90	V90
$Main.RunCounter	$Main.RunCounter
T1.Acc	T1.Acc
TestHeap.Acc	TestHeap.Acc
NickName1	NickName1

DOMORE OI Server Error Codes

The following tables describe the additional error codes that you might receive when poll/poke requests and operations fail.

Code	Description	Possible Causes	Solution
1	Unknown Command	The command sent is not correct or protocol version is mismatched or the message is corrupted.	Check the versions and update. If they are correct, check the cabling, routing and switches for bad packets.
2	Out of Sessions	Too many devices connected.	Reduce the number of devices or restart the driver.
3	Illegal Operation	Not sufficient permission levels for the operation performed.	Increase the permission level for the user on the device.
4	Invalid Session	The session number does not match the sending device.	Re-establish connection or restart the driver and try again.
5	Out of Range	Invalid address accessed	Ensure that the correct address is given and is within range specified. Or expand the address range on PLC and load configuration.
6	Invalid Argument	Message corrupted or nor parsed properly. Could occur from noise or faulty wiring.	Check the parameters sent.
7	Program Update Active	Program Update is running	Wait until Program Update is complete.
8	No Token	Attempted to update the program without first acquiring the program update token.	Wait until Program Update is complete.
9	Program Update Inhibited	Client attempted to update the program when ST21 is TRUE. This allows the customer to use the program to prevent the project from being updated.	-
10	System Configuration Update Active	System Configuration Update Active is running	Wait till it is complete to continue communications.
11	Invalid Mode	The mode is not valid.	Ensure that the switch on the CPU is in Term mode
12	Mode Change Active	Occurs when a PLC mode change is attempted while a mode change is in progress.	In some cases it takes several scans for a mode change. So, wait till the mode change is complete.
13	Mode Locked	Occurs when mode change is attempted and keyswitch is not in Term.	Ensure that the switch on the CPU is in Term mode
14	Invalid Password	The password sent does not exist on the PLC.	Check the password and send the correct one.
15	Resource Locked	Trying to update a tag that is forced.	Force must be removed in order to update the tag.
16	Doc Update Active	Attempted to access the documentation file while it is being written back to ROM.	Wait till it is done.
17	Invalid Driver	Error while reading	-
18	Invalid Driver Data	Error while reading	-
30	Invalid Transaction ID. The ID received does not match the ID sent.	Invalid Station	Check the station used.
31	NAK received. The Request sent is not acknowledged by the PLC	Invalid Station	Check the station used.
32	Invalid MX App Protocol Function. The code on response received does not match the code on Request sent.	Possible problem on the CSV file or on the variables on the PLC.	Check if the CSV variables matches with the PLC variables.
33	Invalid Group for Reading	The read group is not valid	Check the manual for the valid ranges and addresses.

Code	Description	Possible Causes	Solution
34	Invalid Address	Invalid Address	Check the manual for valid address.
35	UDP Timeout Error. Unable to connect probably due to an Invalid Station.	PLC connections, invalid station or invalid port number.	Check the PLC connections and verify the station format. Also verify the port number used.
36	Unable to Parse CSV File. Check if the file exists in the correct path and is valid.	Check if the file exists in the correct path and is valid	Check if the file exists in the correct path and is valid
37	Out-of-Sync. The version of the CSV file does not match with the PLC	The version of the CSV file does not match with the PLC	Update the PLC program and the CSV file.
38	PLC is being uploaded	PLC is being uploaded	Wait until the communication is restablished.

Code	Description	Possible Causes	Solution
0	OK	Communicating without error.	None required.
-15	Timeout waiting for message to start	• Disconnected cables. • PLC is turned off, in stop mode, or in error mode. • Wrong station number. • Wrong parity (for serial communication). • Wrong RTS/CTS configuration (for serial communication).	• Check cable wiring. • Check the PLC mode — it must be RUN. • Check the station number. • Increase the timeout in the driver's advanced settings. • Check the RTS/CTS configuration (for serial communication).