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How to do Time Synchronization and record state of many ISaGRAF PAC?

Download FAQ-070 Demo

1. Introduction

The method listed in this document is similar to FAQ-065

(http://www.icpdas.com/web/product/download/software/development_tool/isagraf/document/faq/faq06 5.pdf). Here use one PC/ Server to receive UDP report data from one or many ISaGRAF PAC (I-7188EG, I-8xx7, iPAC-8x47, W-8xx7). Then the PC/Server can send time synchronization command to the ISaGRAF PAC if necessary.

This demo sample apply one PC, IP = 10.0.0.91, Mask = 255.255.255.0 to link to two ISaGRAF PACs (could be any of W-8xx7, I-8x37, iPAC-8447/ 8847 or I-7188EG) in a local Ethernet area. The PAC 1: IP = 10.0.0.103, Mask = 255.255.255.0, PAC 2: IP = 10.0.0.105, Mask = 255.255.255.0



If this sample is applied in the Internet, then the PC/ Server must set to a fixed Internet IP address. And also each ISaGRAF PAC in the different local area should be possible to connect to the Internet (Normally is through the Gateway Server of the ISP company). Each ISaGRAF PAC (also named as Local controller) must set their proper Gateway IP address.



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2 Install soft	wara and hav	durara fai	domo to	atina				
Z. IIISLAII SOIL	ware and nar	uware ioi	demo tes	sung				
To run this dem https://www.ic	o sample corre pdas.com/en/de	ctly, please ownload/sh	update you ow.php?nu	r Controller m=368&nat	's ISaGRAF dr tion=US&kind	iver to belo 1=&model	w version. =&kw=ISaGRAF	
I-7188EG:	Ver. 2.19	or later vei	rsion					
I-8437/ 8837:	Ver. 3.21	or later vei	rsion					
W-8xx7:	Ver. 3.38	or later vei	rsion					
If you want to k	now more abou	it the UDP p	protocol use	ed in this sai	mple, please i	refer to <mark>Sec</mark>	tion 4.	
The ISaGRAF de	mo programs u	sed in this s	ample are a	as below.				
PAC 1: wdmo_	64a.pia (Please	set PAC's IF	P as 10.0.0.1	LO3, Mask a	s 255.255.255	5.0)		
PAC 2: wdmo_	64b.pia (Please	set PAC's II	o as 10.0.0.1	105, Mask a	s 255.255.25	5.0)		
Note: Sometime	es PC/ Server re	side at the	Internet wit	h a fixed In	ternet IP addr	ess. Then a	ll the local	
controllers in th	e same application	tion must as	sign its pro	per Gatewa	y IP. The valu	e of this "G	ateway IP" can	be
found in a PC w	hich is in the sa Idross automati	me local are	ea with the	local contro	oller. First plea not kov in "ir	ise set IP of	that PC as DHC	CP
the Gateway IP	setting.	cally), then	open a con		прі, кеу-ші ц	JCOILING AS	below, then we	got
	.							
🔜 命令提示字元								
C: Documents	and Settings	Administ	rator> ij	pconfig				
Windows IR C	onfiguration							
MINUOWS IF G	onr iguration							
Ethernet ada	pter 區域蓮編	! .						
Ethernet ada	pter 區域連線	(:						
Ethernet ada Conn IP A	pter 區域連縛 ection-specif ddress	(: ic DNS Su	ffix .:	banchiao. 10.0.0.91	icpdas.com			
Ethernet ada Conn IP A Subn	pter 區域連続 ection-specif ddress et Mask	(: ic DNS Su 	ffix . : : 	banchiao. 10.0.0.91 255.255.2	icpdas.com 55.0			
Ethernet ada Conn IP A Subn Defa	pter 區域連続 ection-specif ddress et Mask ult Gateway .	(: ic DNS Su 	ffix . : : :	banchiao. 10.0.0.91 255.255.2 10.0.0.25	icpdas.com 55.0 4			
Ethernet ada Conn IP A Subn Defa C:\Documents	pter 區域連続 ection-specif ddress et Mask ult Gateway . and Settings	(: ic DNS Su 	ffix . : : : : rator>	banchiao. 10.0.0.91 255.255.2 10.0.0.25	icpdas.com 55.0 4			
Ethernet ada Conn IP A Subn Defa C:\Documents	pter 區域連続 ection-specif ddress et Mask ult Gateway . and Settings	(: ic DNS Su Administ	ffix . : : : : rator>	banchiao. 10.0.0.91 255.255.2 10.0.0.25	icpdas.com 55.0 4		T	
Ethernet ada Conn IP A Subn Defa C:\Documents	pter 區域連続 ection-specif ddress et Mask ult Gateway . and Settings	(: ic DNS Sur Administ	ffix . : : : rator>	banchiao. 10.0.0.91 255.255.2 10.0.0.25	icpdas.com 55.0 4			

"wdmo_64a" and "wdmo_64b" to be the same as that Internet IP. Then re-compile them before downloading to the controller.

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If successfully download ISaGRAF program, the below similar window will show up. IsaGRAF - WDEMO_61 - Debugger File Control Tools Options Help Imaximum=15 Overflow=0									
👷 ISaGRAF	- WDEI	MO_61:LIST1 -	List of vari	ables					
<u>File E</u> dit O	ptions <u>H</u>	<u>H</u> elp							
🗋 🗎 🕍	¥# 🛃	😽 🍳 🛛			Courses				
Year1		2007			Comment				
Month1 Day1		5 30	Date a	& Time of Loc	al Contro	ller			
Hour1 Minute1		13						-	
Second1		17	Auto	-report Interva	l setting a	and progressi	ng		
state1	$\left(\right)$	t#59s374ms			timer to sho	tate information (wy the time elaps)	в		
Report_interva		t#1m			interval to r	eport data to PC / PC/Server must	/Server, init as 1 reply_init as 15	l minute seconds	
msg1	u.	1001,1863154825	5,1,2007,5,30,	13,8,5,1,999990,9	the sending	message		Seconde	
ID_No msg2		1863154825			the coming	fore every sendi message	ng , init as -1		
ip_port msg_in_addr		0			UDP_IP port	t No. of the sende be sender (string	er format)		
R_Command		0			Command in	n the coming data	ionnuc)		
<end list="" of=""></end>	··N / ~ ~ 1	? :	a fuero I e	a al Cantualla				_	
	"Msg1	is the reply i	ge from Lo nessage fr	om the PC/ Se	rver to L	ocal Controlle	er.		
	"Msg_	ip_addr" and "	"ip_port" a	re the source	IP address	s and UDP po	ort No. which	h sent	
	messag	e to the local	controller.	Normally, it i	s the IP a	nd port No. o	f the central	PC/	
	Server. to the I	If it is not, th	at means s er	ome other un-	friendly s	tation or PC	sending UD	P data	
	"R Co	mmand" is the	e <comma< td=""><td>nd> field in th</td><td>e message</td><td>e from the PC</td><td>C/ Server (He</td><td>ere in</td></comma<>	nd> field in th	e message	e from the PC	C/ Server (He	ere in	
1	this de	mo is 2 or 4)							
Then please run VB 6.0 demo_8 program in your testing PC (refer to Section 3).									
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3. VB 6.0 demo program

Please finish the steps listed in Section 2 first before doing the steps in this section.

Please set your PC's IP address to a fixed IP = 10.0.0.91, Mask = 255.255.255.0 for testing this demo. (Because the ISaGRAF demo program "wdmo_64a" and "wdmo_64b" running in the Local Controller will report message to the PC with IP = 10.0.0.91 and with UDP port No. = 12001)

The VB 6.0 demo program "demo_8.exe" resides at ".\vb6_demo\demo_8\" (Download FAQ-070 Demo)

Please run MS. VB 6.0 development studio to open the source code of this "demo_8", the file is ".\vb6_demo\demo_8\demo_8.vbp"

After running this "demo_8.exe", a "VB 6.0 Demo_8" window will show up as below. Please enter the proper value of the following items and then click on "Start" to test it.

"UDP_port_No" is the UDP port No. which this PC is going to bind it to receive message coming from local controllers (value can be 1001 to 65535). This demo uses value of 12001.

"Security_passwd" is the protocol security password. Value can be 0, or 1 to 2147483647, or -2147483647 to -1. This demo uses value of 1234567.

"Output_File_name" is an option. You may specify it or leave it empty. If specifying a name to it, then demo_8.exe will create a new empty file to record all valid message from the local controllers.

NB 6.0 Demo_8 Time synchronization demo of many i-7188EG, i-8xx7 or W-8xx7
Please refer to www.icpdas.com - FAQ - Software - ISaGRAF - 070 for more. Please set PC IP+10.0.0.91, Controller 1 IP =10.0.0.103 Mask=255.255.255.0. If you have the second or more controller, please modify its ISaGRAF program 's variable - "Station, No" to other different value = 1002, 1003, Local controller - 7186E, FA&7 or V-8x47 init auto-report data to this PC / Server via UDP IP protocol. 1. This program is only for demo purpose. ICP DAS and Chun has no responsibility for it. 2. This program is one cover up frame from a +7188EB or 18x37 or V+8x47. Then PC reply time synchronization command to the controller. If the local controller is +7188EG, please use its ISaGRAF driver version of 2.13 or later version. If the local controller is %77, please make sure its ISaGRAF driver is 3.38 or later version. If the local controller is %77, please make sure its ISaGRAF driver is 3.38 or later version. The IsaGRAF program in this demo is "wdmo_64a" for station No.=1001 while "wdmo_64b" for station No.=1002, please download it to i-7188EG, i-8x37 or W-8x7
Parameters UDP_port_No: 12001 Security_passwd: 1234567 Output_File_name: data1.txt Start Stop
Winsock state : Socket closed Please click 'Stat' button to start it. 2007/7/17 13:56:9
Controller is on Line or not Controller 1001: Controller 1002:

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Cli Au Ho The 1. 2.	assification ithor w to test? e local control 15 seconds la Send once at Please wait a display "On L display "No re e vB 6.0 Demo Please refer to www If you have the sec Local controller is The local control if the local controller is Controller 1001 : (VB 6.0 Time syncl PC / Server IP = 1 1 : Receive 51 by 1002,191741273	ISaGRAF FAQ- Chun Tsai ler will send mes ater after the Loc every minute pa bout 2 minutes a ine". If the PAC o esponse" 3 Time synchronizati wicpdas.com - FAQ - Softwar soft or more controller, pleas 188EG, i-8x37 or W-8xx7 will only for demo purpose. ICP D or receive udp frame from a i- iller is i-7188EG, please use its lier is i-7188EG, please use its lier is i-7188EG, please make sur wincon-8xx7, please make sur wincon-8xx7, please make sur inthis demo is "wdmo_fer inter is i-7188EG, please use its lier is i-7188EG, pl	070 Version Ssage to the cal control ast. (Conti after runn doesn't re on demo of ma e · ISaGRAF - 07 e modify its ISaG auto-report data to AS and Chun has risaGRAF driver e its ISaGRAF driver e its ISaGRAF driver e its ISaGRAF driver e its ISaGRAF driver sswd : [1234567 context]	1.0.0 he PC/ Server v ler is powered nuously and pe ing "demo_8.e port any messa ny i-7188EG, i-8xc7 (0 for more. Please set PC 3AF program's variable - b this PC / Server via UDF no responsibility for it. or W-8xx7. Then PC reply version of 2.13 or later version b.=1001 while "wdmo_64te Output_File_r Controller 1002 : On Lin 2007/77/17 下年 02:02:33	Date	Jul. 2007 Dw events hap only deliver of y) e PAC 1 or PA e PC/ Server of Controller 1 IP =10.0.1 other different value = 10 ation command to the co =1002, please download Start 2007/7/1	Page Page ppen in this of ponce) C 2 connection C 2	5/12 demo.]
	VB 6.0 Time synci PC / Server IP = 1 1 : Receive 51 by 1002,191741273 Reply 47 bytes 2 : Receive 49 by 1002,283802696 Benly 45 bytes	fronization demo for PC / Ser 10.0.0.91 UDP Port No = 12 tes 9001,1917412738,2,2007,7, tes 3,1,2007,7,17,14,3,2,58316,4 9001,283802686,2,2007,7,17	ver. Starting at . 2001 3, 6444 17, 14, 2, 47, 21544 6062 7 14, 3, 2, 5473, 17	,59441 731					
	Heply 45 bytes	9001,283802686,2,2007,7,1 下午 02:03:52 , Local station	r,14,3,2, 5473,17 • No.=1001 comm	731 unication is broken !					

B. Please modify the time of this PC/ Server. For example, two hours moving ahead, then wait about one minute, you will see the connected PAC's time will be modified to become the same time as the PC/ Server. The principle is every time the PAC sends message to the PC/ Server, the PC/ Server will calculate the time difference. If it is larger than 20 seconds, the PC/ Server will send a time synchronization command to the PAC. If the application is applied in a local Ethernet area, you may modify this allowed "time difference" to a

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								_		
smaller value, for the VB 6.0 demo_ Modify To becom	smaller value, for example modifying from 20 to become 5 seconds. Please modify the below statement in the VB 6.0 demo_8 source code and re-compile it. Modify If Temp > 20 or Temp < -20 Then To become If Temp > 5 or Temp < -5 Then									
C. Please observe	if receiving a m	essage ev	ery minute.							
4. UDP protoco	ol definition in	n the de	mo listed in	this do	cument					
This protocol defi demo program "c	inition is valid fo demo_8".	r the ISaG	RAF demo pro	ogram "w	/dmo_64a" and	d "wdmo_64	b" and VB 6	.0		
 Local Controll data (message "Port_correct and UDP port the ISaGRAF I 	 Local Controller is as UDP Client, while PC/ Server is as UDP Server. Only Local Controller can auto-send data (message/string) to the PC/ Server (The message variable - "IP_correct_PC" and integer variable - "Port_correct_PC" in the ISaGRAF demo program "wdmo_64a" and "wdmo_64b" specify the IP address and UDP port No. of the target PC/ Server. And also there is similar definition of the target PC/ Server in the ISaGRAF IO connection window - "udp_ip"). 									
 PC/ Server mureceives a val No.> as the <i message with PC/ Server in PC/ Server sti receives a val "wdmo_64a"</i 	2) PC/ Server must reply a message with <command/> = 2 or 4 to the local controller in 15 seconds after it receives a valid message from the local controller. The replied message must contain the exact same <id no.=""> as the <id no.=""> it received from the local controller. The local controller will drop the replied message with incorrect <id no.="">. If the local controller doesn't receive a valid replied message from the PC/ Server in 15 seconds, it will send message once to the PC/ Server with a different <id no.="">. Then if PC/ Server still not replied it in 15 seconds, local controller will continuously send message again until it receives a valid replied message. (The timer variable - "Timeout_interval" in the ISaGRAF demo program "wdmo. 64a" and "wdmo. 64b" defines this Timeout value)</id></id></id></id>									
3) The local cont a. 15 secon b. Send ond	troller will send Ids later after th ce at every minu	message t e Local co ite past. ((to the PC/ Serv ntroller is pow Continuously a	er when er up. (T nd perio	below events his only delive dically)	happen in th r once)	is demo.			
4) UDP message f	ormat of Local (Controller	sending to the	e PC/ Ser	ver					
Security_passw and in the VE or 1 to 21474	Security_passwd: Must be specified as the same value in the ISaGRAF IO connection window – "udp_ip" and in the VB demo program to communicate well. Value can be 0: means "No encoding" (it is not safe), or 1 to 2147483647, or -2147483647 to -1 (none-zero value means "with encoding", it is much safe).									
If setting as a none-zero value, please refer to the "convert_to_udp_deliver_buf()", "convert_back_udp_deliver_buf()" and "udp_ip_crc()" function in the VB 6.0 "demo_8" for its encoding algorithm.										
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				I			I	
If setting "Sec	urity_passwd" a	s 0, every	delivered me	ssage can	not exceed 25	5 bytes.		
If setting "Sec last added 4	urity_passwd" a: -bytes is the <4-	s none-zer byte-Chec	o value, ever ksum > calcu	y delivere ated by tl	d message can ne "udp_ip_cro	not exceed 2 c()" function	259 bytes. Tl	he
Local Controll	er will send the l	pelow forn	nat to the PC	/ Server.				
Security_pas	swd is 0: (No 4-b	yte-Check	sum at the e	nd)				
<station_no <year>,<mo <user-defin< td=""><td>o of local contro onth>,<day>,<ho ed CRC></ho </day></td><td>ller>,<id n<br="">our>,<min< td=""><td>lo.>,<comma ute>,<seconc< td=""><td>nd>, >,</td><td></td><td></td><td></td><td></td></seconc<></comma </td></min<></id></td></user-defin<></mo </year></station_no 	o of local contro onth>, <day>,<ho ed CRC></ho </day>	ller>, <id n<br="">our>,<min< td=""><td>lo.>,<comma ute>,<seconc< td=""><td>nd>, >,</td><td></td><td></td><td></td><td></td></seconc<></comma </td></min<></id>	lo.>, <comma ute>,<seconc< td=""><td>nd>, >,</td><td></td><td></td><td></td><td></td></seconc<></comma 	nd>, >,				
For example 10	e: 001,850334470,	1,2007,5,3	0,17,31,51,4	5677,1863	32			
It means, <station_no controller="" local="" of=""> is 1001 <id no.=""> is 850334470 <command/> is 1 Controller's date and time is 2007/5/30, 17:31:51 < User-defined CRC > is 46677, 18632</id></station_no>								
Security_pas	swd is not 0: (W	ith 4-byte-	Checksum at	the end)				
<station_no <year>,<mo <user-defin< td=""><td>o of local contro onth>,<day>,<ho ed CRC><4-byte</ho </day></td><td>ller>,<id n<br="">our>,<min -Checksun</min </id></td><td>lo.>,<comma ute>,<seconc n></seconc </comma </td><td>nd>, >,</td><td></td><td></td><td></td><td></td></user-defin<></mo </year></station_no 	o of local contro onth>, <day>,<ho ed CRC><4-byte</ho </day>	ller>, <id n<br="">our>,<min -Checksun</min </id>	lo.>, <comma ute>,<seconc n></seconc </comma 	nd>, >,				
<command/> 1: Local	definition: Controller repoi	rt data to t	he PC/ Serve:	r				
<user-define Can be defin (Please app</user-define 	<user-defined crc=""> definition: Can be defined as a different algorithm by the User. This demo apply the following algorithm (Please apply a different algorithm in real application for safety)</user-defined>							
Value is fixed as 11 bytes (Character). It contains two value of 0 to 65535 separated by a ","								
For example,								
value_1	value_2	fixed ler	ngth of 11 by	tes (Chara	cter)			
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0 0 :' 0, 0' (with 4 Space Char. before'0') 1 1 :' 1, 1' (with 4 Space Char. before'1') 21 21 :' 21, 21' (with 3 Space Char. before'2') 321 321 :' 321, 321, (with 2 Space Char. before'3') 4321 4321 :' 4321, 4321' (with 1 Space Char. before'4') 54321 65535 :' '54321,65535' (No Space Char.) Below steps - (a) to (d) is to get value 1, while - (e) is to get value 2 (Please apply a different algorithm in real application for safety)								
(a) extract into byt	t the string not i te array - user_b	ncluding t ouf[] (for c	he <user-defin convient, we ca</user-defin 	ed CRC> ll this by	and <4-byte-0 te array as "us	Checksum> ser_buf[]")		
(b) replace That is (User r this de	e user_buf[3] as user_buf[3] = us nay use [2], [4],. pends on your o	user_buf er_buf[3] , and ma wn decisio	 [3] xor 100 ^ (unsigned ch y be not using on. Please use 	ar)100 ; 100, w your owi	hatever, n algorithm fo	r safety.)		
<pre>(c) replace user_buf[7] as user_buf[7] xor 200 That is user_buf[7] = user_buf[7] ^ (unsigned char)200; (user may use [5], [6],, and may not use 200, whatever, this depends on your own decision. Please use your own algorithm for safety.)</pre>								
(d) Calcula Then <use It is a v</use 	ate <user-define r-defined CRC> value between 0</user-define 	ed CRC> as = 256* <cf and 6553</cf 	s two byte => < RC_Hi> + <crc_ 5.</crc_ 	CRC_Hi> _Lo>.	<crc_lo></crc_lo>			
(e) using a different algorithm to get value 2 proceed (a), then proceed (b) by using user_buf[4]=user_buf[4]^(unsigned char)48 then proceed (c) by using user_buf[6]=user_buf[6]^(unsigned char)197 then proceed (d). Then we get value 2. It is a value between 0 and 65535. (Please use your own algorithm for safety.)								
5) UDP message	format of the PO	C/ Server r	eplying to loca	l control	ler			
Security_pass	wd: Using the sa	me definit	tion as item 4.					
PC/ Server wil	l reply below for	mat to the	e local controll	er.				
Security_passwd is 0: (No 4-byte-Checksum at the end)								
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<station_i <year>, <user-def For exampl 9</user-def </year></station_i 	No of PC/Server <month>,<day> ined CRC> e, 001,519805546</day></month>	>, <same id<br="">,<hour>,<n ,2,2007,5,3</n </hour></same>) No. from /linute>,< 0,18,59,5	the local con second>, 3, 6830,4267	itroller>, <cor< td=""><td>nmand>,</td><td></td><td></td></cor<>	nmand>,		
It means, < Station <id no.=""> <comma Date and < User-de</comma </id>	_No of PC/Serve is 519805546 nd> is 2 Time in PC/Ser efined CRC > is 6	er > is 9001 ver is 2007 5830,42679	/5/30, 18:) (there is	59:53 one Space Ch	ar. Before th	e first "6")		
Security_pas	swd is not 0: (W	/ith 4-byte-	Checksun	n at the end)				
<station_l <year>,< <user-def< td=""><td>No of PC/Server <month>,<day> ined CRC><4-by</day></month></td><td>>,<same id<br="">,<hour>,<n te-Checksu</n </hour></same></td><td>No. from /linute>,<s m></s </td><td>the local cor second>,</td><td>troller>,<cor< td=""><td>nmand>,</td><td></td><td></td></cor<></td></user-def<></year></station_l 	No of PC/Server <month>,<day> ined CRC><4-by</day></month>	>, <same id<br="">,<hour>,<n te-Checksu</n </hour></same>	No. from /linute>, <s m></s 	the local cor second>,	troller>, <cor< td=""><td>nmand>,</td><td></td><td></td></cor<>	nmand>,		
<command/> 2: to infc 4: to infc Server, p	definition: frm the local cor frm the local cor lease adjust cor	ntroller tha ntroller tha ntroller's da	t PC/ Serv t its date a ate and tin	er receive its and time diffe ne and then s	correct data. er more than end data to F	20 seconds PC/ Server o	than the PC/ nce again	
<user-define< td=""><td>ed CRC> definitio</td><td>on: Using th</td><td>ne same d</td><td>efinition as it</td><td>em 4.</td><td></td><td></td><td></td></user-define<>	ed CRC> definitio	on: Using th	ne same d	efinition as it	em 4.			
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5. Controller Ethernet security

5.1: Modbus TCP/IP security

There are some ways user can get access to the Wincon-8xx7 via its Ethernet port.

- 1. Using Modbus TCP protocol at port No. = 502. (ISaGRAF and other HMI can do this)
- 2. Using ftp (for example, keying "ftp://10.0.0.103" on the Internet Explorer)
- 3. Using telnet (for example, key in "telnet 10.0.0.103 in the "command" window)

4. Using the Web server (The Web HMI does)

Note:

1. While for I-8437-80/ 8837-80, I-8437/8837 and I-7188EG, only item 1 is possible.

2. If the controller is W-8x47/8x46, when using "ftp", "telnet", "Web HMI" & "Modbus TCP/IP", please connect your PC/HMI to W-8x47/8x46's "LAN1" port, and please use "NS-205" or "NS-208" Ethernet switch.

For safety, recommend to disable item 2 and 3 at run time for Wincon.

Wincon ISaGRAF Driver Setting Web About Options Enable Web HMI Disable FTP Serveice V Disable FTP Serveice To set up advanced security Settings Settings	click on Se Check it to disable.	eb HMI.
Wincon ISaGRAF Driver Setting Web About Options Enable Web HMI Disable FTP Serveice Disable Telnet Serveice To set up advanced security , click on Settings Settings	OK Security Settings OK Account Modbus List IP Setting Image: Priority Low Image: Priority Low User Name Image: Password Edit Priority Middle User Name Image: Password Password Edit Edit Priority High Super1 Password Password Image: Password Image: Password	Setting user name & password here
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About item 1, user may set up to 8 IP address for ISaGRAF or other HMI to get access to the I-8x37, I-7188EG & W-8xx7 via the Modbus TCP/IP protocol as below.

On the IO connection window of ISaGRAF, please connect "vip" and entering the IP which can get access to the controller via Modbus TCP/IP protocol. If "vip" is not connected, any remote IP can get access to your controller via Modbus TCP/IP protocol. If "vip" is connected and No IP is entered (all assigned as "N/A"), No HMI and ISaGRAF can get access to it by Modbus TCP/IP anymore.



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5.2: Using "dis_stop" to disable/ enable the ISaGRAF Download function											
For some reason, to prevent someone to use ISaGRAF software to stop or to download a different controller project already running in the I-7188EG, I-8437/8837 and W-8xx7, the "Dis_stop" can be applied. Please connect "dis_stop" at a slot No. larger than 8 and init the channel value to become TRUE. Then stop/ download command is not allowed in this controller.											
File Edit Tools Options Help											

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To disable "Dis_stop" to accept stop/ download command, please run the original ISaGRAF project to link to this controller and set the channel value to become False.