

User Manual



Advantech OPC Server





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Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase. This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events. Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details. If you think you have a defective product, follow these steps:

- Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
- 2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
- 3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
- 4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container.
 A product returned without proof of the purchase date is not eligible for warranty service.
- 5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

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Technical Support and Assistance

- 1. Visit the Advantech web site at www.advantech.com/support where you can find the latest information about the product.
- 2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Warnings, Cautions and Notes

Warning! Warnings indicate conditions, which if not observed, can cause personal injury!

Caution! Cautions are included to help you avoid damaging hardware or losing data. e.g. There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! Notes provide optional additional information.

Document Feedback

To assist us in making improvements to this manual, we would welcome comments and constructive criticism. Please send all such - in writing to: support@advantech.com

Safety Instructions

- 1. Read these safety instructions carefully.
- 2. Keep this User Manual for later reference.
- 3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- 4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
- 5. Keep this equipment away from humidity.
- 6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
- 7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
- 8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- 9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- 10. All cautions and warnings on the equipment should be noted.
- 11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
- 12. Never pour any liquid into an opening. This may cause fire or electrical shock.
- 13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- 14. If one of the following situations arises, get the equipment checked by service personnel:
- 15. The power cord or plug is damaged.
- 16. Liquid has penetrated into the equipment.
- 17. The equipment has been exposed to moisture.
- 18. The equipment does not work well, or you cannot get it to work according to the user's manual.
- 19. The equipment has been dropped and damaged.
- 20. The equipment has obvious signs of breakage.
- 21. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.
- 22. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- 23. The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

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1. Product Overview

1.1 Introduction

The ADAM OPC Servers support three communication protocol servers, including Advantech ASCII Command (AdamOPC), MODBUS/RTU (ModbusRTU) and MODBUS/TCP (ModbusTCP) protocol. The servers provide the OPC interface for monitoring the ADAM-4000, ADAM-5000 and ADAM-6000 remote I/O series products. The ModbusTCP OPC Server is used for Ethernet communication and the others are for serial port communication. Therefore, the ModbusRTU and ModbusTCP OPC servers could be used for other devices which are supported MODBUS/RTU and MODBUS/TCP protocol.

The servers provide several fields for specifying the properties of devices, groups and tags. Those were implemented using advanced programming concepts of the most current version of the OPC specification for use in developing next generation industrial software applications.

1.2 Key Features of the ADAM OPC

Servers

- Support Advantech ASCII, MODBUS/RTU, and MODBUS/TCP protocol.
- Compliant with the latest OPC Data Access 1.0, 2.04 and 3.0 standards.
- Compliant with the latest OPC Alarm and Events 1.0 and 1.2 standards.
- Built-in OPC tag simulation and value conversion.
- Wizards to create OPC Server tags about ADAM series quickly.
- Compatible with OPC client compliant application software.
- Provides OPC custom interface.
- Online configuration capability; add new signals and tags during runtime.
- Tag Multiplier let you create tags quickly.
- OPC DA and AE Client for rapid testing of your OPC data connections.

1.3 System Requirements

- CPU: Intel Pentium processor 200MHz or higher
- OS: Microsoft Windows 32 platform
- RAM: 64 MB RAM or higher
- Disk: 10 MB of free local hard disk space
- Microsoft .NET Framework 2.0

1.4 Hardware Support

ADAM OPC Servers mainly support ADAM-4000, ADAM-5000, and ADAM-6000 series data acquisition modules. The detail is as the following tables.



AdamOPC OPC Server

The Advantech ACII protocol is used for the ADAM OPC server.

ADAM Product Series	Modules		
ADAM-4000 Series :	ADAM-4011/D	ADAM-4052	
	ADAM-4012	ADAM-4053	
	ADAM-4013	ADAM-4055	
	ADAM-4015/T	ADAM-4056/S/SO	
	ADAM-4016	ADAM-4060	
	ADAM-4017/+	ADAM-4068	
	ADAM-4018/+/M	ADAM-4069	
	ADAM-4019/+	ADAM-4080/D	
	ADAM-4021	ADAM-4117	
	ADAM-4024	ADAM-4118	
	ADAM-4050	ADAM-4150	
	ADAM-4051	ADAM-4168	

ADAM-5000/485	ADAM-5013	ADAM-5055
ADAM-5000E	ADAM-5017/+/H/UH	ADAM-5056
	ADAM-5018/+	ADAM-5060
	ADAM-5024	ADAM-5068
	ADAM-5050	ADAM-5069
	ADAM-5051	ADAM-5080
	ADAM-5052	ADAM-5081



ModbusRTU OPC Server

The MODBUS/RTU protocol is used for the ModbusRTU OPC server.

ADAM Product Series	Modules	
ADAM-4000 Series	ADAM-4015/T	ADAM-4068
	ADAM-4017+	ADAM-4069
	ADAM-4018+	ADAM-4117
	ADAM-4019+	ADAM-4118
	ADAM-4024	ADAM-4150
	ADAM-4055	ADAM-4168
	ADAM-4056/S/SO	
ADAM-5000/485	ADAM-5013	ADAM-5055
ADAM-5000E	ADAM-5017/+/H/UH	ADAM-5056
	ADAM-5018/+	ADAM-5060
	ADAM-5024	ADAM-5068
	ADAM-5050	ADAM-5069
	ADAM-5051	ADAM-5080
	ADAM-5052	ADAM-5081



ModbusTCP OPC Server

The MODBUS/TCP protocol is used for the ModbusTCP OPC server.

ADAM Product Series	Modules				
ADAM-5000/TCP	ADAM-5013	ADAM-5055			
	ADAM-5017/+/H/UH	ADAM-5056			
	ADAM-5018/+	ADAM-5060			
	ADAM-5024	ADAM-5068			
	ADAM-5050	ADAM-5069			
	ADAM-5051	ADAM-5080			
	ADAM-5052	ADAM-5081			
ADAM-6000 Series	ADAM-6015	ADAM-6050			
	ADAM-6017	ADAM-6051			
	ADAM-6018	ADAM-6052			
	ADAM-6022	ADAM-6060			
	ADAM-6024	ADAM-6066			

1.5 Installation of Advantech OPC Server

The configurators of Advantech OPC Server series are developed by Microsoft .NET Framework 2.0. Before installing the servers application, user has to install Microsoft .NET Framework above version 2.0 firstly. Otherwise, you will see the following message.



If you want to install Microsoft.NET Framework first, click "Yes" button. If Microsoft.NET Framework will be installed latter, click "No" button to install the application first.



Then you can push "Next >" button to install the application step by step.



Please follow the step of setup process.

2. Configuration of the OPC Server

There are two main parts of each OPC server. The one is run-time server, and the other is OPC configurator. During installing the OPC server, the install package register server and important OPC interface. User could modify the OPC tag configuration by configurator. When some OPC clients connect to the server, the run-time server will start automatically.

2.1 Registration

When user launches the OPC configurator at first time, please key in the 16 characters serial number to register, or you only can use Demo version with basic functions. The serial number will be printed on the CD surface. Please check the numbers. Then you could modify the OPC Configuration. When you use the demo version, the OPC server will have a 2 weeks limitation.

🛱 Register AdamOPC	
Register Demo	

If you run the Demo version, you will see the message. The demo version has setting limitation. Customers can get the full function after registering.



Title and Active Database

Advantech AdamOPC Configurator Ver 3.01.006 - [C:\Documents and Settings\LGT\My Documents\ADAM1.mdb]

On the title of the configurator, there are information of version and active database. And you can see what kind the OPC server is from the icon.

The active database is the database that the runtime server will use when started. The active

database may be the same as the database currently edited in the configurator. You can work on any database inside the configurator, while the runtime part has its own active database. Next time the server runtime part starts, it will use the active database for all its operations. Before the active database is actually set, the program asks you to confirm the setting. The dialog box that is invoked looks like this:

atabase confirm dialog 🛛 🔣
Current active database is: C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb. Active database is the database that the server will load when started.
Currently edited database is: C:\Documents and Settings\LGT\My Documents\modbusRTU2.mdb.
Do you want to set edited database as active database?

2.2 Menu and Toolbar



File

New

Create a new Microsoft Access database.

Open

Open an existing database.

Save

Save current database under different name.

Exit

This function will terminate the configurator

• Tool

ADAM-Wizard

Create an ADAM device quickly

Set Active Database

Active database is the database that the server will load when started. This function will set the current edit database as active database.

Multiply

Multiply the selected item.

Options

Set the configurator setting

About

Register OPC Configurator

Input the serial number to unlock formal version.

Tree view configuration

Address Space

You can configure the OPC Configuration under the Address Space tree. When the OPC client connect to the server, it can browser the configuration of server as user set.

🚟 Advantech AdamOPC Configurato	r Ver 3.01.0	005 - [C:V	Documents	and Setting	s\LGT\My	Documents\mod	busRTU1.mdb	9 (
<u>File I</u> ools <u>A</u> bout									
E 🔁 🔂 🖉									
표 연물 Address Space	Name	Simulate	File Name	Baud Rate	Byte Size	Parity Checking	Parity Scheme	Stop Bits	1
🗄 🗾 Conversions	COM1	No	\\.\COM1	9600	8	No	None	1	
 JT Device Parameters Simulation Signals Alarm Definitions Templates 	Щ СОМ2	No	\\.\COM2	9600	8	No	None	1	
Ready								2 Object(s	3)

Ports

Port is equivalent to a physical serial port in the computer. To correctly configure port means to set up serial port as a file name, Baud rate, Transmission mode (ASCII or RTU for ModbusRTU server), Stop bits and Parity scheme. Parity checking enabled unchecked will force the server to ignore the parity bits in the message. The ModbusTCP server does not have the property.

<u>File T</u> ools <u>A</u> bout					
🗅 🕒 🖯 🤻 🚜					
Address Space OMI COM1 COM2 Conversions	Name Simul	ate Address Read Ti 1 1000	meout Write Timeout 1000	Timeouts to Suspend 3	Suspend Period 60000
If Device Parameters Sinulation Signals Alarm Definitions Templates	Name: COM Simulate:	f1	Transmission mode O ASCII) RTU	Reset
	Setting File Name: Baud Rate: Stop Bits:	WVCOM1 9600 1		 	
	Parity Scheme: Parity Checking:	None		×	

Devices

Every device is connected to particular port, so it logically creates second level in the Address Space tree. Again, the device is represented by its symbolic name. Also, it is uniquely identified by the Address value. It is impossible to have two devices with the same (IP) address connected to on port. Setting up Device requires configuring its unique (IP) address, type, timeouts and optimization parameters.

Device Type

There is a group of six predefined standard device types enhanced with Other (any) and Custom options. Device with the most limited parameters and the lowest performance is called Other (any) alternative. If you have devices that are among the list of pre-defined Modicon types, use Custom option and select from Parameters combo one of device types predefined by user. For instruction on how to create new or edit predefined device, see Device Parameters chapter below.

Timeout

Timeout parameters (separately for reading and writing message) specify period length server will wait for response from devices.

Optimizations

The server tries to optimize the communication with the devices by requesting as much data as possible in one message. Consecutive registers are merged together into one request for efficiency. The server also can read registers that are not really requested, if this allows it to join two blocks of requested registers. The numbers entered under Optimizations specify the maximum block length of adjacent unused data.

🚜 Advantech AdamOPC Configurat	tor Ver 3.01.005 - [C:\Documents :	and Settings\LGT\My	Documents\mod busR TI	J1.mdb]	
<u>File T</u> ools <u>A</u> bout					
i 🗅 🕒 🗔 🔍 🚳					
CoM1 COM2 Conversions Comotion Signals Alarm Definitions Templates	Name Simulate S0_Adam5051 No S1_Non No S2_Non No S3_Non No S4_Non No S5_Non No Simulate:	Address: 1 Paremeters: https://www.englishedicate-how-n he numbers indicate-how-n n be transformed in one me gether address that are closs Timeouts to suspend: Suspend period: 	stagned>	Reset Apply	
			·		
Ready				8 Objec	t(s)

🔁 Folders

Folder is an object that can group items that logically belong together. Moreover, user also can use the template configuration which is preset.

🚟 Advantech AdamOPC Configurator V	/er 3.01.007	7 - [C:\I	Ocuments and	Settings\LGT\M	y Documents\ma	odbusRTU1.mdb]	
<u>File I</u> ools <u>A</u> bout							
i 🗅 🕒 🖃 🔍 😣							
🖃 🏘 Address Space	Name S	Simulate	Locatoin Type	Starting Address	Modbus Type		
COM1	🖸 DIO N	lo	Coil (bit, r/w)	1	BOOL		
	DI1 N	lo	Coil (bit, r/w)	2	BOOL		
DI 0	DI2 N	lo ·	Coil (bit, r/w)	3	BOOL		
- 🖸 DI 1	DIS N	10 1-	Coll (bit, r/w)	4	BOOL		
- 🖸 DI 2	DIA N	10 1-	Coll (bit, r/w)	5	BOOL		=
🖸 DI 3	M DIS N	10 Io	Coil (bit, nw)	7	BOOL		
- DI 4	DIT N	lo Io	Coil (bit r/w)	8	BOOL		
DI 5	DIS N	lo	Coil (bit r/w)	q	BOOL		
	DIG N	lo	Coil (bit, r/w)	10	BOOL		
	DI 10 N	lo	Coil (bit. r/w)	11	BOOL		
DI9	DI 11 N	lo	Coil (bit, r/w)	12	BOOL		
- DI 10	🖸 DI 12 N	Io	Coil (bit, r/w)	13	BOOL		~
— 🖸 DI 11							
DI 12	Ne Ne	ame:	S0_Adam5051			Reset	
DI 13		. [
DI 14	e.,	maalada . [_				
- Si Non	ы	unuale.				Apply	
S2_Non	🗌 Use tem	nplate					
S3_Non	💿 Simj	ple templa	ate	<not assigned=""></not>		~	
S4_Non S5 Non	O Para	umeterized	l template	<not assigned=""></not>		~	
S6_Non				Start address base:	0		
S7_Non							
COM2							
Conversions Device Parameters							
🛓 🚫 Simulation Signals 🔍							
Ready						16 Obj	ect(s)

🔼 Data Items

Data Item represents a register in the device or a range of register. A symbolic name and description is associated with the data item. OPC Client can obtain the data item description. New data item creation requires configuration of the following properties:

Location type

Location type is a type of a register in the device. Device registers are divided into Coils, Inputs, Input Registers and Holding Registers for Modbus OPC server. For AdamOPC Server, you can set the ADAM product properties (Such as module type, IO type, channel, and slot index.) of data item.

Modbus type

The location type will be understood as Modbus type. Modbus data type also depends on the Location type selected. When selecting Modbus String type, user has to specify the data length (how many bytes will the String is represented by).

Starting address

Starting address value specifies the data item address (register number) in the device data space.

With the UINT Modbus type, it is possible to extract bits from the register and use them as a Boolean or integer value (this functionality is read-only). The user can specify a group of Count adjacent bits inside a word starting with Bit #. This way, it is possible to use a register for several separate data items.

Simulation

To test the client functionality, choose a Simulation Signal from the Signal drop-down and check Simulate check box. See chapter Simulation Signals for setting the simulation signal. All levels in the Address space (port, device, folder, data item) support process of simulation (Simulate check box). Parent list in the tree is superior, has higher priority when deciding to simulate the data item or not. In other words, data item is simulated, if it itself has a Simulation checked, or if any of its parents has Simulate checked (it may be simulated even if its Simulate check box stays unchecked).

Manual

If check, data item will offer constant parameter value, because Manual setting is of the highest priority. The changes in the configuration take effect only when the server reloads the configuration (on startup).

Use conversion

To get the data value converted according to a prescribed form, choose one of the predefined or user-defined conversions. See chapter Conversions for more details.

Generate Alarms

Check Generate Alarms box to make the server generate Alarms based on the data item value. Message prefix parameter is the text of the message for this data item; it will be followed by the text configured for a particular alarm type. The second part of the alarm message will contain Message Body string (see Alarm Definitions below). The server allows to have any number of Alarm Definitions (templates) predefined. You can combine one of them with the specific tags. The data item dialog of ModbusRTU Configurator.

File Tools About			
🗋 🕒 🖳 🔍 🚳			
Address Space COMI ADAM4068 CHO Conversions Simulation Signals Alarm Definitions Templates	Name: CH0 Description:	 Location Type 0xxxx Coil 1xxxx Input 3xxxx Input registers 4xxxxx Holding registers Modbus Type BOOL UINT INT REAL UDINT DINT STRING 	Reset Apply Bit field Bit #: 0 Count: 1 Data length (bytes): 10 0

The data item dialog of AdamOPC Configurator.

📇 Advantech AdamOPC Configurator V	Fer 3.01.007 - [C:\Documents and Setti	ings\LGT\My Documents\ADAM1.mdb]	
<u>F</u> ile <u>T</u> ools <u>A</u> bout			
☐ ♣ Address Space ☐ ♣ ☐ COM1 ☐ ₩ ADAM_4018	Name: AI O		Reset
AI 1	Description:		Apply
AI 2	Simulate	Location Type	
AI 4	Signal: «Not Assigned»	Module: ADAM-4018/+/M/4118 💌	
AI 6	Manual	Type: Analog Input	
Conversions	Value:	Channal: 0	
 Simulation Signals Alarm Definitions 	Conversion		
	Name: «Not Assigned»	Slot: 0	
	Generate Alarms		
	Mess. prefix:		
	Limit Alarm: <pre> <not assigned=""></not></pre>	~	
	Digital Alarm: <pre> <not assigned=""></not></pre>	~	
	<u></u>		
Ready			O Object(s)

Conversions

User could tell the server to convert device data value simply settings the following properties:

There are two types of units:

EU: engineering unit (client scale)

IR: instrument range (device scale)

None conversion converts the data into float data type, but does not change the value itself. Linear or square root conversions keep a linear or square root relation between EU and IR. If clamping is on, the data value will be limited to its High clamp/EU value, when it exceeds the upper limit, and similarly with Low clamp parameter.

Advantech AdamOPC Configurator	Yer 3.01.005 - [C:\Documents and Settings\LGT\My Documents\ADAM1.mdb]	
<u>File T</u> ools <u>A</u> bout		
i 🗅 🕒 🖯 🦊 🚳		
Address Space ADAM_5000E ADAM_4052 ADAM_4013 ADAM_4016 AI0 AO0 DO0 DO1 DO2 DO3 Conversions None (to/from float) Default Linear Default Square Root Conv_Adam4016AI Simulation Signals Alarm Definitions	Name: Conv_Adam4016AI Type of conversion None (make float) None (make float) Inear Square root Conversion Parameters EU High 2000 Low 2000 Low 2000 Clamping Clamping Parameters High 100.00 Clamping on EU Low O Clamp on EU Low Low 0.00	Reset
Ready		O Object(s)

T* Advantech AdamOPC Configurator Ver 3.01.00	5 - [C:\Documents and Settings\L	GT\My Documents\ADAM1.mdb]	
<u>File I</u> ools <u>A</u> bout			
0 🕒 🖃 🔍 🚳			
	ame: AIO		Reset
ADAM_4013	otion:		Apply
ADAM_4016	ilate Loca	ation Type	
AO 0 Signal:	<not assigned=""> Mod</not>	ule: ADAM-4016 💌	
→ DO 0 → DO 1 → DO 2 → Man	ual Туре	e: Analog Input 💌	
DO 3	Chau	nmel: 0	
V Default Linear Name:	Conv_Adam4016AI	0	
Conv_Adam4016AI	erate Alarms		
🐨 🊫 Simulation Signals Mess. pro	efix:		
Limit Ak	um: <not assigned=""></not>	×	
Digital A	larm: <not assigned=""></not>	×	
Ready			O Object(s)

Device Parameters

Device Parameters directory contains the list of custom device types. Device parameters influence the behavior and performance of the server for the device. The meaning of numbers in the device parameters dialog is the maximum amount of data that can be transferred in one message. Setting the value equal to zero means force the server to use single read/write messages only.

🚟 Advantech AdamOPC Configurator Ver 3.0	01.005 - [C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb]	
<u>File T</u> ools <u>A</u> bout		
: 🗋 🕒 🖃 🔍 🚳		
Address Space	Name: Ideal The numbers below are maximum amounts of data that can be transferred in one message. Specifying 0 (zero) instructs the server to use single read/write only. Read (0x) Coils: 2040 (1x) Inputs: 2040 (4x) Holding registers: 127 (3x) Input registers: 127 Word swap (Swaps the first word with the second when reading/writing DIN T, UDINT or Swap bits (Reverses the order of bits in word-sized values.)	Reset Apply float values.)
Ready	ļ.) Object(s)

Simulation Signals

There is a wide range of simulation signals offered. You can select from them in the Type group of radio boxes.

Read Count is incremented by one every time when the item is read (Write Count increments when the item is written). Random generates random value within the Amplitude range starting with Position. Ramp, Sine, Square, Triangle and Step are periodical signals. Their time behavior is influenced by Period and Phase parameters. Period specifies the signal frequency, while Phase moves the signal origin on the time axis.Square and Triangle signal types have one more parameter: Ratio. Ratio defines Triangle signal steepness, or Square signal H/L proportions. # of steps parameter of the Step signal defines a number of steps signal amplitude will be divided into.

🚟 Advantech AdamOPC Configurator ¥er 3.0	1.005 - [C:\Docume	nts and Settings	s\LGT\My Documents\modbusRTU1.md1	J 🔲 🗖 🚺
<u>File T</u> ools <u>A</u> bout				
: 🗅 🕒 🖃 🔍 🚳				
Address Space Conversions Conversions Device Parameters Simulation Signals ReadCount WriteCount Random Ramp(T) Sine(T) Sine(T) Step(T) 100*Random 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T) 100*Sine(T)	Name: Type Read Count Write Count Random Ramp Sine Square Triangle Step	100*Step(T) Parameters Position: Amplitude: Period: Phase (deg): Ratio: # of step:	0 100 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Reat Apply
Ready				O Object(s)

S Alarm Definition

Alarm definitions are divided into two alarm template type: Digital and Limit (Analog) alarm definition. Digital alarm can be defined for data item of BOOL type only, while Limit alarm definition for the rest except String data type.

Digital alarm definition

Update rate parameter defines the frequency of checking the data item value, and possibly responding with sending the alarm message.

User can request the alarm when the value equals to TRUE or FALSE, define the Message body that carries the information, and Severity, which is the alarm message importance. The Severity value ranges from 0 to 1000.

Checking Return to normal will generate a separate alarm message when the data item gains the opposite value.

Req. Ack. Tells the client that the alarm requires an acknowledgement. Then alarm message can be not only sent, but also acknowledged, etc.

Limit alarm definition

Limit alarm parameters can have subranges within the data item amplitude. Every subrange definition includes Message body that will be appended to the alarm message, the Severity of the alarm and Req. Ack. flag.

Deadband prevents the server from generating huge amount of alarm messages and overloading the clients when the signal oscillates around one of the limits specified. Deadband value extends the limit zone. It results in sending only one alarm message even if the signal oscillates.

🚆 Advantech AdamOPC Configurator Ver 3.0	11.005 - [C:\Documents and Settings\LCT\My Documents\modbusRTU1.mdb]	
<u>File T</u> ools <u>A</u> bout		
: 🗋 🖨 🗔 🔍 🚳		
Address Space Address Space Address Space Conversions Alarn Definitions Default Limit Alarm (0-10-90-100) Default Digital Alarm (on TRUE) Demo Limit Alarm Faster Limit Alarm Templates	Name: Default Digital Alarm (on TRUE) Update rate(ms): 2000 Digital alarm definition > ✓ Enable Value: Message body: Severity: Req. Ack.: True (1) ✓ Digital Alarm 500 ✓ Return to normal: Return to Normal	Reset Apply
Ready		O Object(s)

Advantech AdamOPC Configurator Ver 3.0 File Tools <u>A</u> bout	1.005 - [C:\Documents a	nd Settings\LCT\My Documents\modbusRTU1.mdb]	
: 🗅 🕒 🖃 🔍 ֎			
Address Space Conversions Device Parameters	Name: Defa	ult Limit Alarm (0-10-90-100)	Reset
Simulation Signals Alarm Definitions Default Limit Alarm (0-10-90-100)	Update rate(ms): 2000	Deadband: 1	Apply
	Limit: Value:	Message body: Severity: Req. Ack.:	
Default Digital Alarm (on TRUE)	HiHi 100	HiHi Level Alarm 850 🗊 🗆	
en Paster Digital Alarm (on IRUE)	✓ Hi 90	Hi Level Alarm 500 😂 🗌	
	Return to normal:	Return to Normal	
	✓ Lo 10	Lo Level Alarm 500 🗧 🗌	
	LoLo 0	LoLo Level Alam 850 😴 🗌	
			N.
Ready			0 Object(s)

Templates

Simple Template Folder

Parameterized Template Folder

ModbusRTU and ModbusTCP Server provide template configuration. User can preset the configuration of folders and data items as templates which is used to common similar structure. The template can assign to device or folder under Address Space. There are two type templates. One names Simple Template Folder, and the other names Parameterized Template Folder. The difference between the two templates is "Start Address Base". The Start Address Base means that the Modbus start address base of data items. So the Modbus addresses of the data items under Parameterized Template Folder mean offset addresses. "Parameterized" represents the "Start Address Base" parameter.

If you apply the template to device or folder, OPC client can monitor the template configuration under the assigned device or folder. You can see the following example. There are two devices under COM1. One is created by wizard; the other is created by template. Open AdamOPC Browser, you can see the difference of configuration. But the purposes and results are the same.



Note: User should notice the following information message when want to delete Conversions, Device Parameters, Simulation Signals, Alarm Definitions and Templates. Take the example for deleting template. The delete error message is show because there are some devices or folders

using the template. Before deleting the template, user has to disable "Use template" or do not use the target template.



Advantech AdamOPC Configurator V	7er 3.01.007 - [C:\	Documents and Setti	ings\LGT\My	Documents\modbusRT	V1.mdb]	- 🗆 🗙
<u>File T</u> ools <u>A</u> bout						
0 🕒 🖂 🔍 🚳						
Ele Tools About	Name Simulate CH0 No CH1 No CH2 No CH3 No Description: Error Error Failed to c	Locatoin Type Star Coil (bit, r/w) 17 Coil (bit, r/w) 18 Coil (bit, r/w) 20 st_ADAM4068 st_ADAM4068 st_ADAM4068 st_ADAM4068 st_ADAM4068	nting Address	Modbus Type BOOL BOOL BOOL BOOL	Reset	
Ready					8 Object	(s)

🚜 Advantech AdamOPC Configurator V	er 3.01.007 - [C:\Documents a	nd Settings\LGT\My Do	cuments\modbusRTU1.n	ulb] 📃 🗖 🔀
<u>File I</u> ools <u>A</u> bout				
: C 🖯 🕄 🔍 🐼				
	Name			
DO 4 DO 5 DO 6 DO 7 DO 7	Simulate: Device Type Type: Other (any) Optimizations	8_Template Address: 1 Paremeters: <pre><not a<="" pre=""></not></pre>	signed >	Reset Apply
Templates st ADAM4068 CH0 CH1 CH2	Bits: 160 Words: 5 Timeouts (ms)	The numbers indicate how n can be transferred in one me together address that are close	nuch unused data ssage to merge se but not adjacent.	
CH3	Read: 1000	Timeouts to suspend:	3	
	Write: 1000	Suspend period:	60000	
CH7	Use template Simple template Parameterized template	st_ADAM4068 <not assigned=""> Start address base:</not>	•	
Ready				O Object(s)

Monitor View

Display monitor view

User can push Display monitor view button to monitor the data items of target device or target folder. The value and quality of data items are showed in the list view by callback of the OPC server. If the button is pushed up, configurator stops monitoring. Therefore, you also could modify the update rate of monitor view items in the options dialog.

Advantech AdamOPC Configure	tor ¥er 3.01.005 - [C	ADocuments and	i Settings\LGT\M	ly Docume:	nts\ADAM1.1	nd b]	
<u>File I</u> ools <u>A</u> bout							
				_			
🖃 🏘 Address Space	Name Simulate	Locatoin Type	Locatoin Address	Data Type			
🖻 到 COM1	🖸 DIO No	ADAM-4052	1	BOOL			
ADAM_5000E	🖸 DI 1 No	ADAM-4052	2	BOOL			
■ ADAM_4052	🚺 🖸 DI 2 No	ADAM-4052	3	BOOL			
ADAM_4013	🖸 DI 3 No	ADAM-4052	4	BOOL			
■ * ADAM_4016	DI4 No	ADAM-4052	5	BOOL			
Conversions	DI5 No	ADAM-4052	6	BOOL			
Simulation Signals	DI6 No	ADAM-4052	7	BOOL			
E C Alaim Definitions	DI7 No	ADAM-4052	8	BOOL			
	Simulate: Timeouts (ms) Read: 1000 Write: 1000		Address: 1 Timeouts to suspe Suspend period:	md: 3 60000	Checksum	Apply	
Item ID	Value	Timestamp	Qual	lity	Subquality	Limit	
COM1.ADAM_4052.DI 0	False	2008/1/22 下午/	01:23:08 Good		Not-specific	Not Limited	
COM1.ADAM_4052.DI 1 COM1.4DAM_4052.DI 2	False	2008/1/22 下午1	01:23:08 Good 01:23:08 Good		Not-specific	Not Limited	
COM1.ADAM 4052.DI 2	False	2008/1/22 下午	01:23:08 Good	i	Not-specific	Not Limited	
COM1.ADAM_4052.DI 4	True	2008/1/22 下午/	01:23:08 Good	i l	Not-specific	Not Limited	
COM1.ADAM_4052.DI 5	False	2008/1/22 下午1	01:23:08 Good		Not-specific	Not Limited	
COM1.ADAM_4052.DL5	False	2008/1/22 下十1	01:23:08 Good 01:23:08 Good		Not-specific	Not Limited	
Ready						BOt	riect(s)

ptions Jeneral		
Monitor view setting Update Rate:	1000	🗘 (ms)
	0	K Cancel

2.3 Quick Start

There are two ways to configure the OPC devices, folders, and data items. User could add each sub-tree node step by step or use ADAM-Wizard quickly to establish OPC configuration.

Add data item step by step

You can retrieve channel data from any ADAM module listed steps.

- Step 1: Add New Port (Except ModbusTCP OPC Server).
- Step 2: Add New Device.
- Step 3: Add New Folder (Optional)
- Step 4: Add New DataItem

Suppose you want retrieve the ADAM-4068 with MODBUS/RTU protocol and your PC uses COM1 to connect with the device. You can do as the following steps.

Add new port from Address Space. You can name the Port and configure the COM port setting.

<u> </u>	dvantech Ad	amOPC	Configurate	or Ver	3.01.006	- [C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb]	
<u>F</u> ile	<u>T</u> ools <u>A</u>	bout					
	884	60					
e	📲 Address Spe 🗾 Conversion	s	New 🕨	- -	Port		
± - 1	T Device Para	mi Siş	Multiply				
.	Alarm Defin Templates	nit	Delete				
9.5							
Ready	/						1 Object(s)

🚜 Advantech AdamOPC Config	garator ¥er 3.01.006 - [C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb]	
<u>File T</u> ools <u>A</u> bout		
<u>: </u>		
Address Space Conversions Conversions Conversions Conversions Conversions Alarm Definitions Templates	Name Image: COM1 Simulate: Simulate: File Name: MCOM1 Baud Rate: 9600 Stop Bits: 1 Parity Scheme: None Parity Checking:	
Ready	[ioo]	ect(s) .:

Add new device from target port. You can configure the device setting. Make sure the address of ADAM-4068.

🚟 Advantech AdamOPC Configurator	Ver 3.01.006 - [C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb]	
<u>File T</u> ools <u>A</u> bout		
0688		
Address Space	Name	
Conversic New ▶	Device	
Device Pa Multiply Simulation		
Alarm De Delete	Name: COM1 Reset	
	Simulate: Apply	
	File Name: W.YCOM1	
	Baud Rate: 9600	
	Stop Bits:	
	Parity Scheme: None	
	Parity Checking:	
Ready	ס	Dbject(s)

🚟 Advantech AdamOPC Configura	tor Yer 3.01.006 - [C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb]	
<u>File I</u> ools <u>A</u> bout		
i 🗅 🕒 🖯 🔍 🚳		
Address Space COM1 ADAM4068 Conversions Conversions Simulation Signals Alarm Definitions Templates	Name Image: Im	
Ready	D Object(s)	

Add new Data Item from device node. You can configure the data item setting. Choose the location type and MODBUS start address of ADAM-4068.

🚟 Advantech AdamOPC Conf	igurator ¥er 3.01.006 - [C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb]	
<u>File T</u> ools <u>A</u> bout		
i 🗅 🕒 🖯 🔍 🚳		
Address Space COM1 ADAM4068 Conversions Simulation Signals Alarm Definitions Templates	New Folder Multiply Data item Delete Name: ADAM4068 Reset Simulate: Address: Device Type Type: Type: Optimizations Bits: 160 Timeouts (ms) Timeouts to suspend: Timeouts (ms) Timeouts to suspend: Write: 1000 Use template Not Assigned> Start address base: 0	
Ready	0 Object(s)

e <u>T</u> ools <u>A</u> bout		
Address Space COM1 COM1 Conversions Conversions Conversions Conversions Simulation Signals Alarm Definitions Templates	Name: CHO Description:	Reset. Apply Bit field Bit #: 0 0 Count: 1 Data length (bytes): 10 0
	Limit Alarm: <not assigned=""> Digital Alarm: <not assigned=""></not></not>	

You can use "Multiply" function to add other channels by the template which is selected.

🚟 Advantech AdamOPC Confi	igurator ¥er 3.01.006 - [C:	Wocuments and Settin	gs\LGT\My Documents\modbusRT	J1.mdb]	
<u>File I</u> ools <u>A</u> bout					
1 1 1 B E 🔍 🚳					
Address Space	Name:	CHO		Reset	
	New • scription:			Apply	
	Multiply art addr.:	17	Location Type		
🗄 🍎 Alarm Definitions	Delete		💿 Oxxxxx Coil	Bit field	
Iempiates	Simal: Moi	t Assimed >	🔘 1 xxxxx Input	Bit #: 0	<u>\$</u>
			O 3xxxx Input registers	Count: 1	0
	Manual		• 4xxxx Holding registers		
	Value:		Modbus Type	Data length (bytes): —	
	Conversion		O REAL O HDINT O DINT	10	3
	Name: <not< td=""><td>t Assigned > 💌</td><td>O STRING</td><td></td><td></td></not<>	t Assigned > 💌	O STRING		
	Generate Ala	arms			
	Mess. prefix:				
	Limit Alarm:	<not assigned=""></not>	~		
	Digital Alarm	<not assigned=""></not>	×		
	<u></u>				
Ready				0 Objec	t(s)

First number:	1	\$	OK
Numeric places:	1	\$	Cancel
Number of items:	7	\$	
Basic text:	СН		
First address:	18	\$	
Address increment:	1	*	
tem name:			
WAddress SpaceVCC	M1\ADAM4068\CI	HO	

Advantech AdamOPC Configurato	r ¥er 3.01.006 - [C:\Documents and Settings\LGT\My Documents\modbusRTI	J1.mdb] 📃 🗖 🔀
<u>File T</u> ools <u>A</u> bout		
E 🕒 🖂 🔍 🚱		
Address Space	Name: CHO	Reset
CH0 CH1 CH2	Description:	Apply
CH3	Start addr.: 17	
CH4	⊙ 0xxxx Coil	Bit field
CH6	Signal: (Not Assigned >	Bit#.
CH7	Multinbuing	Count 1
Device Parameters	multipiyatz	
 Simulation Signals Alarm Definitions 	Cencel	Data length (bytes):
- 🙀 Tempiaes	Conversion Multiply Information O DINT Generate Alax Fitters have successfully inserted!	
	Limit Alem:	
	Digital Alarm: Not Assigned >	
Ready		O Object(s)

After multiplying the data item, you even more have to set the current edit database as active database. Then you can monitor the ADAM-4068 by pushing the monitor view button.

🚆 Advantech AdamOPC Configurator	¥er 3.01.007 - [C:\Documents a	nd Settings\LGT\My D	Documents\mod busR TU	l.mdb]	
File Tools About					
ADAM Wizard					
E Set Active Database	Name Simulate Locatoin Tyr	e Starting Address M	fodbus Type		^
Multiply Options ▲ DO 1 ▲ DO 2 ▲ DO 3	DO 0 No Coil (bit, r/w) DO 1 No Coil (bit, r/w) DO 2 No Coil (bit, r/w) DO 3 No Coil (bit, r/w)	17 BC 18 BC 19 BC 20 BC	00L 00L 00L 00L		
DO 4 DO 5 DO 6 DO 7 Device Parameters Simulation Signals Alarn Definitions Templates	Name: ADAM_4068 Simulate: Device Type Type: Micro 84	Address: 1 Paremeters: Not A	Assigned>	Reset Apply	
	Bits: 160 T Words: 5 t	he numbers indicate how r an be transferred in one me ogether address that are clo	much unused data essage to merge see but not adjacent.		
	Read: 1000	Timeouts to suspend:	3		
	Write: 1000	Suspend period:	60000		
	Use template				
	 Simple template Description 	<not assigned=""></not>	~		
	U rarameterized temptate	<not assigned=""></not>	X		
		Start address base:	0		
Ready				8 Object(s)	
					- T

Active d	atabase confirm dialog 🛛 📈
?	Current active database is: C:\Documents and Settings\LGT\My Documents\modbusRTU2.mdb. Active database is the database that the server will load when started.
	Currently edited database is: C:\Documents and Settings\LGT\My Documents\modbusRTU1.mdb.
	Do you want to set edited database as active database?
	<u>是(Y)</u> 否(N)

Advantech AdamOPC Config	urator ¥er 3.01.007	 [C:\Documents and Settin; 	s\LGT\My Doc	uments\mod busR 1	'U1.mdb]			
Fue Lools About								
Address Space	Nam	e Simulate Locatoin Type	Starting Addres	s Modbus Type				
	🛛 🗖 D	00 No Coil (bit, r/w)	17	BOOL				
DO 0	D 🗖 🖸	O 1 No Coil (bit, r/w)	18	BOOL				
DO I	🛛 🗖 D	02 No Coil (bit, r/w)	19	BOOL				
		0.3 No Coil (bit r/w)	20	ROOT				
		Name: ADAM 4068				Reset		
- DO 6		Simulate: 🔲	Address: 1	\$		Analy		
DO 7	D	evice Type				Appiy		
Conversions		Trans No. 04	Burnature	NT				
Circle Parameters		Type: Micro 84	raremeters.	Not Assigned >				
Simulation Signals								
Templetec	0	Optimizations						
and remplates		Bits: 160 The numbers indicate how much unused data						
		Words: 5 together address that are close but not adjacent.						
	Ti	Timeouts (ms)						
		Read: 1000	Timeouts to sus	nend: 2				
			100000000000	Prom. 3				
		Write: 1000	Suspend period	60000				
		Use template						
		Simple template	Not Assigned					
		O Business and American	- itor itosignou					
			<not assigned<="" th=""><th></th><th></th><th></th><th></th><th></th></not>					
Item ID	Value	Timestamp	Quality	Subguality	Limit	1		
COM1.ADAM_4068.DO 0	False	2008/1/25 下午 05:26:56	Good	Not-specific	Not Limited			
COM1.ADAM_4068.DO 1	False	2008/1/25 下午 05:26:56	Good	Not-specific	Not Limited			
COM1.ADAM_4068.DO.2	False	2008/1/25 下午 05:26:56	Good	Not-specific	Not Limited			
COM1.ADAM 4068.DO 4	False	2008/1/25 下午 05:26:56	Good	Not-specific	Not Limited			
COM1.ADAM_4068.DO 5	False	2008/1/25 下午 05:26:56	Good	Not-specific	Not Limited			
COM1.ADAM_4068.DO 6	False	2008/1/25 下午 05:26:56	Good	Not-specific	Not Limited			
COMITADAM_4068.DU /	raise	2008/1/25 1 + 05:26:56	Good	Not-specific	Not Limited			
	1			1	1.		10 A1	
eady							8 Oł	ject(s)

ADAM-Wizard 🔝

User can use the wizard to configure the ADAM series product quickly. Take ModbusRTU OPC Server for example, you have to choose the Port which the ADAM device is connected firstly. Then select device type and ADAM module. If you select ADAM-4000 series device type, you can choose the ADAM-4000 modules under combo. If ADAM-5000 series device type is chosen, you also can configure ADAM-5000 IO modules in each slot. Then push Next button to the next stage.

👫 ADAM-Wizard						
Port: COM1 COM1 COM2		~				
Device Type	ADAM-4	000 Module				
🔄 💿 ADAM-4000	Module:	None	*			
	ADAM-5	000 Module				
📶 🔿 adam-5000/485	Slot0:	None	×	Slot4:	None	~
	Slot1 :	None	<u>~</u>	Slot5:	None	~
ADAM-5000E	Slot2:	None	V	Slot6:	None	
	Slot3:	None	×	Slot7:	None	~
·						
Choose type		< Back	Vext >		Finish	Cancel

~			
ADAM-4000 Module			
Module: ADAM-4117 ADAM-4056S	~		
-ADAM-5 ADAM-4056SO ADAM-4068 ADAM-4068 ADAM-4019 ADAM-4119	Slot4:	None	~
Slot1: ADAM-41150 ADAM-41150 ADAM-41168	Slot5:	None	
Slot2: None	Slot6:	None	×
Slot3: None	Slot7:	None	~
< Back N	/ext >	Finish	Cancel
	ADAM-4000 Module Module: ADAM-4117 ADAM-4056S ADAM-5 ADAM-5 Slot0: ADAM-4068 ADAM-4069 ADAM-4118 ADAM-4118 ADAM-4118 ADAM-4118 ADAM-4168 Slot2: None Slot2: None Slot3: None	▲DAM-4000 Module Module: ADAM-4000 Module Module: ADAM-4017 ADAM-4056S ADAM-4056SO ADAM-5 ADAM-4068 ADAM-4068 ADAM-4069 Slot0: ADAM-4117 ADAM-4118 Image: ADAM-4117 ADAM-4118 Image: ADAM-4118 Slot1: ADAM-4168 Slot2: None Slot3: None < Back Next >	ADAM-4000 Module Module: ADAM-4117 ADAM-4056S ADAM-4056SO ADAM-4068 ADAM-4068 ADAM-4069 Slot0: ADAM-4117 ADAM-4118 ADAM-4118 ADAM-4168 Slot1: ADAM-4168 Slot2: None Slot2: None Slot2: None Slot3: None Slot3: None Slot4: None Slot5: None Slot5: None Slot7: None Slot7: None

ADAM-Wizard	~		×
Device Type	ADAM-4000 Module		
ADAM-4000	ADAM-5000 Module	<u> </u>	
ADAM-5000/485	Slot0: ADAM-5013	Slot4:	ADAM-5017
譋 💿 ADAM-5000E	Slot1: ADAM-5017UH	Slot5:	ADAM-5017H ADAM-5017+ ADAM-5017UH ADAM-5018
	Slot2: ADAM-5018	Slot6:	ADAM-5018+ ADAM-5024 ADAM-5050
	SIOD: ADAM-50184	>10t7:	180C-MAUA
Choose type	< Back Next >		Finish Cancel

At this step, you could modify the device name, address and timeouts setting. The device name and address have to be unique at this Port especially. Otherwise, the communication of OPC server will fail.

💠 ADAM-Wizard		×
Port: COM1		
Slot Configuration ADAM_5000E S0_Adam5013 S1_Adam5017U S2_Adam5018P S4_Adam5017U S5_Adam5068 S6_Adam5069 S7_Adam5081	Device setting Name: ADAM_5000E_2 Address: 2 Timeouts (ms) Read: 1000 Timeouts to suspend: 3 Write: 1000 Suspend period: 60000	
< >		
Step: 2-1	< Back Next > Finish Cancel	

You can see the ADAM-5000E slot configuration left. When selecting DIO module like ADAM-5069, you can configure the MODBUS starting address. The MODBUS starting

address is default setting following properties of ADAM-5000E. And the data items configuration is showed.

ADAM-Wizard Port: COM1 Slot Configuration ADAM_5000E Slot Adam5013 Sl_Adam5017UH	Name: S6_A	Adam5069	Config	Starting Address
S2_Adam5018 S3_Adam5018P S4_Adam5017UH S5_Adam5068 S6_Adam5069 S7_Adam5081	Channel DO 0 DO 1 DO 2 DO 3 DO 4 DO 5 DO 6 DO 7	Location Type OX OX OX OX OX OX OX OX OX OX	Modbus Type BOOL BOOL BOOL BOOL BOOL BOOL BOOL BOO	Modbus Address 97 98 99 100 101 102 103 104 104
Step: 2-1		< Back	lext >	Finish Cancel

When selecting AIO module like ADAM-5017UH, you even more can configure the Conversions setting for each channel. Then push Next button to the next stage.

🔸 ADAM-Wizard				
Port: COM1	Y			
Slot Configuration			Starting Add	ress
 ADAM_5000E S0_Adam5013 S1_Adam5017UH 	Name: S4_Adam5017UH Channel Conversions	Conf	äg 33	Config
S2_Adam5018	Conversion: Default Linea	· · · · · · · · · · · · · · · · · · ·		🔄 Check all
	Channel: 0	Config		Config checked
5_Adam5068	DataItems Configuration -			
\$7_Adam5081	Channel Location Type	Modbus Type	Modbus Address	Conversion 🔥
	AIO 4X	UINT	33	<not assigned=""></not>
	🔲 AI 1 4X	UINT	34	<not assigned=""> 📃</not>
	🔄 AI 2 4X	UINT	35	<not assigned=""></not>
	AI 3 4X	UINT	36	<not assigned=""> 🛛 👝</not>
		TITNTT	27	Mat Amimada 🚬 🎽
<	<			<u> </u>
a				
Step: 2-1	< Back	Next >	Finish	Cancel

Finally, the data items configuration overview is showed as list. Click the Finish button to configure OPC database.

Port: COM1		~				
Device Information		DataItems Configur	ation			
		Module (Folder)	Channel	Location Type	Modbus Type	Modbus Addre
		S3_Adam5018P S4_Adam5017UH S4_Adam5017UH	AI 6 AI 0 AI 1	4X 4X 4X	UINT UINT UINT	31 33 34
Device Type: ADAM 5000E	-	S4_Adam5017UH	AI 2	4X	UINT	35
ADAM-2000E		S4_Adam5017UH	AI 3	4X AV	UINT	36
Name à DàM		S4_Adam5017UH	AI 4 AI 5	4A 4X	UINT	38 -
5000F 2		S4_Adam5017UH	AI 6	4X	UINT	39
Address 2		S4_Adam5017UH	AI 7	4X	UINT	40
Device timeout:		S5_Adam5068	DO U DO 1	UX OV	BOOL	81
Read :1000		S5_Adam5068	DO 2	OX	BOOL	83
Write :1000		S5_Adam5068	DO 3	OX	BOOL	84
Timeouts to Suspend :3		S5_Adam5068	DO 4	OX	BOOL	85
a 1 1 00000		<				>



Then you could see that the device named ADAM_5000E_2 is established by ADAM-Wizard. You also can modify the detail configuration again certainly after using wizard.

🚟 Advantech AdamOPC Configurator Ver 3	01.005 - [C:\Documents and Set	hings\LGT\My Documer	its\modbusRTU1.md	b]	- F 🛛
<u>File T</u> ools <u>A</u> bout					
i 🗅 🖨 🖃 🔍 🚳					
Address Space COM1 ADAM_5000E ADAM_5000E 2 SO_Adam5013 AT AT AT AT AT AT AT AT AT AT	Name Simulate SD_Adam5013 No S1_Adam5017UH No S2_Adam5018 No S2_Adam5018P No S3_Adam5018P No S5_Adam5018P No S5_Adam5018P No S5_Adam5068 No S5_Adam5069 No S7_Adam5081 No				
AI2 AI3 AI4 AI4 AI5 AI6 S2_Adam5018 S2_Adam5018 S3_Adam5018 S5_Adam5088 S5_Adam5088 S5_Adam5089 Conversions Conversions Alarn Definitions Templates	Name: ADAM_500 Simulate:	OE_2 Address: 2 Paremeters: Not A The numbers indicate how a can be transferred in one m together address that are clo Timeouts to suspend: Suspend period: Not A Suspend period: Suspend: www.example.com suspend: suspend: suspend: <a href="https:</td> <td>stigned></td> <td>Reset Apply</td> <td></td>	stigned>	Reset Apply	
Ready					B Object(s)
					in a place (b)

2.4 Using OPC Client (AdamOPC Browser)

The AdamOPC Browser provided with the ADAM OPC Servers, has rapid methods for connecting your Servers, including Data Access OPC Server and Alarm Event OPC Server. The OPC Client is able to browse the registry of a PC and display a complete list of all installed OPC Servers. It also provides real live data feedback and OPC Server browsing capabilities.

AdamOPC Browser View About E ? Browser OPC Server Data Access 2.XX v 🖃 🛄 Local Servers 💁 Advantech AdamOPCDA Advantech.ModbusRtuDA CONICS.ModbusOPCServer OPC.DaWrapper OPCSample.NET.DaServer.W 🐼 OPCSample.OpcDa20Server 🐼 OPCSample.OpcDaServer E Local Network > Monitor OPC DA Monitor Add OPC Server Ready 0 Object(s)

Data Access Monitoring

Select OPC DA Monitor node and click right mouse button to add OPC Server.

User can choose target DA server under local PC or other local network PCs. If you would like choose the server under local network, you have to make sure the DCOM communication security setting of OPC server and client between two computers.



After choosing the server, you can add group to create subscription and items of the OPC server. Then select target group node, the data items states are showed in the right list view.

🚯 AdamOPC Browser		
View About		
i 🗊 🤋		
Browser	Group Name	
Browser Data Access 2.XX Construction Advantech.AdamOPCDA Advantech.ModbusRtuDA Advantech.ModbusRtuDA Advantech.ModbusRtuDA Advantech.ModbusRtuDA Advantech.ModbusRtuDA OPCSample.OpcDa20Server OPCSample.OpcDa20Server OPCSample.OpcDaServer OPCSample.OpcDaServer OPCSAmple.OpcDaServer Monitor Advantech.AdamOPCDA Advantech.AdamOPCDA OPC AE Monitor	Group Name Add Group Connect Disconnect Delete Server	
Ready		O Object(s)

Name	AdamGi	coup	
Active			
Update Rate	1000	*	
Keep Alive Rate	0	Ŷ	
Deadband	0.0	\$	

You can pick the tags by double click the left mouse button. Then click "OK".

🗖 Add Subscription Items		
Advantech AdamOPCDA COM1 ADAM_4013 ADAM_4013 ADAM_4016 ADAM_4016 ADAM_4016 ADAM_4016 DO 0 DO 0 DO 0 DO 1 DO 2 DO 2 DO 3 ADAM_4052 DI 0 DI 1 DI 2 DI 2 DI 3 DI 4 DI 5 DI 4 DI 5 DI 6 DI 7 ADAM_5000E BaudRate DI 7 FileName OutxCtsFlow ParityChecking ParityScheme RtsControl StopBits	Item ID Image: Communication of the state of	
	Read Items OK	Cancel

View About									
T ?									
Browser	Item ID	Value	DataType	Timestamp	Quality	Subquality	Limit	Result	Active
Data Access 2.XX 🛛 😽	🔁 COM1.ADAM_4016.AI 0	0.3999999999999864	Double	2008/1/22 下午 06:27:58	Good	Not-specific	Not Limited	S_OK	True
🖃 🛄 Local Servers	2 COM1.ADAM_4016.AO 0	0.255	Single	2008/1/22 下午 06:26:42	Good	Not-specific	Not Limited	S_OK	True
🗍 🏧 Advantech.AdamOPCDA	🔁 COM1.ADAM_4016.DO 0	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
- 🖙 Advantech ModbusRtuDA	🔁 COM1.ADAM_4016.DO 1	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
- Advantech.ModbusTCPDA	🔁 COM1.ADAM_4016.DO 2	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
ICONICS ModbusOPCServer3	🔁 COM1.ADAM_4016.DO 3	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
- 😂 OPC Da Wrapper	🔁 COM1.ADAM_4052.DI 0	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
	🔁 COM1.ADAM_4052.DI 1	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
OPCSample.OpcDa20Server	🔁 COM1.ADAM_4052.DI 2	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
UPC.Sample.OpcDaserver	🔁 COM1.ADAM_4052.DI 3	False	Boolean	2008/1/22 下午 06:26:41	Good	Not-specific	Not Limited	S_OK	True
Tocal Network	🔁 COM1.BaudRate	9600	Int32	2008/1/22 下午 06:26:42	Good	Not-specific	Not Limited	S_OK	True
	🔁 COM1 ByteSize	8	Int16	2008/1/22 下午 06:26:42	Good	Not-specific	Not Limited	S_OK	True
	🔁 COM1.ByteSize	8	Int16	2008/1/22 下午 06:26:42	Good	Not-specific	Not Limited	S_OK	True
Monitor									
- and u								DObie	4/->

Alarm and Event Monitoring

Select OPC AE Monitor node and click mouse right button to add OPC Server. When some events occur from OPC AE server, the right list view will receive the newest event information.



Server Se	lector	
Specification	Alarms and Event 1.XX	~
Local	Servers Ivantech.AdamOPCAE Ivantech.ModbusRtuAE Ivantech.ModbusOPCEvent ONICS.ModbusOPCEvent Network RTHURLAPTOP FTPC	Server3
ОК]	Cancel

	vent Time 18:2240 062 18:32:39 062 18:32:30 062 18:32:20 062 18:32:20 062 18:32:20 062 18:32:20 062 18:32:21 062 18:32:17 062 18:32:10 062 18:32:10 062 18:32:09 062 18:32:09 062 18:32:00 062 18:30:00 062 18:30:00 062 18:30:00 062 18:300	Severity 500 6	Source ADAM_6052.D10	Ack Req Υ	Condition DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION	Message LGT Digital Alarm LGT Digital Alarm	
Browser Data Access 2 XX Dat	vent Time 13:2240 062 18:32:39 062 18:32:39 062 18:32:20 062 18:32:20 062 18:32:20 062 18:32:20 062 18:32:20 062 18:32:19 062 18:32:19 062 18:32:19 062 18:32:09 062 18:32:	Severity 500 500 500 500 500 500 500 500 500 50	Source ADAM_6052.D10	Аск Req У У У У У У У У У У	Condition DIGITAL_EXCEPTION DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default DIGITAL_EXCEPTION Default	Message LGT Digital Alarm LGT Digital Alarm	
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Advantech.ModbusTCPAE							

Appendix A.

DCOM Configuration for Windows XP SP2

DCOM Configuration and the securities of Windows OS are integrated together. The advanced security setting of Windows often makes the OPC communication difficulties. The document describes the following steps that are used to disable these security settings and make sure that communication can be established. We will take Windows XP SP2 for example. On basically, the configuration of NT/2000 is similar with XP system except configuration user interface. Moreover, the Windows Firewall will interfere with OPC communication between applications on the system. If user would like allowed OPC applications through the Firewall, the documents are describe the procedure from the OPC Foundation (www.opcfoundation.org). Otherwise you can disable the firewall for reducing complicated setting processes.



Please disable your firewall.

🔯 Windows Firewall	×
General Exceptions Advanced	
Your PC is not protected: turn on Windows Firewall	
Windows Firewall helps protect your computer by preventing unauthorized users from gaining access to your computer through the Internet or a network.	
🔮 O On (recommended)	
This setting blocks all outside sources from connecting to this computer, with the exception of those selected on the Exceptions tab.	
Don't allow exceptions	
Select this when you connect to public networks in less secure locations, such as airports. You will not be notified when Windows Firewall blocks programs. Selections on the Exceptions tab will be ignored.	
Off (not recommended)	
Avoid using this setting. Turning off Windows Firewall may make this computer more vulnerable to viruses and intruders.	
Windows Firewall is using your domain settings.	
What else should I know about Windows Firewall?	
OK Cancel	

Open the DCOM permissions.



Right click on "My Computer" and select "Properties".

Component Services						
🚱 File Action View V	/indow Help				_	. ð ×
← → 1 1 × 1	* 🕅 😰 🖄 🔚	- 😫 🏛 🗊				
Console Root		My Computer	4 object(s)			
Component Services						
E COM+ Ap	Stop MS DTC	COM+	DCOM Config	Distributed	Running Processes	
	Refresh all components			indi baccimi	110005505	
É…	View New Window from Here	•				
	Properties					
	пеф					
Opens property sheet for the	current selection.					

Check the "Default Properties" as the following setting.

My Computer Properties			? ×			
Default Protocols	MSDTC) coł	d Security			
General	General Options Default Properties					
Enable Distributed COM	Enable Distributed COM on this computer					
Enable COM Internet Se	rvices on this co	mputer				
Default Distributed COM C	Default Distributed COM Communication Properties					
The Authentication Level	The Authentication Level specifies security at the packet level.					
Default Authentication Level:						
Connect	Connect					
The impersonation level sp who is calling them, and w using the client's identity.	pecifies whether whether the appli evel:	applications can cation can do op	determine erations			
Security for reference trac and that the default impers	king can be prov sonation level is ecurity for referer	vided if authentica not anonymous. nce tracking	ation is used			
	OK	Cancel	Apply			

Go to the "COM Security" tab page. You have to modify "Access Permissions" and "Launch and Activation Permissions". Click on the "Edit Limits" and "Edit Default" under "Access Permissions", and under "Launch Permissions".

y Computer Properties	5	<u>?</u> ×		
General	Options	Default Properties		
Default Protocols	MSDTC COM Security			
Access Permissions—				
You may edit who is also set limits on app	allowed default access plications that determine	to applications. You may their own permissions.		
	Edit <u>L</u> imits	Edit Default		
activate objects. Yo determine their own	u may also set limits on a permissions. Edit Limits	Edit Default		
	OK	Cancel Apply		

Ensure that you have allowed Access and Launch permissions to "Anonymous Logon", "Everyone", "Interactive", "Network", and "System" as shown below. Make sure that both the Local Allow and Remote Allow checkboxes are both checked.

Note: Since "Everyone" includes all authenticated users, it is often desirable to add these permissions to a smaller subset of users. One suggested way to accomplish this is to create a group named "OPC Users" and add all user accounts to this group that will execute any OPC Server or Client. Then substitute "OPC Users" everywhere that "Everyone" appears in these configuration dialogs.

Access Permission		? ×
Security Limits		
Group or user names:		
ANONYMOUS LOGON ANONYMOUS LOGON Everyone INTERACTIVE NETWORK SYSTEM		
Permissions for SYSTEM	Add	<u>R</u> emove Deny
Local Access Remote Access		

Launch Permission		? ×
Security Limits		
Group or user names:		
ANONYMOUS LOGON Control Everyone Control Every		
, <u>P</u> ermissions for SYSTEM	A <u>d</u> d	<u>R</u> emove Deny
Local Launch Remote Launch Local Activation Remote Activation		
	ОК	Cancel

Browser the OPC server under "My Computer/DCOM Config". Right-click on it and select "Properties".

🛞 Component Services				
🐌 Eile <u>A</u> ction <u>Vi</u> ew <u>W</u> indow <u>H</u> elp	<u>_8×</u>			
← → 🗈 📧 🗶 🕋 😰 😤 🏪 😳 🕮 🏢 🕯				
Console Root	DCOM Config 190 object(s)			
🚊 🐌 Component Services	Name Application ID			
	AccStore Class {DE5DBCDC-104A-4cbc-A4D5-0C2104			
B B My Computer	AcroPDF {BBAA0E44-3862-490C-8E63-AC2D2D			
E COM+ Applications	Adobe Acrobat D {B801CA65-A1FC-11D0-85AD-444553			
	Advantech ADAM {FED57D15-F0B1-11D2-8BF3-0000000			
	Advantech Modb {79BB43C0-DDF9-11D3-B264-0228CF			
Adobe Acrobat Document	Advantech Modb {4C972905-1123-11D4-AFA4-005004			
Advantech ADAM series OPC Server	Background Intelli {69AD4AEE-51BE-439b-A92C-86AE49			
🗄 💑 Advantech Modbus Opc Server	Blocked Drivers {783C030F-E948-487D-B35D-94FCF0			
🕀 🧑 Advantech Modbus/TCP OPC Server Version 2.0	CaptureAPI {7F63964D-9454-45B1-BBB5-03CC24i			
🕀 🥎 Background Intelligent Transfer Service	COM+ Event Syst {4E14FBA2-2E22-11D1-9964-00C04Ft			
🗄 🥎 Blocked Drivers	ComEvents.ComS {ECABB0C3-7F19-11D2-978E-0000F8			
🗄 🧐 CaptureAPI	ComEvents.ComS {ECABB0C6-7F19-11D2-978E-0000F8			
E 😨 COM+ Event System	Command line Tri {797EF3B3-127B-4283-8096-1E8084B			
ComEvents.ComServiceEvents	CoverEdDocFilter {2AA996C4-56DF-4051-896E-E0DC9C			
Comevents.ComSystemAppEventData	CustReg Class {84D586C4-A423-11D2-B943-00C04F			
	OdeServer {68793CC6-1F9B-11D3-8FE6-002018t			
	Defrag FAT engine {80EE4902-33A8-11d1-A213-0080C88			
	Defrag NTFS engine {80EE4901-33A8-11d1-A213-0080C88			
	Gfuicom {FFFAA5E1-83F5-4AFE-8190-6B3F03			



ModbusRtu DA and Mod	ousRtu AE Properties	×
General Location Secu	urity Endpoints Identity	_,
General properties of th	is DCOM application	
Application Name:	ModbusRtu DA and ModbusRtu AE	
Application ID:	{556EB235-4B53-4D6A-A58F-E524122E3E2D}	
Application Type:	Local Server	
Authentication Level:	Connect	
Local Path:		
		1
	Cancel Apply	

Under "General" tab page, set the "Authentication Level" to "Connect"

Go to the "Security" tab page. Select "Customize" button. Click on the "Edit" under "Access Permissions", and under "Launch and Activation Permissions".

ModbusRtu DA and ModbusRtu AE Properties	<u>? ×</u>
General Location Security Endpoints Identity	
Launch and Activation Permissions	
© <u>U</u> se Default	
• Customize	<u>E</u> dit
Access Permissions	
C Use De <u>f</u> ault	
• Customize	E <u>d</u> it
Configuration Permissions	
C Use Defa <u>u</u> lt	
 Customize 	E dįt
OK Car	ncel <u>A</u> pply

Ensure that you have allowed Access and Launch permissions to "Everyone", "Interactive", "Network", and "System" as shown below.

Launch Permission		? ×
Security		
<u>G</u> roup or user names:		
Everyone Everyone Everyone INTERACTIVE NETWORK SYSTEM		
	A <u>d</u> d	<u>R</u> emove
Permissions for SYSTEM	Allow	Deny
Local Launch Remote Launch Local Activation Remote Activation		
	OK	Cancel

Access Permission		? >
Security		
<u>G</u> roup or user names:		
Everyone Everyone INTERACTIVE NETWORK SYSTEM		
	Add	Remove
Permissions for SYSTEM	Aga	Deny
Local Access Remote Access		
	οκ	Cancel

Go to the 'Identity' tab. You can set which user account you want to sue to run the server. Click OK to return to the Component Services window.

ModbusRtu DA and Mod	busRtu AE Prope	rties	? ×		
General Location Secu	urity Endpoints I	dentity			
Which user account do y	Which user account do you want to use to run this application?				
The interactive user.					
O The Jaunching user.					
◯ This <u>u</u> ser.					
Us <u>e</u> r:			<u>B</u> rowse		
Password:					
Confirm password:					
C The system account	(services only).				
		Cancel			
	UN	Caricei	8PPV		

In the "DCOM Config" folder browse to "OpcEnum". Right click on it and select 'Properties'. Set the setting of "OpcEnum" as the OPC server.



If you are using workgroup instead of domains the following steps may need to be taken in order to establish communication. Please note that these changes may compromise the security of your system.



Click on "Administrative Tools" under "Control Panel".

Click on "Local Security Policy" under "Administrative Tools".



Go to "Security Settings/Local Policy/Security Options/". Right-click on "DCOM: Machine Access Restrictions in Security Descriptor Definition Language (SDDL) syntax", and select "Properties".

Local Security Settings			
File Action View Help			
+ → 1 = × 🗗 🖳	3		
Security Settings	Policy A	Security Setting	
Security Settings	Policy ////////////////////////////////////	Security Setting Enabled Disabled Enabled Administrator Guest Disabled Disa	perties p
	Domain member: Require strong (Windows 2000 or later) session key	Disabled	
	Interactive logon: Do not require CTRL+ALT+DEL	Not defined	
	Important Important <t< td=""><td>Not defined</td><td></td></t<>	Not defined	
Opens property sheet for the curre	ent selection.		

Click the "Edit Security" button to ensure that "Everyone", "Interactive", "Network", and "System" are added into the allowed Group or User Names.

DCOM: Machine Access Restrictions in Security Descriptor Defi <mark>?</mark> 🗙			
Template Security Policy Setting			
DCOM: Machine Access Restrictions in Security Descriptor Definition Language (SDDL) syntax			
If the security descriptor is left blank after defining the policy setting in the template, the policy setting will not be enforced.			
Security descriptor:			
	OK Cancel Apply		

You also have to edit "Security Settings/Local Policy/Security Options/". Right-click on "DCOM: Machine Access Restrictions in Security Descriptor Definition Language (SDDL) syntax" as above steps.

Docal Security Settings					
File Action View Help	File Action View Help				
\leftarrow \rightarrow $\boxed{\mathbf{E}}$ \times $\boxed{\mathbf{E}}$ $\boxed{\mathbf{E}}$	3				
Security Settings	Policy A	Security Setting			
🗄 🛄 Account Policies	Accounts: Administrator account status	Enabled			
E Gal Policies	Accounts: Guest account status	Disabled			
E G Audit Policy	Accounts: Limit local account use of blank passwords to console logon only	Enabled			
User Rights Assignmen	Accounts: Rename administrator account	Administrator			
Security Options	Accounts: Rename guest account	Guest			
Public Key Policies	Audit: Audit the access of global system objects	Disabled			
TP Security Policies on Loca	Audit: Audit the use of Backup and Restore privilege	Disabled			
E Security Policies of Loca	Audit: Shut down system immediately if unable to log security audits	Disabled			
	DCOM: Machine Access Restrictions in Security Descriptor Definition Language (SDDL) syntax	Not defined			
	DCOM: Machine Launch Restrictions in Security Descriptor Definition Language (SDDL) syntax	Not defined		_	
	Devices: Allow undock without having to log on	Enabled	Properties		
	BDevices: Allowed to format and eject removable media	Administrators	Help		
	Devices: Prevent users from installing printer drivers	Disabled		_	
	BDevices: Restrict CD-ROM access to locally logged-on user only	Disabled			
	BDevices: Restrict floppy access to locally logged-on user only	Disabled			
	BDevices: Unsigned driver installation behavior	Silently succeed			
	BDomain controller: Allow server operators to schedule tasks	Not defined			
	Bomain controller: LDAP server signing requirements	Not defined			
	Bomain controller: Refuse machine account password changes	Not defined			
	Bomain member: Digitally encrypt or sign secure channel data (always)	Enabled			
	BODomain member: Digitally encrypt secure channel data (when possible)	Enabled			
	BDomain member: Digitally sign secure channel data (when possible)	Enabled			
	BDomain member: Disable machine account password changes	Disabled			
	B Domain member: Maximum machine account password age	30 days			
	Bomain member: Require strong (Windows 2000 or later) session key	Disabled			
	Interactive logon: Do not display last user name	Disabled			
	Interactive logon: Do not require CTRL+ALT+DEL	Not defined			
	Interactive logon: Message text for users attempting to log on				
	Interactive logon: Message title for users attempting to log on	Not defined		-	
Opens property sheet for the current selection.					

DCOM: Mac	thine Launch Restrictions in Security Descriptor Defi <mark>?</mark> 🗙		
Template 3	Security Policy Setting		
DCOM: Machine Launch Restrictions in Security Descriptor Definition Language (SDDL) syntax			
If the security descriptor is left blank after defining the policy setting in the template, the policy setting will not be enforced.			
Security descriptor:			
	<u>E</u> dit Security		
	OK Cancel Apply		

Browse to "Network access: Let Everyone permissions apply to anonymous users". Right click on it, and select "Properties" to be "Enabled" state.

📑 Local Security Settings			_ 🗆 ×
File Action View Help			
$\leftarrow \rightarrow \mathbf{E} \times \mathbf{C} _{\mathbf{E}} _{\mathbf{C}}$	3		
😼 Security Settings	Policy A	Security Setting	
🗄 📴 Account Policies	BigMicrosoft network client: Send unencrypted password to third-party SMB servers	Disabled	
E Gal Policies	Microsoft network server: Amount of idle time required before suspending session	15 minutes	
Audit Policy	B Microsoft network server: Digitally sign communications (always)	Disabled	
User Rights Assignmen	BigMicrosoft network server: Digitally sign communications (if client agrees)	Disabled	
Bublis Key Palicies	Microsoft network server: Disconnect clients when logon hours expire	Enabled	
Software Pestriction Policies	BNetwork access: Allow anonymous SID/Name translation	Disabled	
IP. Security Policies on Loca	BNetwork access: Do not allow anonymous enumeration of SAM accounts	Enabled	
	BNetwork access: Do not allow anonymous enumeration of SAM accounts and shares	Disabled	
	Betwork access: Do not allow storage of credentials or .NET Passports for network authentic	Disabled	
	Network access: Let Everyone permissions apply to anonymous users	Disabled	
	BNetwork access: Named Pipes that can be accessed anonymously	COMNAP,COMP	ercies
	Network access: Remotely accessible registry paths	System\CurrenI Help	
	Network access: Shares that can be accessed anonymously	COMCFG,DFS\$	
	BigNetwork access: Sharing and security model for local accounts	Guest only - local us	
	Retwork security: Do not store LAN Manager hash value on next password change	Disabled	
	Wetwork security: Force logoff when logon hours expire	Disabled	
	Billion Network security: LAN Manager authentication level	Send LM & NTLM re	
	Retwork security: LDAP client signing requirements	Negotiate signing	
	BigNetwork security: Minimum session security for NTLM SSP based (including secure RPC) clients	No minimum	
	Retwork security: Minimum session security for NTLM SSP based (including secure RPC) servers	No minimum	
	Recovery console: Allow automatic administrative logon	Disabled	
	Recovery console: Allow floppy copy and access to all drives and all folders	Disabled	
	🔀 Shutdown: Allow system to be shut down without having to log on	Enabled	
	蹬Shutdown: Clear virtual memory pagefile	Disabled	
	🐯 System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing	Disabled	
	Bystem objects: Default owner for objects created by members of the Administrators group	Object creator	
	System objects: Require case insensitivity for non-Windows subsystems	Enabled	
<	System objects: Strengthen default permissions of internal system objects (e.g. Symbolic Links)	Enabled	•
	-		

Opens property sheet for the current selection.

Network access: Let Everyone permissions apply to anonymou?
Local Security Setting
Network access: Let Everyone permissions apply to anonymous users
© Enabled
C Digabled
OK Cancel Apply

Browse to "Network access: Sharing and security model for local accounts". Right click on it, and select "Properties" to be "Classic-local users authenticate as themselves" state.

F Local Security Settings	
File Action View Help	
Security Settings Policy A Security Setting	
Image: Source y Secting y Second y Sectig y Sectig y Secting y Secting y Secting y Secting y Se	DDE, SQL \QUERY, SPOOLSS, LL ControlSet\Control\ProductOpti
Network security: Force logoff when logon hours expire Disabled Disabled Disabled Network security: LAN Manager authentication level Send LM & NTLM Network security: LAN Manager authentication level Send LM & NTLM Network security: LAN Manager authentication level Network security: LAN Manager authentication level Network security: IDAP client signing requirements Negotiate signing Network security: Minimum session security for NTLM SSP based (including secure RPC) clients No minimum Network security: Minimum session security for NTLM SSP based (including secure RPC) servers No minimum Network security: Minimum session security for NTLM SSP based (including secure RPC) servers No minimum Network security: Minimum session security for NTLM SSP based (including secure RPC) servers No minimum Network security: Minimum session security for NTLM SSP based (including secure RPC) servers No minimum Network security: Minimum session security for NTLM SSP based (including secure RPC) servers No minimum Network security: Minimum session security for NTLM SSP based (including secure RPC) servers No minimum Network security: Allow Ropy copy and access to all drives and all folders Disabled Shutdown: Clear virtual memory pagefile System oryptography: Use FIPS compliant algorithms for encryption, hashing, and signing Disabled System objects: Default owner for objects created by members of the Administrators group Object creator System objects: Default owner for objects created by members of the Administrators group Object creator System objects: Strengthen default permissions of internal system objects (e.g. Symbolic Lin Enabled System objects: Strengthen default permissions of internal system objects (e.g. Symbolic Lin Enabled	responses Help

Network access: Sharing and security model for local accounts 👥 🗙			
Local Security Setting			
Network access: Sharing and security model for local accounts			
Classic - local users authenticate as themselves			
	,		
		OK Cancel	



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