

OPC DA Client with Scriptlets

AEH

DRIVER TYPES

Operating System	Version
Windows NT	7.16 – 5
Windows 2000	7.16 – 5

PROTOCOL

OPC Data Access Custom Interface, version 2.05a.
 OPC Common Definitions and Interfaces, version 1.0.
 OPC Security Custom Interface, version 1.0.

SUPPORTED MESSAGES/DATA AREAS

Commands Supported	Used for
Synchronous Read.	Read one Item. Hang until server returns.
Synchronous Write.	Write one Item. Hang until server returns.
Asynchronous Read.	Read one Item
Asynchronous Write.	Write one Item
Asynchronous Update.	Receive unsolicited updates for one Group.
Asynchronous Refresh.	Read one Group.

DATA TYPES

Data type	Description
VT_BOOL	Boolean (OLE Automation)
VT_I1	Signed Integer 1 byte
VT_UI1	Unsigned Integer 1 byte (OLE Automation)
VT_I2	Signed Integer 2 bytes (OLE Automation)
VT_UI2	Unsigned Integer 2 bytes
VT_I4	Signed Integer 4 bytes (OLE Automation)
VT_UI4	Unsigned Integer 4 bytes
VT_I8	Signed Integer 8 bytes
VT_UI8	Unsigned Integer 8 bytes
VT_R4	Real, floating point 4 bytes (OLE Automation)
VT_R8	Real, floating point 8 bytes (OLE Automation)
VT_BSTR	Text string (OLE Automation)
VT_CY	Currency (OLE Automation)
VT_DATE	Date (OLE Automation)
VT_ARRAY	Read only. One dimensional array of a simple variant.

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2004-09-20

REQUIRED VENDOR SOFTWARE

OPC DA Server.

Microsoft Windows Script Control
 Microsoft Windows Script Component Wizard
 Microsoft Windows Script Debugger
 Microsoft Windows Script Documentation
 Microsoft Windows Script Encoder

Microsoft Windows Script recourses can be downloaded from www.microsoft.com.
 They are however NOT free to redistribute.

SIGNAL CONDITIONING

AEH uses Scriptlets (Windows® Script Components) for advanced signal conditioning. Define your own Scriptlet with the following functions to accomplish virtually any signal conditioning or functionality. The code in the Scriptlet can get full access to all internal properties of the AEH driver.

```
' Purpose: Construct me
'
' Inputs: lngServer handle to my server (channel)
'         lngGroup handle to my group (device)
'         lngItem handle to my item (datablock)
'
' Returns: "OK" if OK else error message
Function Construct(lngServer, lngGroup, lngItem)
    Construct = "OK"
End Function
```

```
' Purpose: Destruct me
'
' Returns: "OK" if OK else error message
Function Destruct()
    Destruct = "OK"
End Function
```

```
' Purpose: Called after my group was updated. Other items in my group may have new values.
'         Transid = 0 : Data change event or Read response.
'         Transid <> 0: Refresh response.
'
' Returns: "OK" if OK else error message
Function OnGroupUpdate(lngTransid)
    OnGroupUpdate = "OK"
End Function
```

```
' Purpose: Called after my Item was updated from OPC server, before iFIX database is updated.
'
' Returns: "OK" if OK else error message
Function OnItemUpdate()
    OnItemUpdate = "OK"
End Function
```

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' Purpose: Called after output to my Item from iFIX database, before write to OPC server.

' Returns: "OK" if OK else error message

```
Function OnItemOutput()
    OnItemOutput = "OK"
End Function
```

' Purpose: Called when an iFIX database tag (DO) with I/O address !Switch is trigged.

' Returns: "OK" if OK else error message

```
Function OnSwitch()
    OnSwitch = "OK"
End Function
```

COMMUNICATIONS PERFORMANCE

Not available.

GENERAL LIMITATIONS

Not available.

MANUAL

Available.

DEMO

Not available.

COMMENTS

The AEH driver was originally developed to collect time stamped alarms or events from an OPC DA Server and deliver them to iFIX in a format suitable for AA and DA blocks. The time stamp should show in the Alarm Summary Link. It was also developed to fetch historical data logs from an OPC DA Server and send it to iHistorian in a suitable format, hence the acronym AEH (Alarm & Event & Historical).

The AEH driver can now completely replace the Intellution OPC driver and it also supports many new useful features that are part of the OPC specifications. The Scriptlet functionality poses virtually no limits to what can be accomplished with the AEH driver.

Features.

- Local and remote OPC Server browsing with OPCEnum.
- Possible to enter a Prog ID that did not show in the browser.
- Locale setting on Server.
- OPC Security by NT Credentials.
- OPC Security by Private Credentials.
- Locale setting on Group - may differ from Locale setting on Server.
- Time Bias settings.
- No need to configure the start and length of an array.
- Start Active settings, possible to start the driver and not update the Item until requested by iFIX Database.
- Read a single Item with both primary and secondary poll rate.
- Synchronous/asynchronous setting for read and write independently.
- Scriptlet support.
- Possible to have the same Item Name on two different Groups.
- No limit to the possible length of an Item ID.

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- Item browser.
- Backward compatible with OPC driver. Just export the database, replace OPC with AEH, then import the database and the AEH driver will configure itself automatically according to the template settings.

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