Advantech SE Technical Share Document

Date	2020 / 04 / 07						
	□ FAQ ■SOP	Related	Windows	ubuptu			
Category	🗆 Driver Tech	Product	vvinuows,	ubuntu			
	Note						
Abstract	How to connec	How to connect ADAM-6350 OPCUA server					
Keyword	Ignition, ADAM-6350, OPC UA						
Related OS	AdvLinuxTU						
		Revision Histo	ory				
Date	Version	Author	Reviewer	Description			
2020/04/07	V1.0	Dylan.Huang	Nick.Liu				

- Problem Description & Architecture:
- Brief Solution Step by Step:

1. Install Ignition in your OS.

The install step can refer as below: Windows : <u>https://docs.inductiveautomation.com/display/DOC79/Windows+-+Install</u> Ubuntu : <u>https://docs.inductiveautomation.com/display/DOC79/Linux+-+Install</u>

- 2. Open the Ignition with website : <u>http://localhost:8088/</u>
- 3. The trial license will re-activate every 2 hours. So we need to press "Activate Ignition " every 2 hours.

🗐 🛢	nition-WINDOWS-PII3000					💄 Dyl	an Sign Out 🔿			
lgni	tion					Help 🚱 🛛 🕞	et Designer			
Config > Opcus > Devices										
Home	Overview	Trial Expired 0:00:00	Two hours went by already?	Not to worry, just click reset for two m	ore.	Reset Trial	Activate Ignition			
da	Backup/Restore					-				
Status	Ignition Exchange	Name	Туре	Description	Enabled	Status				
•	Licensing	No Devices								
Config	Modules	NO Devices								
	Projects	→ Create new De	vice							
	Redundancy		 Create new Device 							
	Gateway Settings									
	NETWORKING									

4. Find the OPC UA → Device Connections and "Create New Device"





5. Choose "TPC Driver" and press "Next"

	UPCUA	A Config > Opena > Devices	
n	Device Connections	Coning / Opcos / Devices	
nome	Security	Siemens S7-1200	-
 Status	Server Settings	Connect to Siemens S7-1200 PLCs over Ethernet.	
•	ENTERPRISE ADMINISTRATION	Siemens 57-1500	
Config	Setup	Connect to Siemens S7-1500 PLCs over Ethernet.	
	SEQUENTIAL FUNCTION CHARTS	Siemens S7-300	
	Settings	Connect to Siemens S7-300 PLCs over Ethernet.	
		Siemens 57-400	
		Connect to Siemens S7-400 PLCs over Ethernet.	
		TCP Driver	
		UDP Driver	
		Next >	
Ŧ	Q Search	Ignition by Inductive Automation. Copyright © 2003-2020. All rights reserved. <u>View license</u> inductive automation Ignition	

6. Fill the information and create new device.

N			Help 🕜	Get Designer
re m verview	Config > Opcua > Devia Trial Expired 0:00:00	ces	Reset Trial	Activate Ignition
ackup/Restore inition Exchange				
icensing Iodules	General	ADAM	1	
rojects edundancy ateway Settings	Description			
WORKING leb Server	Enabled	☑ (default: true)		
ateway Network mail Settings	Connectivity			
URITY uditing sers, Roles	Port(s)	4840 The port(s) to connect to.		
ervice Security lentity Providers ecurity Levels	Address	10.0.0.1 The IP address to connect to.		
ecurity Zones ABASES onnections	Inactivity Timeout	0 The number of milliseconds without receiving a disconnect/reconnect is made. Set to 0 to di (default: 0)	; data from the so isable.	urce before
	EM verview ackup/Restore nition Exchange censing odules rojects edundancy ateway Settings WORKING eb Server ateway Network mail Settings WORKING eb Server ateway Network mail Settings WITY uditing sers, Roles ervice Security lentity Providers ecurity Levels ecurity Zones WBASES Donnections rivers	Image: Security S	EM Config > 0pcus > Devices Trial Expired 0:00:00 Trial Expired 0:00:00 ackup/Restore nition Exchange censing odules rojects edundancy ateway Settings WORKING eb Server ateway Network mail Settings PRITY Uditing sers, Roles ervice Security entity Providers ecurity Zones RASES connections rivers General Mame ADAM	EN Config > Opcus > Devices Trial Expired 0:00:00 Reset Trial Verview ackup/Restore inition Exchange censing odules rojects sedundancy ateway Settings WORKING eb Server ateway Network nail Settings Part(s) 4840 The port(s) to connect to. Port(s) 4840 The port(s) to connect to. Address 10.0.1 The Paddress to connect to. Inactivity Timeout 0 The number of milliseconds without receiving data from the so a disconde vite out of soble. (default: 0)

7. Now we can find we create a new device successful.

Igni	tion					1	Help 🕜	Get Designer
•	SYSTEM	Config > Ope	ua > Device	s				
Home	Overview	Trial Expired	8:89:88				Reset Trial	Activate Ignition
dit	Backup/Restore							
Status	Ignition Exchange	Name	Туре	Description	Enabled	Status		
•	Licensing	Design 19940						_
Config	Modules	ADAM	TCP Driver		true	1/1 Connected	de	lete edit
	Projects							
	Redundancy	→ Creat	e new Devic	e				
	Gateway Settings							
	NETWORKING							
	Web Server							
	Gateway Network							
	Email Sattings							

8. Find the OPC CLIENT → OPC Connections and "Create New Device"

•	Security Levels	Config > Opc > OPC Connection	ons		
Home	Security Zones	Trial Expired 0:00:00		Res	t Trial Activate Ignition
du	DATABASES				
Status	Connections				
•	Drivers				
Config	Store and Forward				
	ALARMING				
	General				
	Journal				
	Notification				
	On-Call Rosters				
	Schedules				
	T 100				
	1AG5				
	History				
	Realtime				
	ODC Connections				
	OPC Quick Client				
	or e quick client				
	/				
Igni	tion			ныр	Get Designer
•	SYSTEM	Config > Opc > OPC Connection	ons		
Home	Overview	Trial Expired 8:88:88		Res	et Trial Activate Ignition
.ht	Backun/Restore				
Status	Ignition Exchange				
~	Licensing	Name Type	Description	Read Only	Status
Config	Modules	No OPC Connections			
comp	Projects				
	Redundancy	→ Create new OPC Conne	ection		
	Gateway Settings	Note: For details about a co	nnection's status, see th	e OPC Connection Status	page.
	NETWORKING				
	Web Server				
	Gateway Network				
	Email Settings				

9. Choose "OPC UA" and press "Next"

lgni	ition	Help 🕢 Get Designer
Home III Status	SYSTEM Overview Backup/Restore Ignition Exchange Licensing Modules	Config > Opc > OPC Connections Trial Expired 0:00:00 OPC UA Connect to a device or server that supports OPC UA.
	Projects Redundancy Gateway Settings	 OPC-DA COM Connection Provides access to legacy COM-based OPC-DA servers. Supports OPC-DA versions 2 and 3.
	Web Server Gateway Network Email Settings	Next >

10. Fill the OPCUA server Endpoint URL and press "Next"

lgni	ition		Help 🕐	Get Designer
A	SYSTEM	Config > Opc > OPC Connections		
Home	Overview	Trial Expired 0:00:00	Reset Tr	ial Activate Ignition
Status	Ignition Exchange		→ Skip to Advanced	Configuration
Config	Licensing Modules	Server Discovery		
	Projects Redundancy Gateway Settings	Endpoint URL]	
	NETWORKING	Example: opc.tcp://localhost:62541/discovery	-	
	Gateway Network Email Settings		Next: Ch	oose Server

11. Choose "ADAM-6350" and press "Next"

Igni	tion		Help 🕜	Get Designer
A Home	SYSTEM Overview	Config > Opc > OPC Connections Trial Expired 9:09:09	Reset Tria	Activate Ignition
dul Status	Backup/Restore Ignition Exchange Licensing Modules	Choose a Server	→ Skip to Advanced	Configuration
Cont	Projects Redundancy Gateway Settings	ADAM-6350 opc.tcp://10.0.0.1:4840/		
	NETWORKING Web Server	Previous: Endpoint Discovery	Next: Selec	t Endpoint

12. ADAM-6350 provides 2 different security policies. In this document we choose user/password to demo.

Igni	tion		Help 🚱	Get Designer
A Home	SYSTEM Overview Backup/Restore	Config > Opc > OPC Connections Trial Expired 0:00:00	Reset Tri	Activate Ignition
Status Config	Ignition Exchange Licensing Modules	Select Endpoint	→ Skip to Advanced	Configuration
	Projects Redundancy Gateway Settings	opc.tcp://10.0.0.1:4840/ Security Policy: None Security Mode: None		
	NETWORKING Web Server Gateway Network Email Settings	opc.tcp://10.0.0.1:4840/ Security Policy: Basic128Rsa15 Security Mode: Sign		
	SECURITY Auditing	Previous: Choose Server		Finish

13. Press "Finish"



14. Fill the username with "admin" and password with "00000000". Then press "Create New OPC Connection"

Igni	ition			Help 🕜	Get Designer
A Home	SYSTEM Overview	Config > Opc > OPC O Trial Expired 0:00:00	Connections	Reset Tr	al Activate Ignition
. lii Status	Backup/Restore Ignition Exchange				
Config	Licensing	Main			
oom g	Projects	Name	ADAM-6350		
	Gateway Settings	Description			
	NETWORKING Web Server	Enabled	(default: true)		
	Gateway Network Email Settings	Read Only	If selected, the connection to this OPC to write will fail. (default: false)	server will be read-	only; all calls
	SECURITY				
	Auditing Users, Roles	Authentication			
	Service Security Identity Providers	Username	admin		
	Security Zones	Password			
	DATABASES Connections Drivers	Password	Re-type password for verification.]	
	Store and Forward	Show advanced	properties		
	ALARMING		Create New OPC Connection	on	
	Journal				

15. We will find the status is "Faulted"

Igni	ition					Н	elp 🕜	Get Designer
A Home	SYSTEM Overview	Config > Opc > Of Trial Expired 0:00:	PC Connect 88	ions			Reset Trial	Activate Ignition
Jul Status	Backup/Restore Ignition Exchange Licensing Modules	Name ADAM-6350	Type OPC UA	Description	Read Only	Status Faulted	More	edit
	Projects Redundancy Gateway Settings	→ Create new	OPC Conn	ection	s, see the OPC (Connection S	tatus page.	
	NETWORKING Web Server							

16. Come back to OPC UA \rightarrow Security

A	Security Zones	Config > Opcua > Security		
Home		Trial Expired 0:00:00	Reset Trial	Activate Ignition
L.	DATABASES			
Status	Connections			
-	Drivers			
Config	Store and Forward			
	ALARMING			
	General			
	Journal			
	Notification			
	On-Call Rosters			
	Schedules			
	TAGS			
	History			
	Realtime			
	OPC CLIENT			
	OPC Connections			
	OPC Quick Client			
	OPC UA			
	Device Connections			
	Security			
	Server Settings			

Trust the Quarantined Certificates



17. This is the flow to certificate in ADAM-6350



Currently, manage certificate through RESTful.

Trust the specified DER

http://10.0.0.1/?TRUSTED(//pki/DefaultApplicationGroup/rejected/certs/E3C50 F092939AED5FB8E5CFB09BEEE0ACAC6F7A3.der)



After trust the DER, don't forget to power off ADAM-6350 and power up again.

18. Come back to OPC CLIENT \rightarrow OPC Connections and we can find the status is "Connected"



19. Click "Get Design"



- 20. Follow the steps to install "Designer Launcher"
- 21. The installation icon will show on the desktop



22. Double click the icon to start and fill the username and password

	1			
lanitic	onad	desid	aner	
by inductive aut	omation			
se of this application is subject the acceptance of the terms	Username	Dylan		
nd conditions set forth in the ccompanying <u>license agreement</u>	Password	******		
			Login	Cancel

23. We can create a new project.

<table-cell> Open/Create Projec</table-cell>	:t					- 🗆 ×			
	Ignition designer								
+ <u>N</u> ew Project		• Filter Projects				🛎 Import Project			
Name	Title		Inheritable	Inheritance Hierarchy		Actions			
DylanTest	DylanTest					OPEN			
OPC_Test						OPEN			
			🧿 in	ductive					

24. Fill the "Project Name" to create a new project

✓ Open/Create Project	Ignitiondesigner		_		×
← Back	New Project Setup	Create	e New	Project	t -
	Project Name TestDemo Project Title User Source opcua-module Default Database				
	Default Tag Provider default ✓ Parent Project ✓ Project Template ✓				Ų

25. We can create "New main windows"

🌠 TestDemo - Ignition-W	INDOWS-PII3000 - Ignition Desig	jner					
File Edit View	Project Component Align	nment Shape Tools	Help				
Project Browser			5 _ ×				
Q Filter			Project Properties 🔏	Getting Started			
Alarm Notification Sequential Functi Cripting Perspective Transaction Grou Vision Reports	n Pipelines on Charts ps		- 		New Main Window	New Popup Window	New Docked Window
Tag Browser			ē _ ×		<u> </u>	•	-
Q 🖉 🐨 🛲 🔅	+						
Tag	Value	Data Type	Traits				
 B System Wision Client Tags All Providers 							

26. We also can check the OPCUA server we connect before



27. Finally we can drag the tag to main windows



28. Besides the default value we can also import the DI, DO tags.

