

# Advantech SE Technical Share Document

Date	2020 / 04 / 07	Related Product	Windows , ubuntu	
Category	<div><input type="checkbox"/> FAQ <input checked="" type="checkbox"/> SOP</div> <div><input type="checkbox"/> Driver Tech Note</div>			
Abstract	How to connect ADAM-6350 OPCUA server			
Keyword	Ignition, ADAM-6350, OPC UA			
Related OS	AdvLinuxTU			
Revision History				
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:

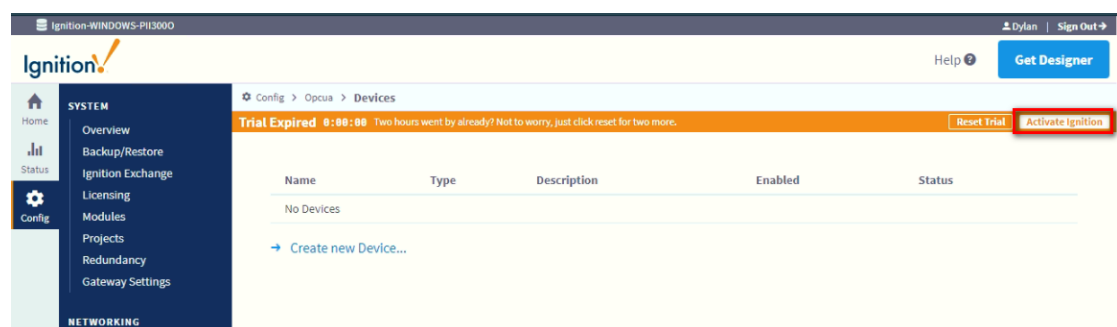
Windows :

<https://docs.inductiveautomation.com/display/DOC79/Windows+-+Install>

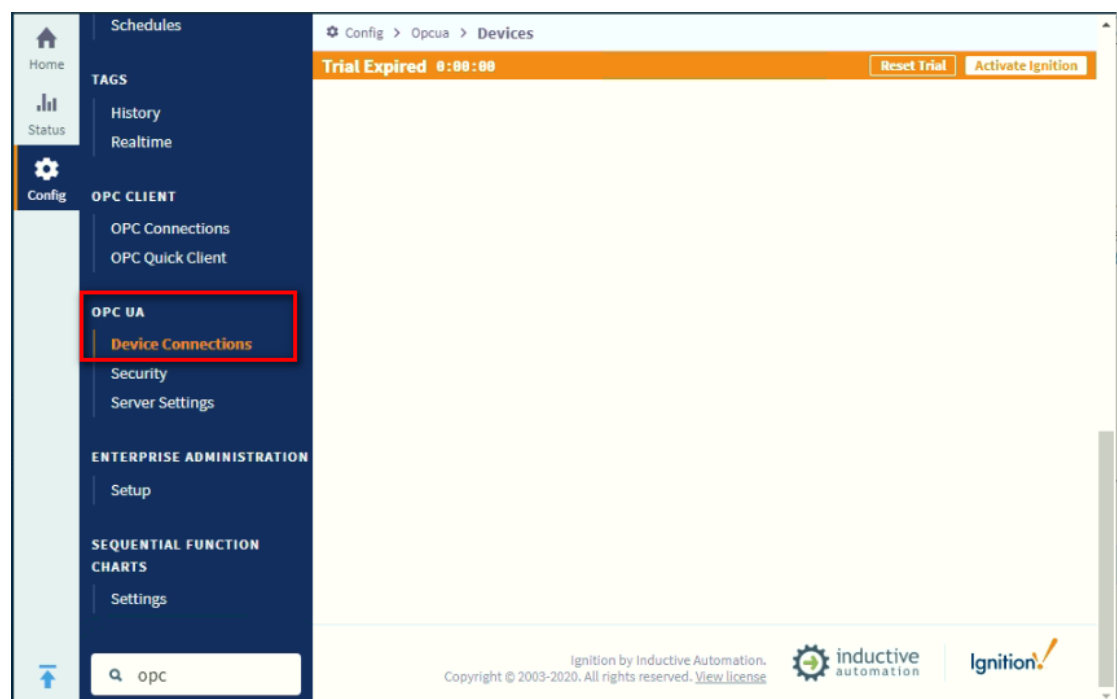
Ubuntu :

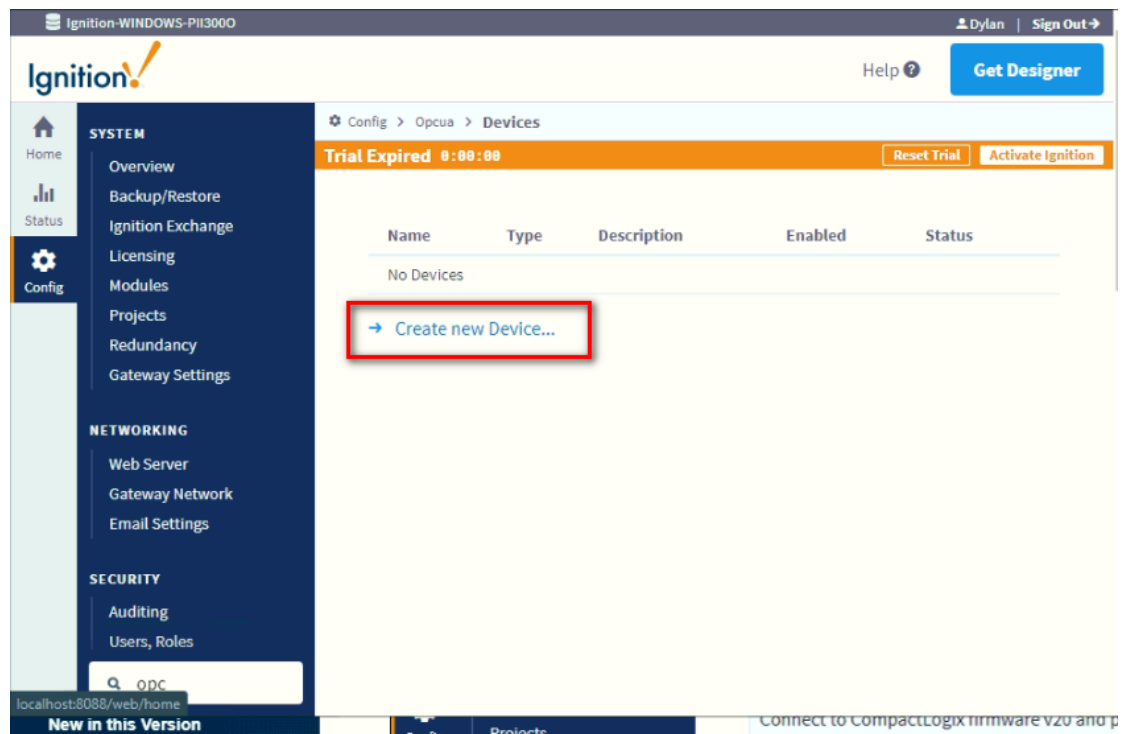
<https://docs.inductiveautomation.com/display/DOC79/Linux+-+Install>

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

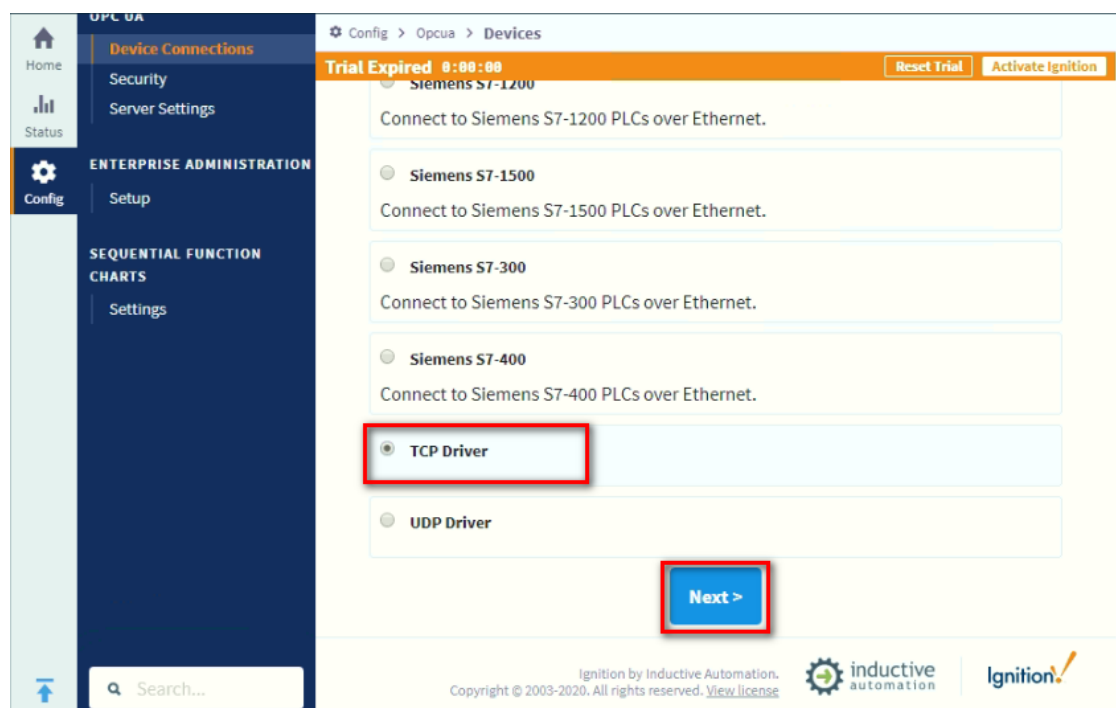


4. Find the OPC UA ➔ Device Connections and “Create New Device”





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



6. Fill the information and create new device.

Ignition! Help ? Get Designer

Config > Opcua > Devices

Trial Expired 0:00:00 Reset Trial Activate Ignition

**General**

Name ADAM

Description

Enabled ☒ (default: true)

**Connectivity**

Port(s) 4840  
The port(s) to connect to.

Address 10.0.0.1  
The IP address to connect to.

Inactivity Timeout 0  
The number of milliseconds without receiving data from the source before a disconnect/reconnect is made. Set to 0 to disable. (default: 0)

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

Ignition! Help ? Get Designer

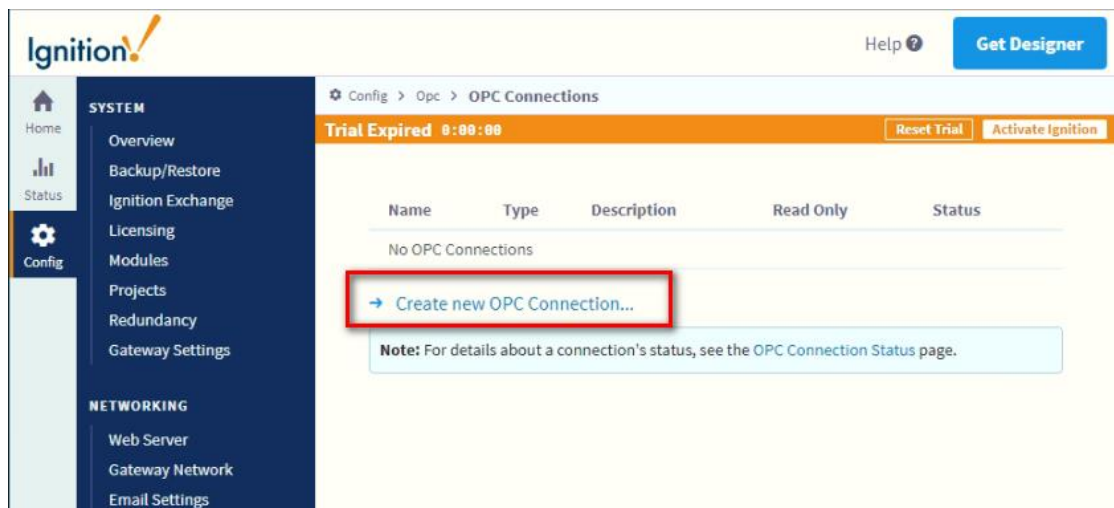
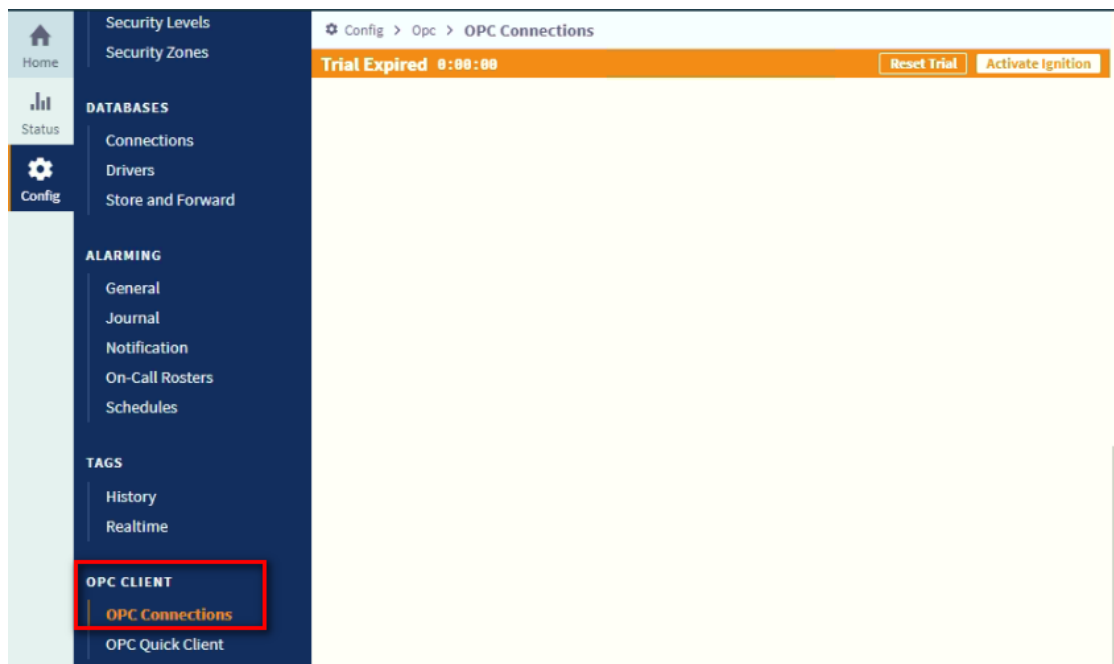
Config > Opcua > Devices

Trial Expired 0:00:00 Reset Trial Activate Ignition

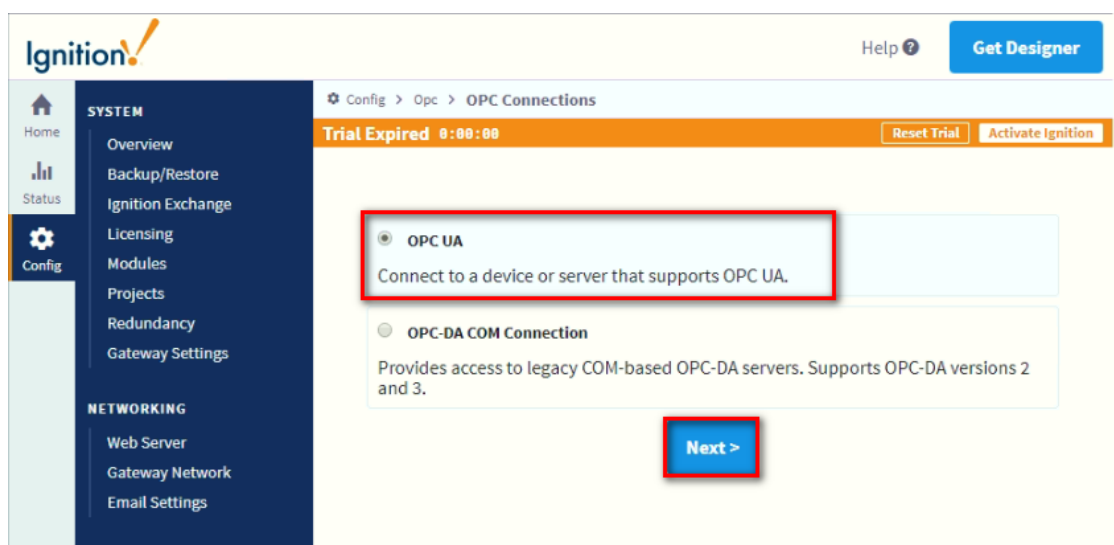
Name	Type	Description	Enabled	Status	
ADAM	TCP Driver		true	1/1 Connected	delete edit

→ Create new Device...

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



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



10. Fill the OPCUA server Endpoint URL and press “Next”

The screenshot shows the Ignition configuration interface. The left sidebar has a 'Config' menu item highlighted. The main content area is titled 'OPC Connections' and shows a 'Trial Expired 0:00:00' banner. Below the banner, there is a 'Server Discovery' section with a text input field for the 'Endpoint URL'. The field contains the text 'opc.tcp://10.0.0.1:4840/'. Below the input field, there is an example: 'Example: opc.tcp://localhost:62541/discovery'. At the bottom right, there is a blue button labeled 'Next: Choose Server'.

11. Choose “ADAM-6350” and press “Next”

The screenshot shows the Ignition configuration interface. The left sidebar has a 'Config' menu item highlighted. The main content area is titled 'OPC Connections' and shows a 'Trial Expired 0:00:00' banner. Below the banner, there is a 'Choose a Server' section. It lists 'ADAM-6350' with a radio button selected next to it. Below the list, there is a blue button labeled 'Previous: Endpoint Discovery' and a blue button labeled 'Next: Select Endpoint'.

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

The screenshot shows the Ignition configuration interface. The left sidebar has a 'Config' menu item highlighted. The main content area is titled 'OPC Connections' and shows a 'Trial Expired 0:00:00' banner. Below the banner, there is a 'Select Endpoint' section. It lists two endpoints: 'opc.tcp://10.0.0.1:4840/' and 'opc.tcp://10.0.0.1:4840/'. The second endpoint is selected with a radio button. Below the list, there is a blue button labeled 'Previous: Choose Server' and a blue button labeled 'Finish'.

13. Press “Finish”

Ignition! Help ? Get Designer

Config > Opc > OPC Connections

Trial Expired 0:00:00 Reset Trial Activate Ignition

→ Skip to Advanced Configuration

**Confirm Connection Settings**

Discovery URL: opc.tcp://10.0.0.1:4840/  
Endpoint URL: opc.tcp://10.0.0.1:4840/  
Endpoint Host Override:  
Endpoint Security Mode: Sign  
Endpoint Security Policy: Basic128Rsa15

Previous: Choose Server Finish

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

Ignition! Help ? Get Designer

Config > Opc > OPC Connections

Trial Expired 0:00:00 Reset Trial Activate Ignition

**Main**

Name: ADAM-6350  
Description:  
Enabled: ☒ (default: true)  
Read Only: ☐ If selected, the connection to this OPC server will be read-only; all calls to write will fail. (default: false)

**Authentication**

Username: admin  
Password:   
Password:   
Re-type password for verification.

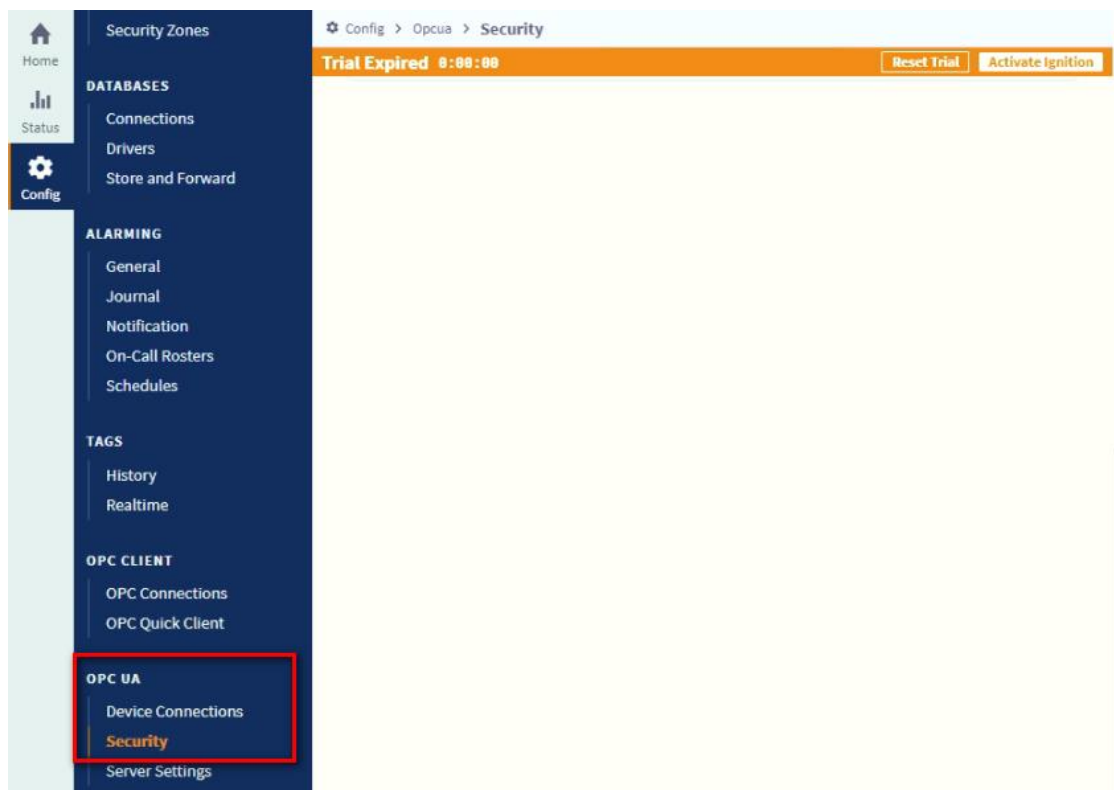
☐ Show advanced properties

Create New OPC Connection

15. We will find the status is “Faulted”



16. Come back to OPC UA → Security



Trust the Quarantined Certificates



Ignition! Help ? Get Designer

Config > Opcua > Security

Trial Expired 0:00:00 Reset Trial Activate Ignition

Client Server

### Client Security

#### Trusted Certificates

	Common Name	SHA-1 Fingerp...	Expiration	Action
+	Ignition OPC UA...	0f6539b2b9b52...	Mar 19, 2023	Delete

Upload Trusted Certificate:

Browse or Drag files here

#### Quarantined Certificates

	Common Name	SHA-1 Fingerp...	Expiration	Action
+	Advantech Test ...	010a2f519ac5e...	Apr 6, 2028	Trust Delete

DATABASES

Ignition! Help ? Get Designer

Config > Opcua > Security

Trial Expired 0:00:00 Reset Trial Activate Ignition

Client Server

### Client Security

#### Trusted Certificates

	Common Name	SHA-1 Fingerp...	Expiration	Action
+	Ignition OPC UA...	0f6539b2b9b52...	Mar 19, 2023	Delete
+	Advantech Test ...	010a2f519ac5e...	Apr 6, 2028	Delete

Upload Trusted Certificate:

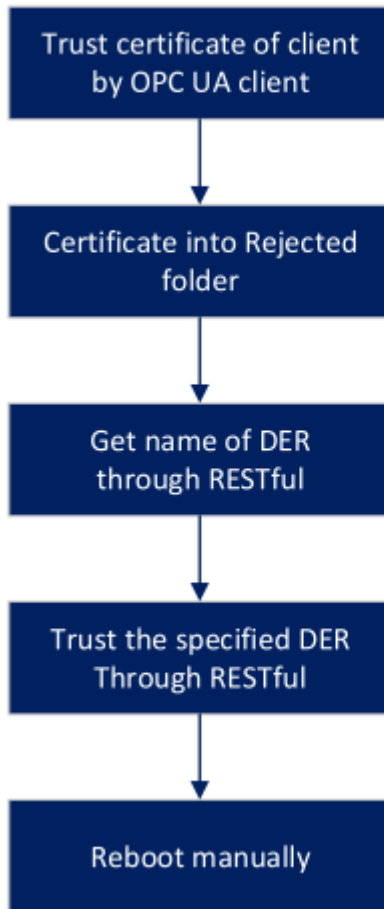
Browse or Drag files here

#### Quarantined Certificates

	Common Name	SHA-1 Fingerp...	Expiration	Action
No rejected client certificates to display.				

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

Currently, manage certificate through RESTful.



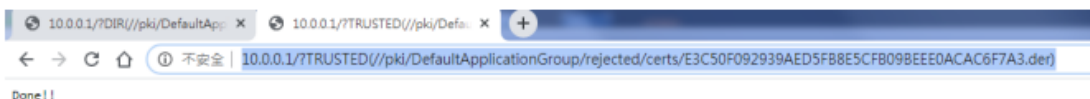
- Get name of DER

<http://10.0.0.1/?DIR///pki/DefaultApplicationGroup/rejected/certs/>



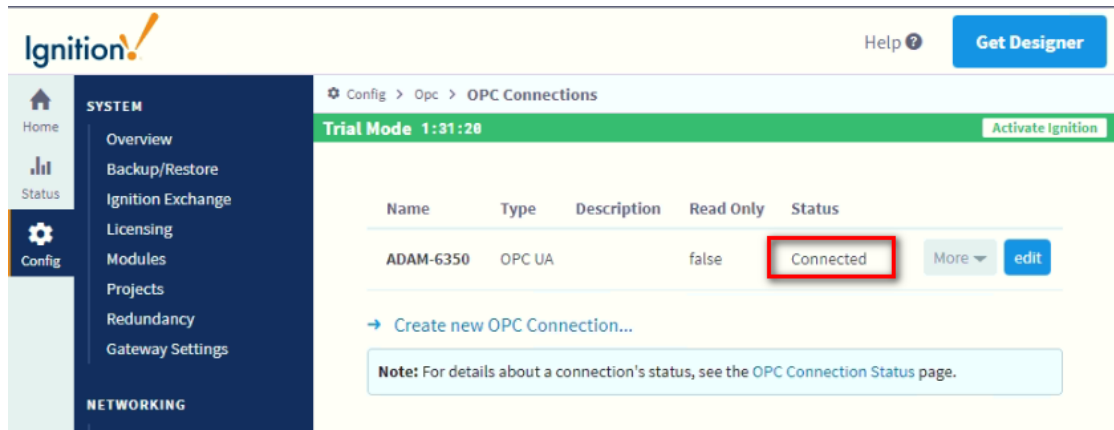
- Trust the specified DER

<http://10.0.0.1/?TRUSTED///pki/DefaultApplicationGroup/rejected/certs/E3C50F092939AED5FB8E5CFB09BEEE0ACAC6F7A3.der>

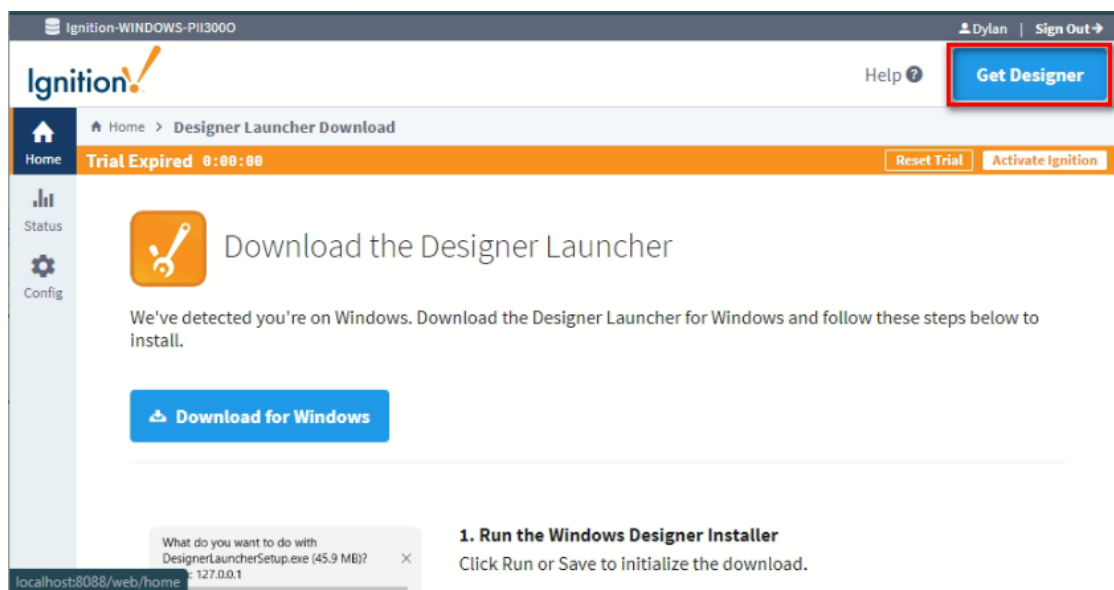


**After trust the DER, don't forget to power off ADAM-6350 and power up again.**

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

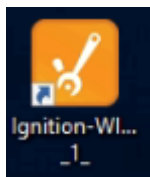


19. Click “Get Design”



20. Follow the steps to install “Designer Launcher”

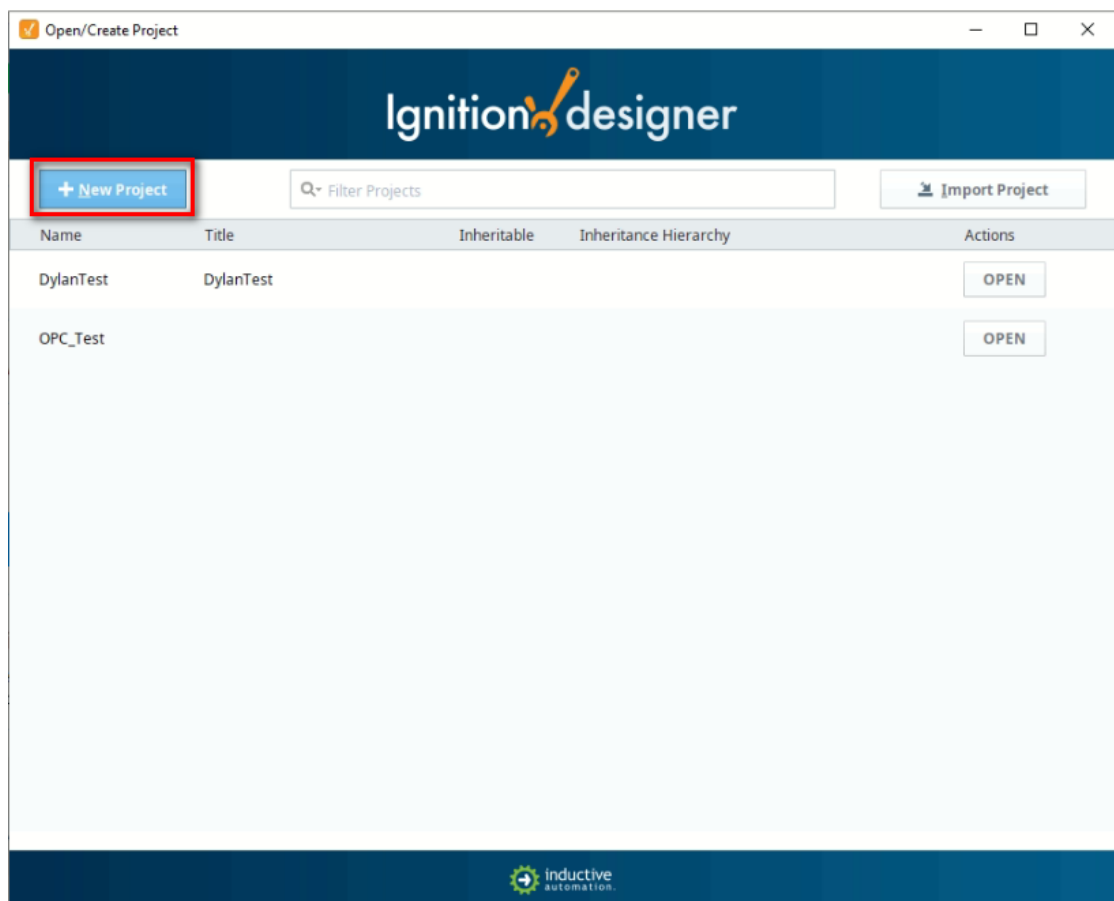
21. The installation icon will show on the desktop



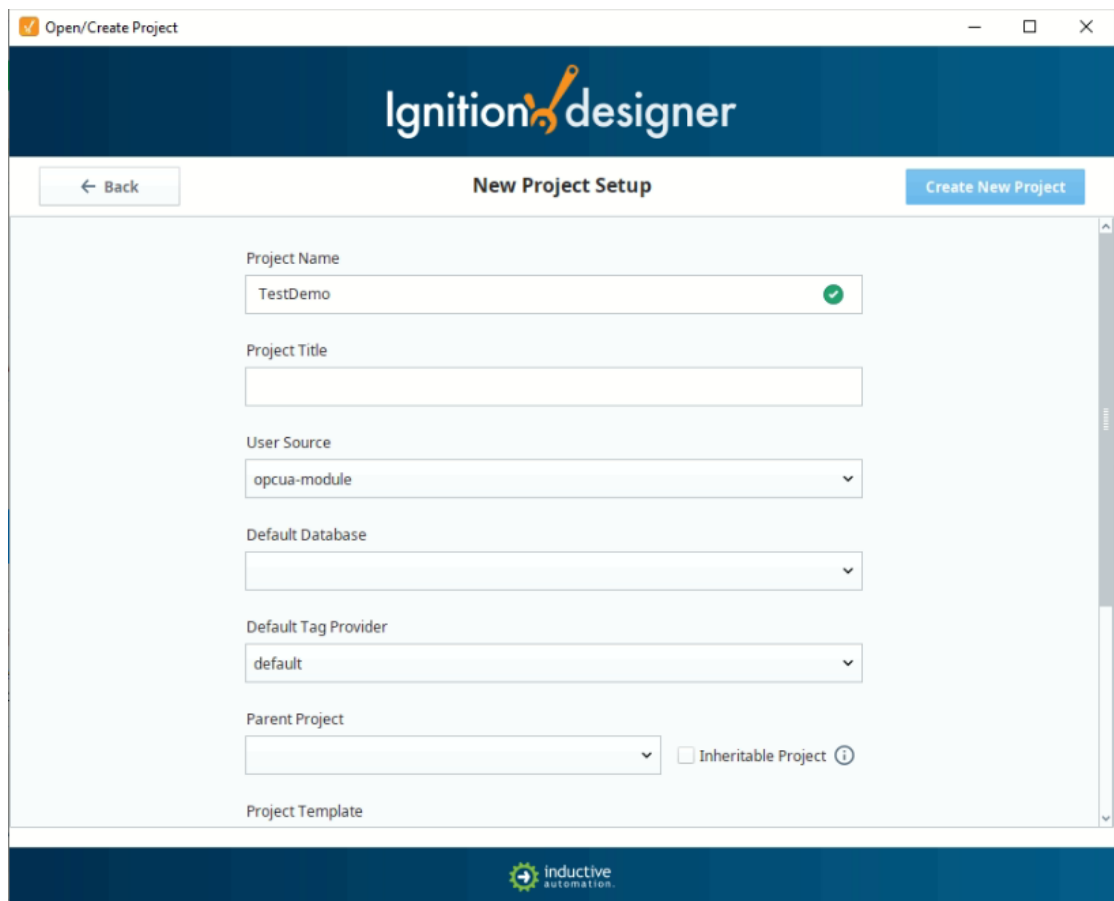
22. Double click the icon to start and fill the username and password



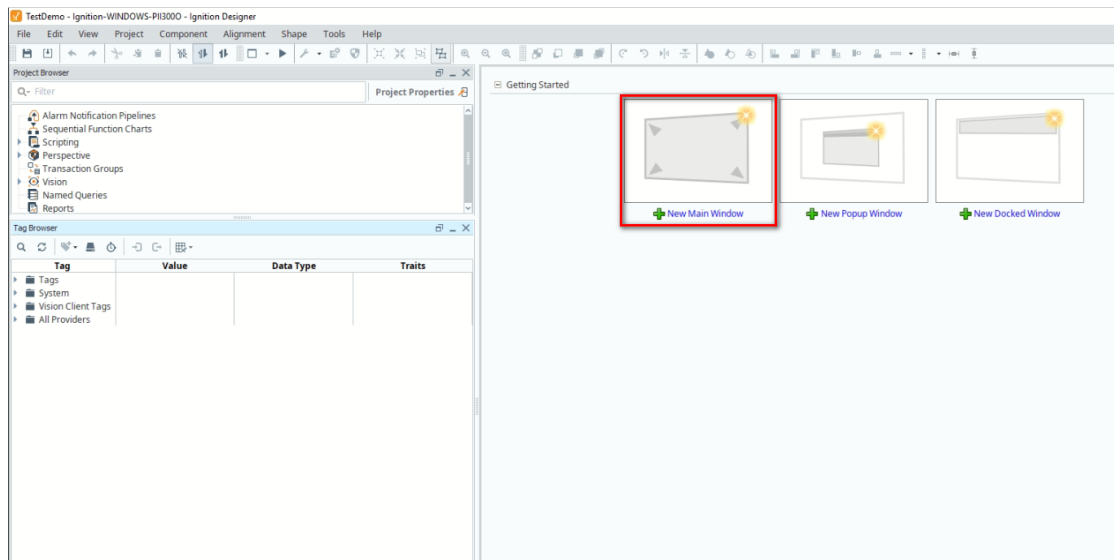
23. We can create a new project.



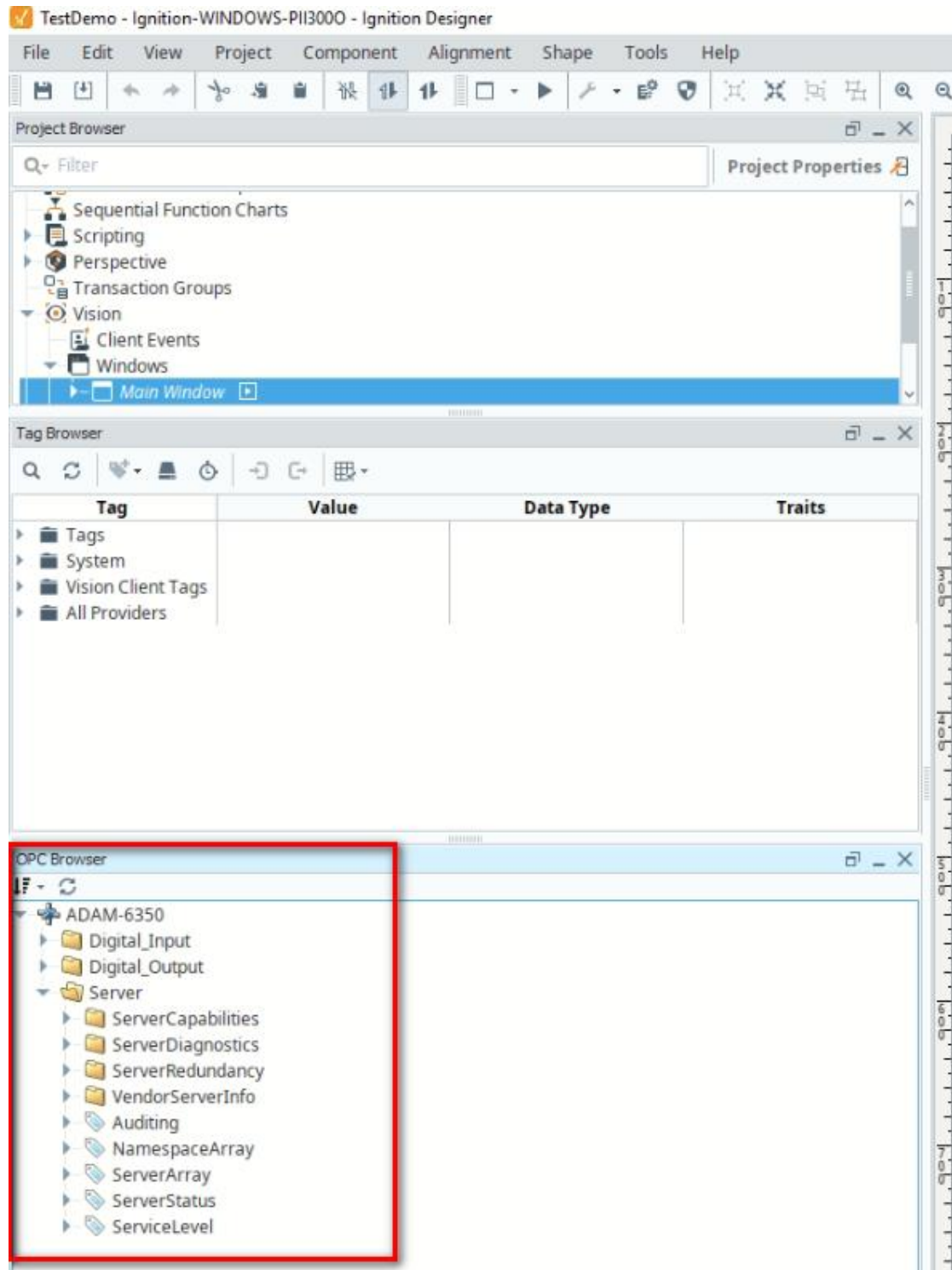
24. Fill the "Project Name" to create a new project



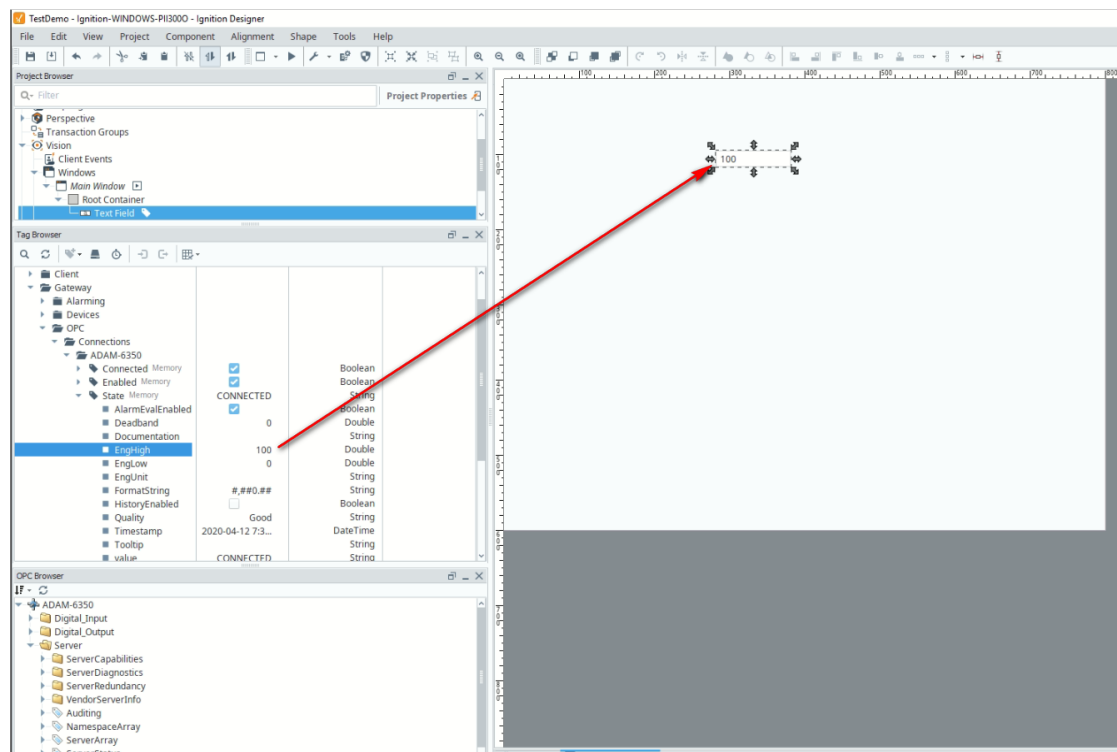
25. We can create “New main windows”



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.

