

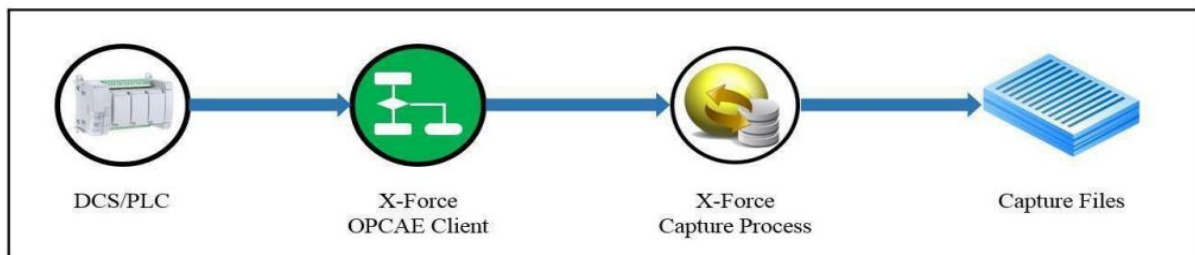
## X-Force OPC AE Client

### OPC:

An OPC is the interoperability standard for the secure and reliable exchange of data in the industrial automation space and in other industries. It is platform independent and ensure the seamless flow of information among devices from multiple vendors.

### X-FORCE OPC AE CLIENT APPLICATION:

OPC stands for Alarm Event. As its name suggest, it will get alarms from OPC and that will be thrown to the capture process or processed directly. User can configure channels through providing OPC server credential to establish connection, printer can be configured as it has to be provided to another machine. It also provides facility to configure ignore string with regular expression using various options. There can be omission of log or capture deleting schedule can be configured through UI. Channel(s) can be dependent on license authorization.



10.2.8.226 (Simulator)	10.2.8.201	10.2.8.201	10.2.8.201
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**X-Force OPC AE Client application will fetch the data from any industrial OPC Server.**

### First you need to do DCOM configuration:

Distributed Component Object Model (DCOM) is an extension to Component Object Model (COM) that enables software components to communicate with each other across different computers on a local area network (LAN), on a wide area network (WAN) or across the internet.

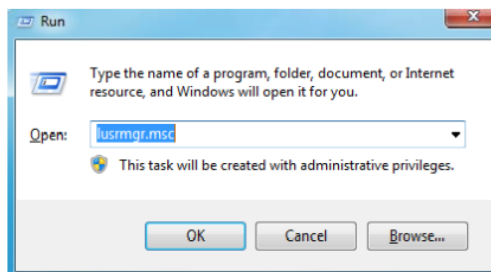
## DCOM Setup Procedure

You need to configure DCOM on both server and client machines.

- Configure your computer to be a member of your Network
- System-wide DCOM Setup
- OPC Server-specific DCOM Setup
- OPCEnum Setup
- Configure Local Security Policies
- Add Firewall exceptions
- OS-specific Setup
  - Recommend to disable UAC & DEP on Win7, Win2008 & Win2012.
- Checks for In-proc OPC Server
  - Most OPC servers are out-of-Proc, Clients can connect to the server remotely.
  - In-proc OPC Servers do not allow connections from remote clients. You may need additional components (OPC Server for DA client) or DCOM Tunneller.

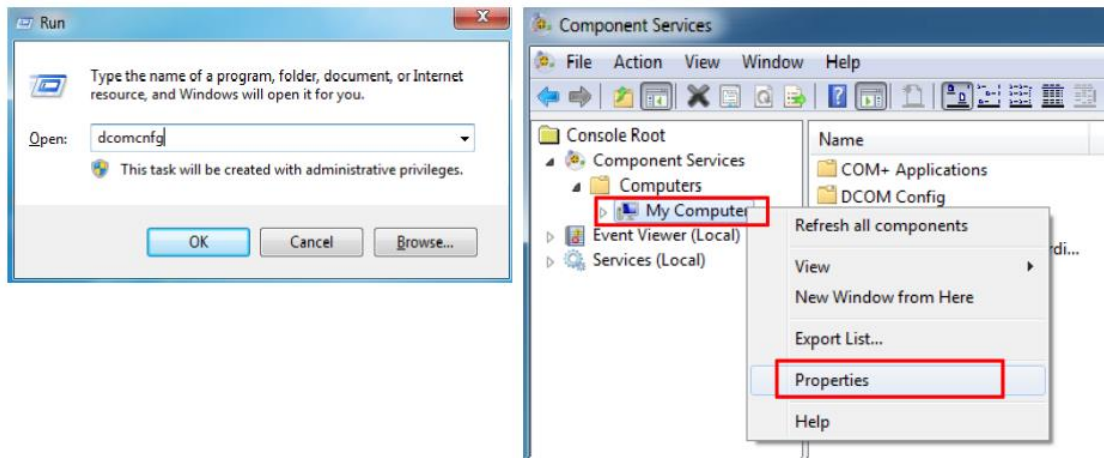
## Network & User Account Setup

- Configure your computer to be a member of your network (Domain or Workgroup)
  - Workgroup users: [Client's logon account and password must be registered on the server PC.](#)  
[And client must log-on by the registered account.](#)  
\*\*OPC Server & client PCs do not need to use the same account and password, though most DCOM manuals recommend to do so.
  - Domain users: Logon ID and PW will be managed by Domain Server. No need to add logon account on individual PCs.
- Add Windows user account
  - In the Start menu, type "**lusrmgr.msc**" and then click OK.
  - Add user account or group and setup **password** for that account.

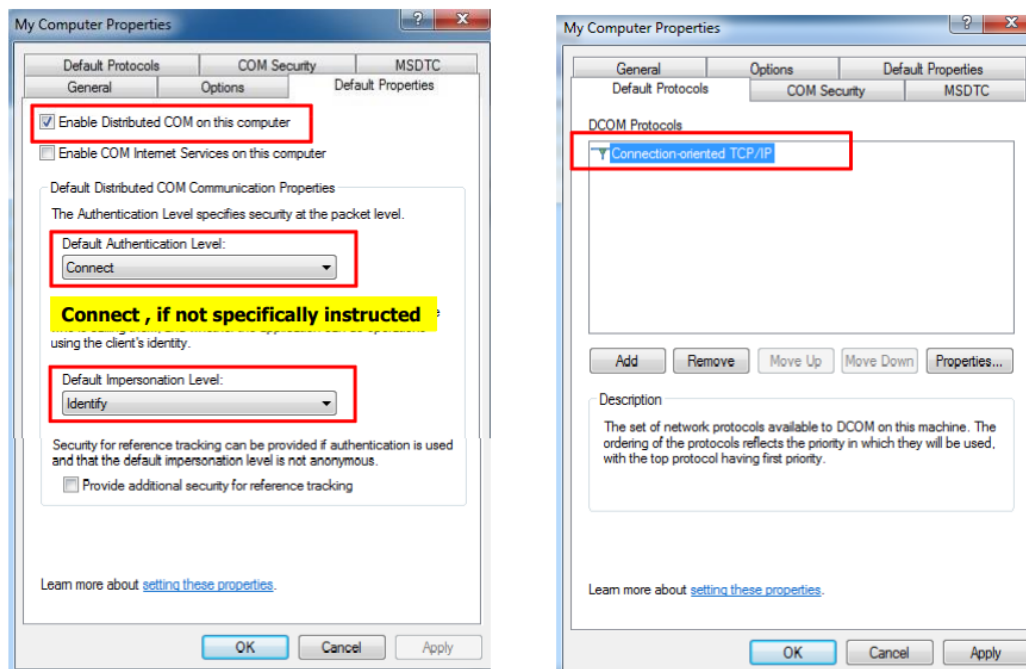


## System-wide DCOM Setup

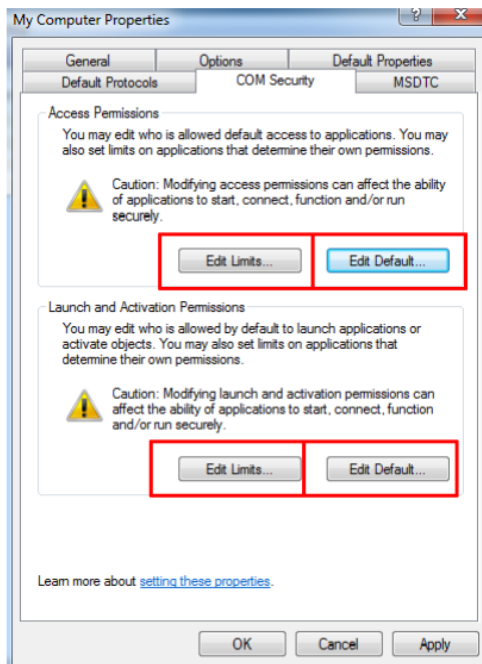
- From the Start menu, type **"dcomcnfg"** in the run command and then click OK
- Alternatively, go to Control Panel > Administrative Tools > Component Services



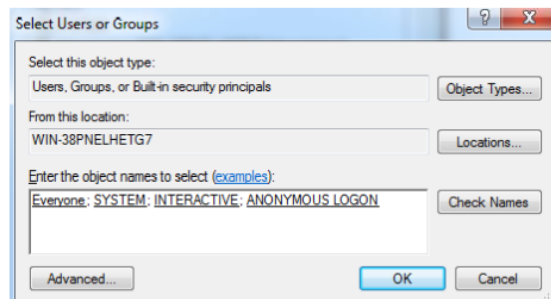
## System-wide DCOM Setup



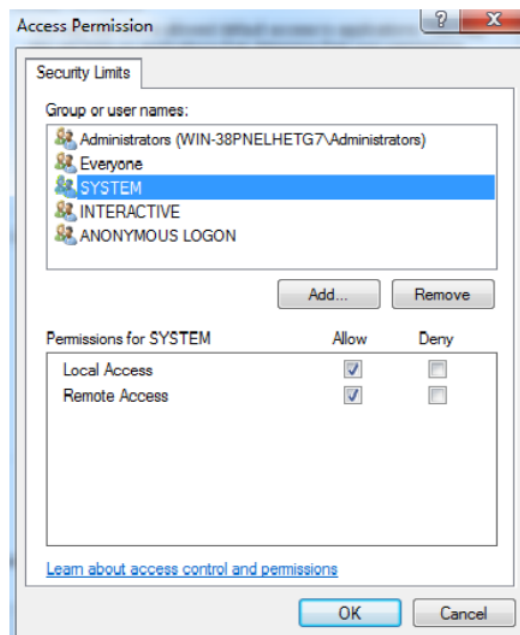
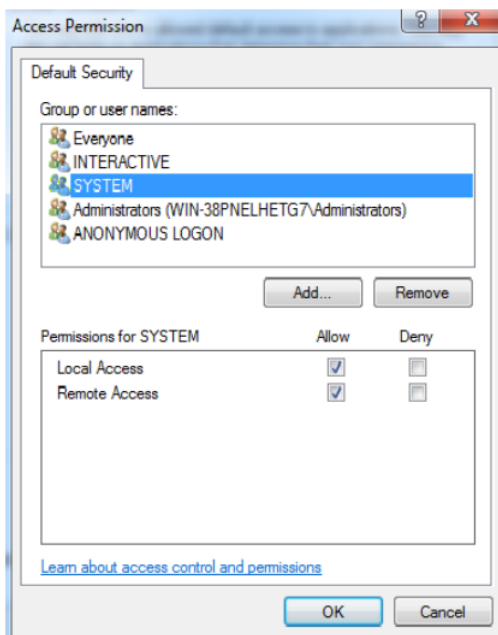
## System-wide DCOM Setup



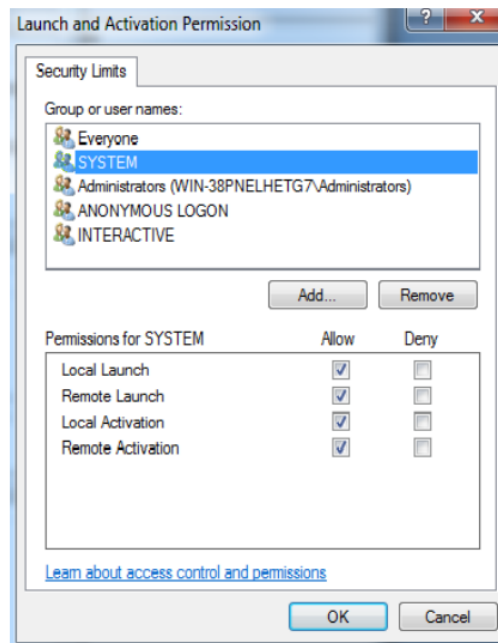
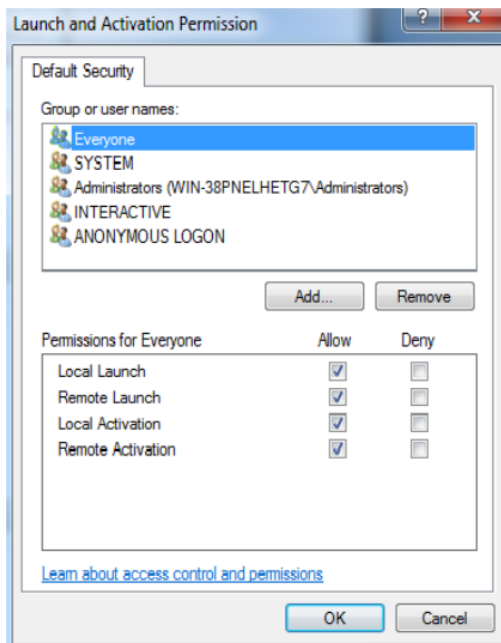
- Give **Anonymous Logon, Everyone, Interactive, System accounts** (and your specific account ) Access Rights.



## System-wide DCOM Setup

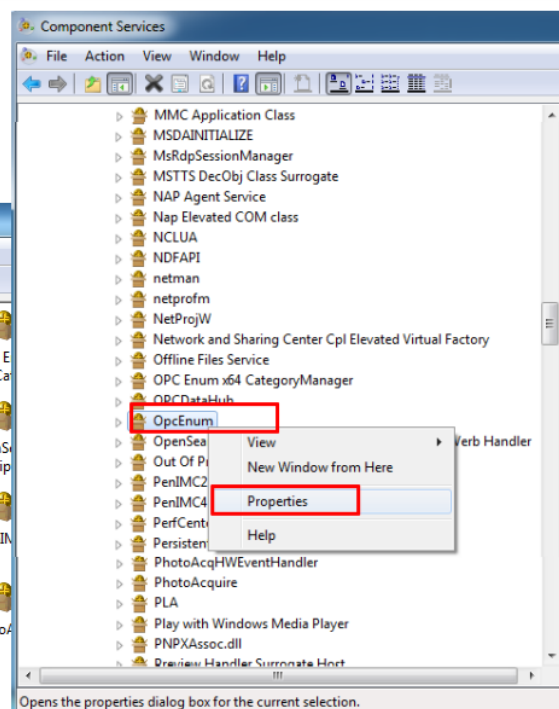
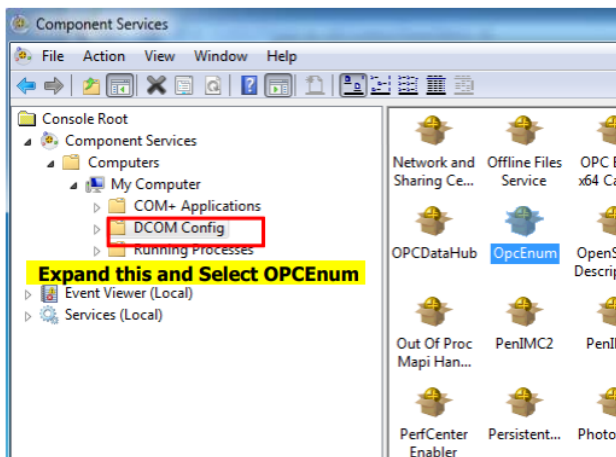


## System-wide DCOM Setup

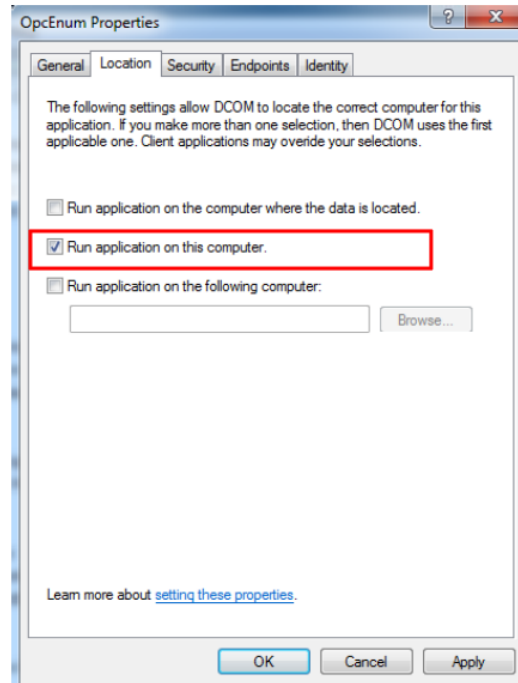
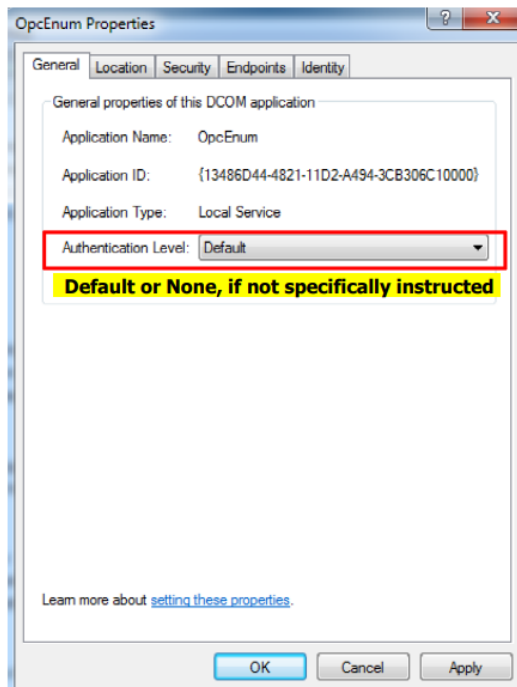


## DCOM Setup for OPCEnum

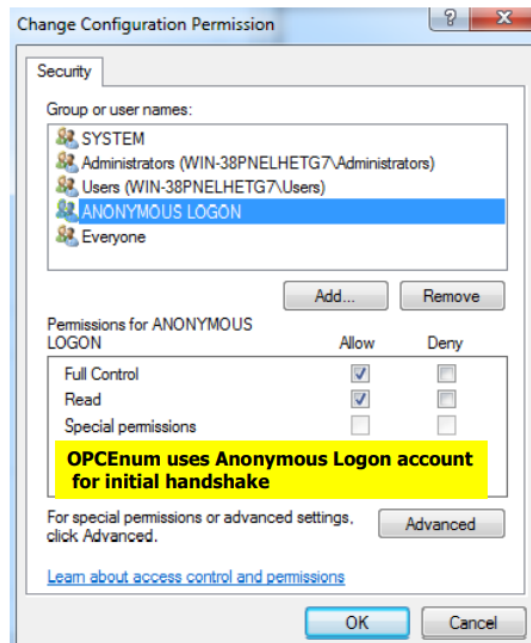
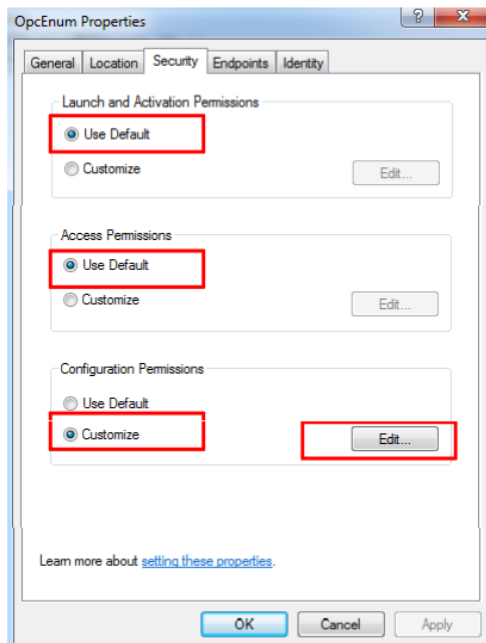
- Configure DCOM for OPCEnum which is almost same as System-wide DCOM setup
- OPCEnum enables OPC clients to browse OPC server name and tag names



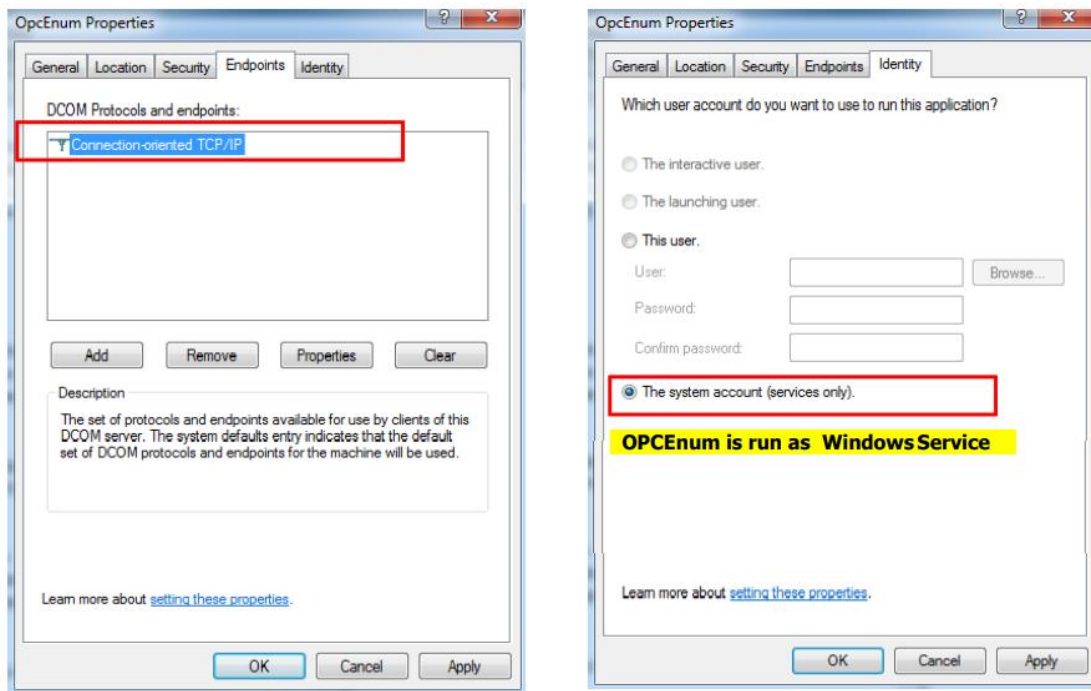
## DCOM Setup for OPCEnum



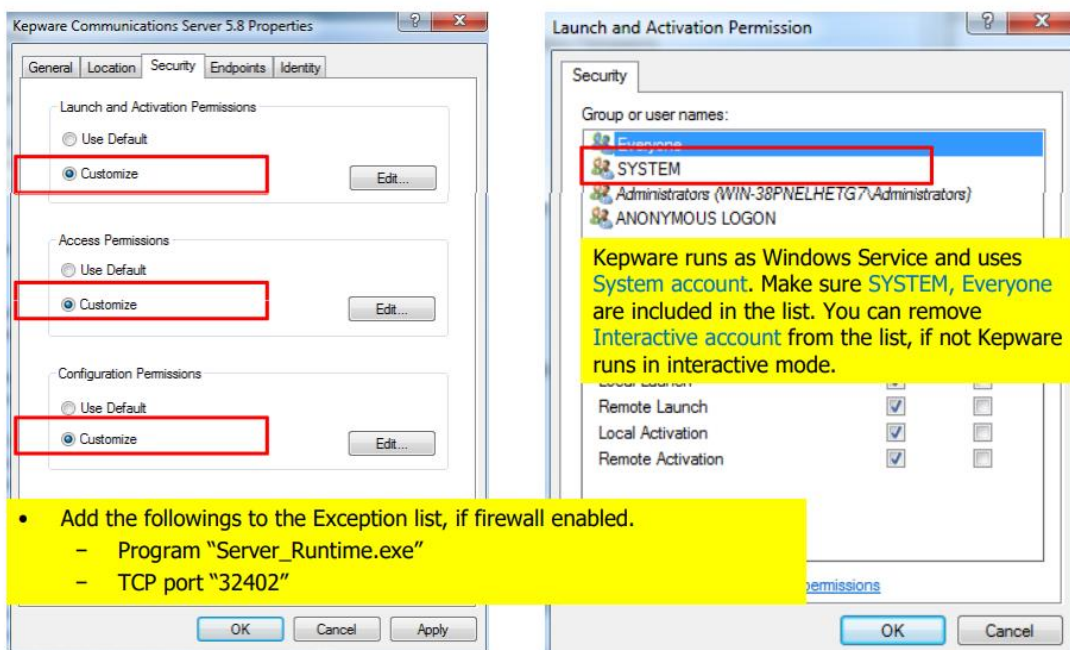
## DCOM Setup for OPCEnum



## DCOM Setup for OPCEnum



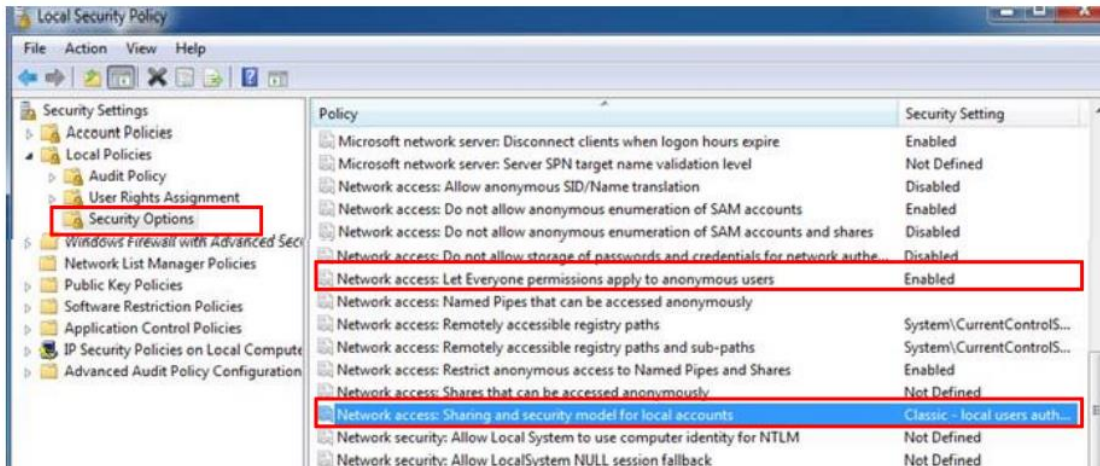
## Server-specific DCOM Setup (for Kepware OPC Server)



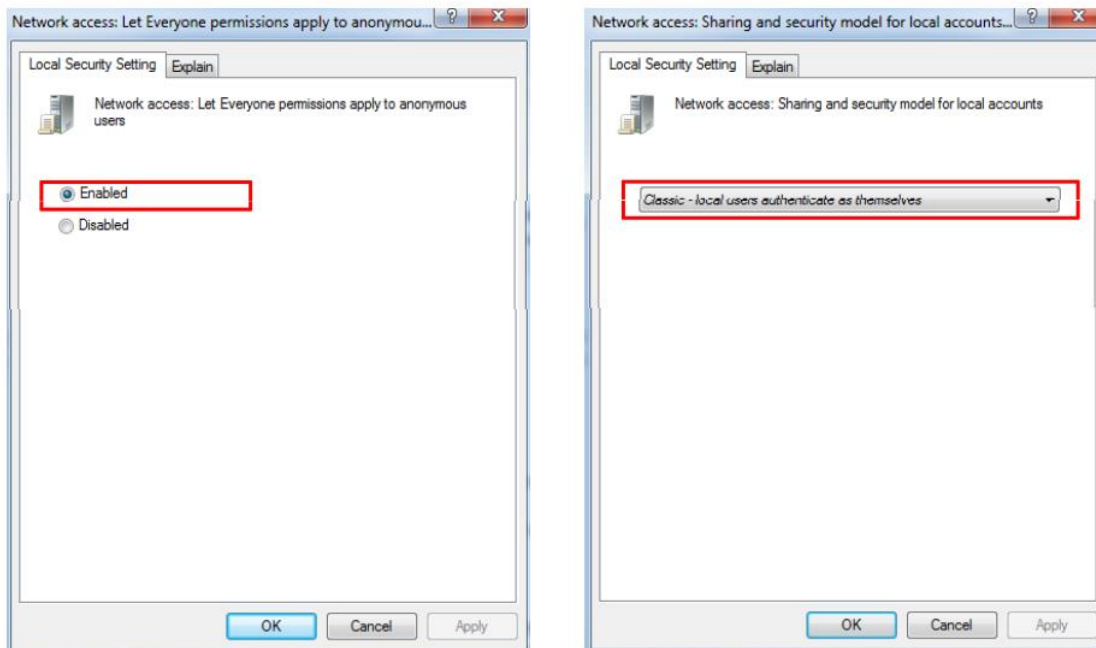


## Local Security Policies Setup

- In the Start menu, type "**secpol.msc**" and then click OK.
- Or In the Start menu, open the **Control Panel > Administrative Tools** and setup as below.
  - "Network access: Let Everyone Permission Apply to Anonymous Users →" Enabled"
  - "Network access: Sharing and security model for local accounts" → "Classic: Local users authenticate as themselves"



## Local Security Policies Setup



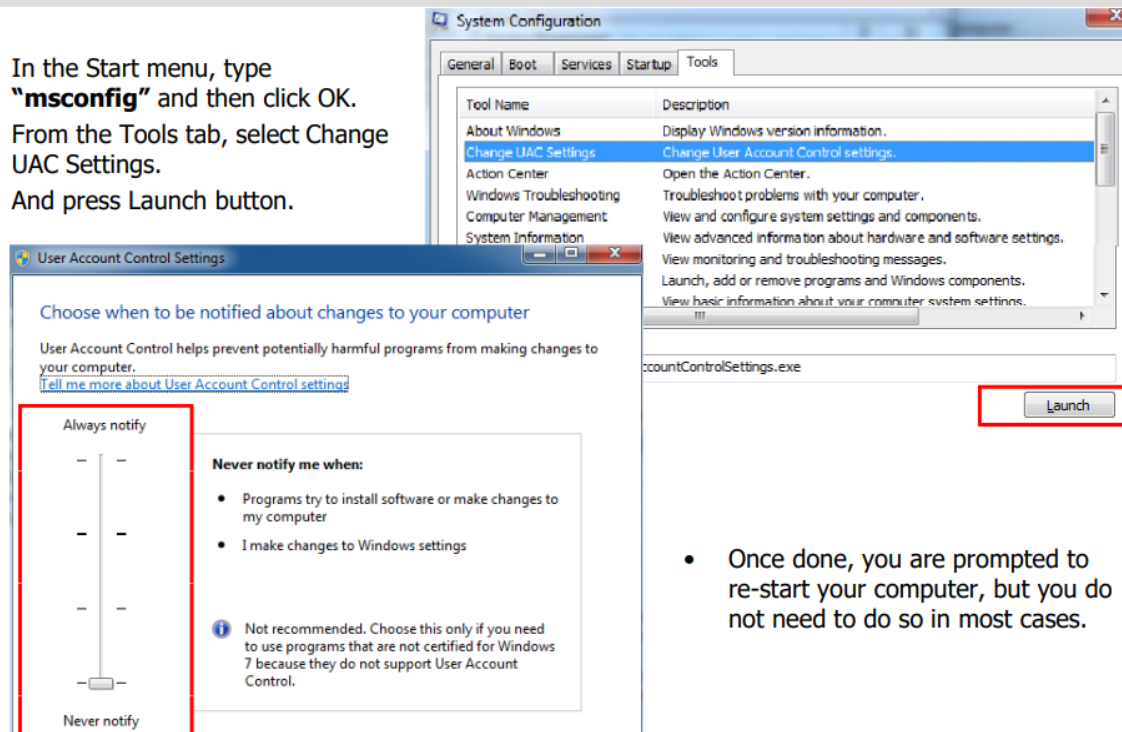


## Firewall Setups

- In the Start menu, type "**firewall.cpl**" and then click OK.
- Or go to Control Panel > **Windows Firewall**
- We recommend you turn off firewall before DCOM setups. Once DCOM setups done, you may need to turn your Firewall back on, if required.
- You need to add the followings to the Firewall Exceptions list.
  - In the Start menu, type "**wf.msc**" to add exceptions.
  - Inbound Rule > New Rule > Port > add TCP port 135 (for initial DCOM handshake)
  - Inbound Rule > New Rule > Program > add "OPCEnum.exe"
  - Inbound Rule > New Rule > Custom > Protocol and Port > add ICMPv4 (for PING command to work over firewall).
  - Add your OPC Server executable and port number which is used by the executable. ("Server\_runtime.exe" and the port 32402 for Kepware OPC Server)
  - Add your OPC client executable and the port number which is used by the executable.
  - On Win7 or later, adding the above in the Inbound Rule is enough in most cases, if not, add them in the Outbound Rule as well.

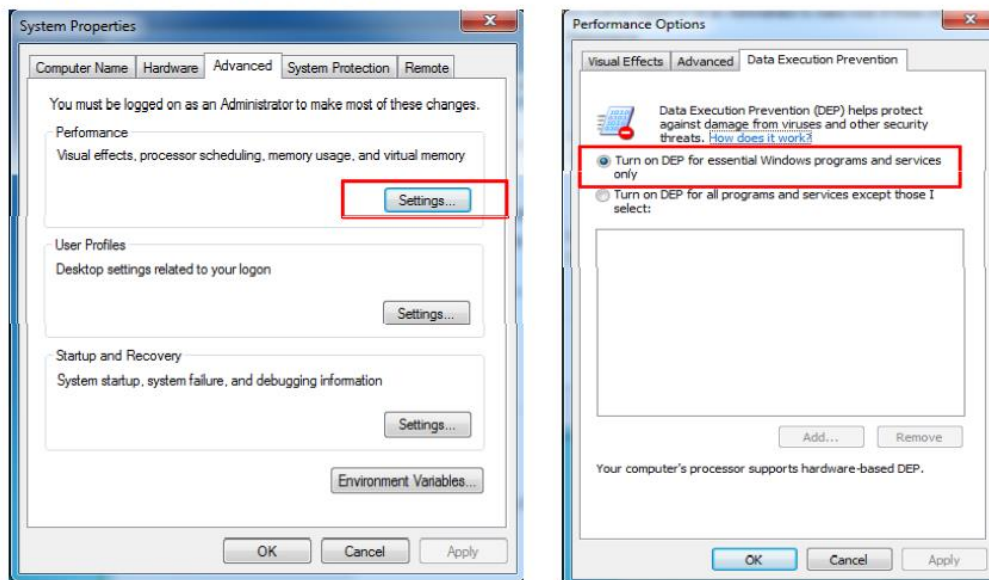
## Windows UAC (User Access Control) Setup

- In the Start menu, type "**msconfig**" and then click OK.
- From the Tools tab, select Change UAC Settings.
- And press Launch button.

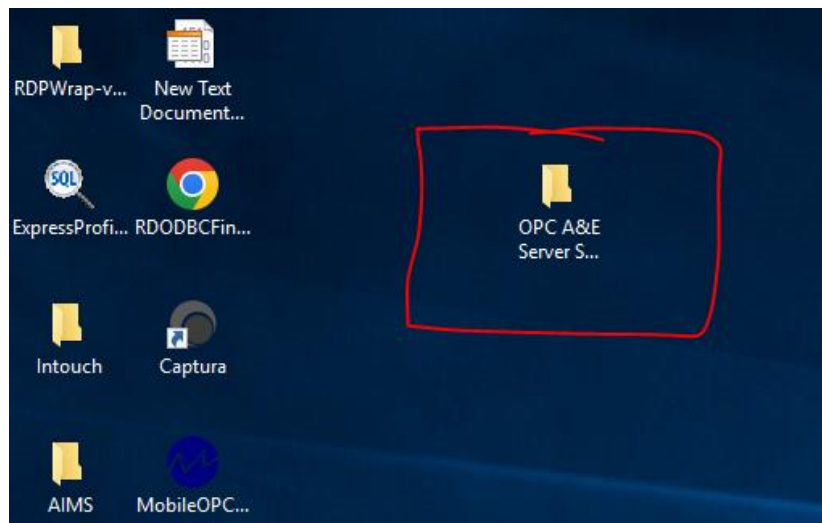


- Once done, you are prompted to re-start your computer, but you do not need to do so in most cases.

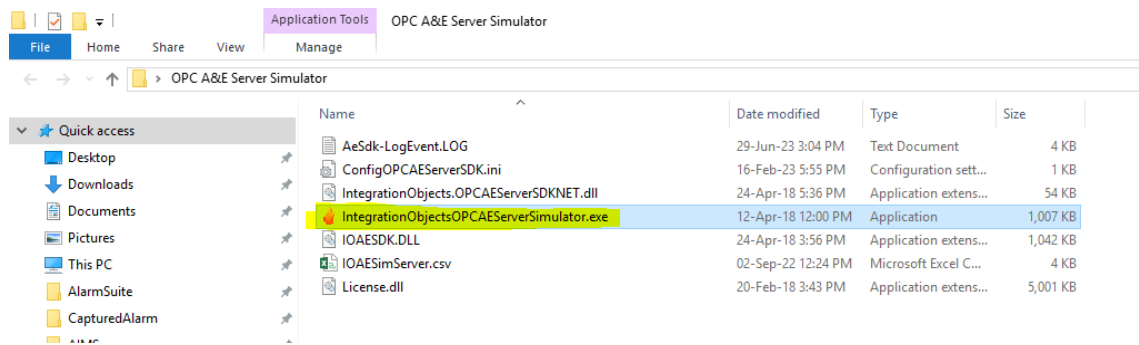
- Start Menu > Computer > Properties > Advanced System Settings > Advanced Tab



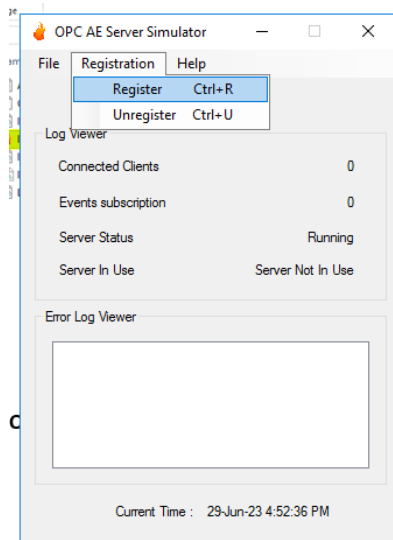
After Dcom Configuration, On 10.2.8.226 Start Simulator Open OPC A&E Server Simulator



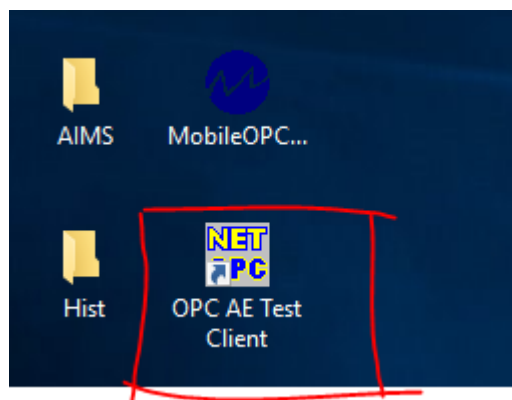
Click on Integration Objects OPCAE Server Simulator



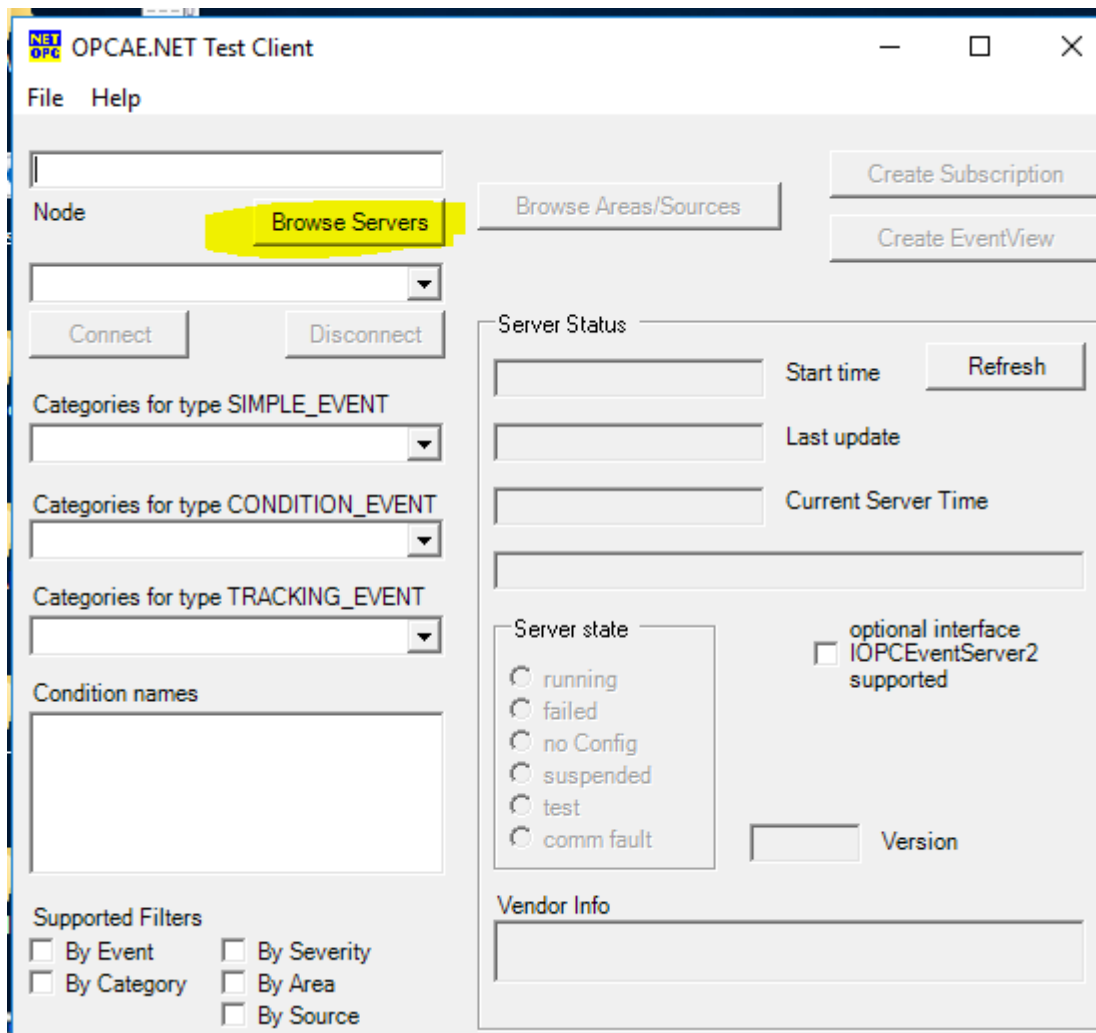
Click on Register



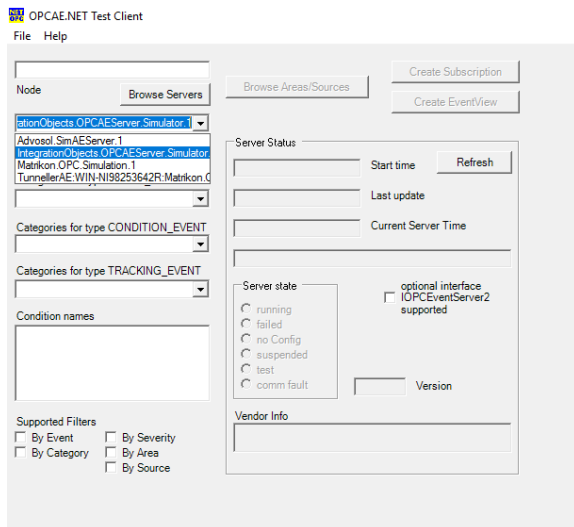
Double click on OPC AE Test Client



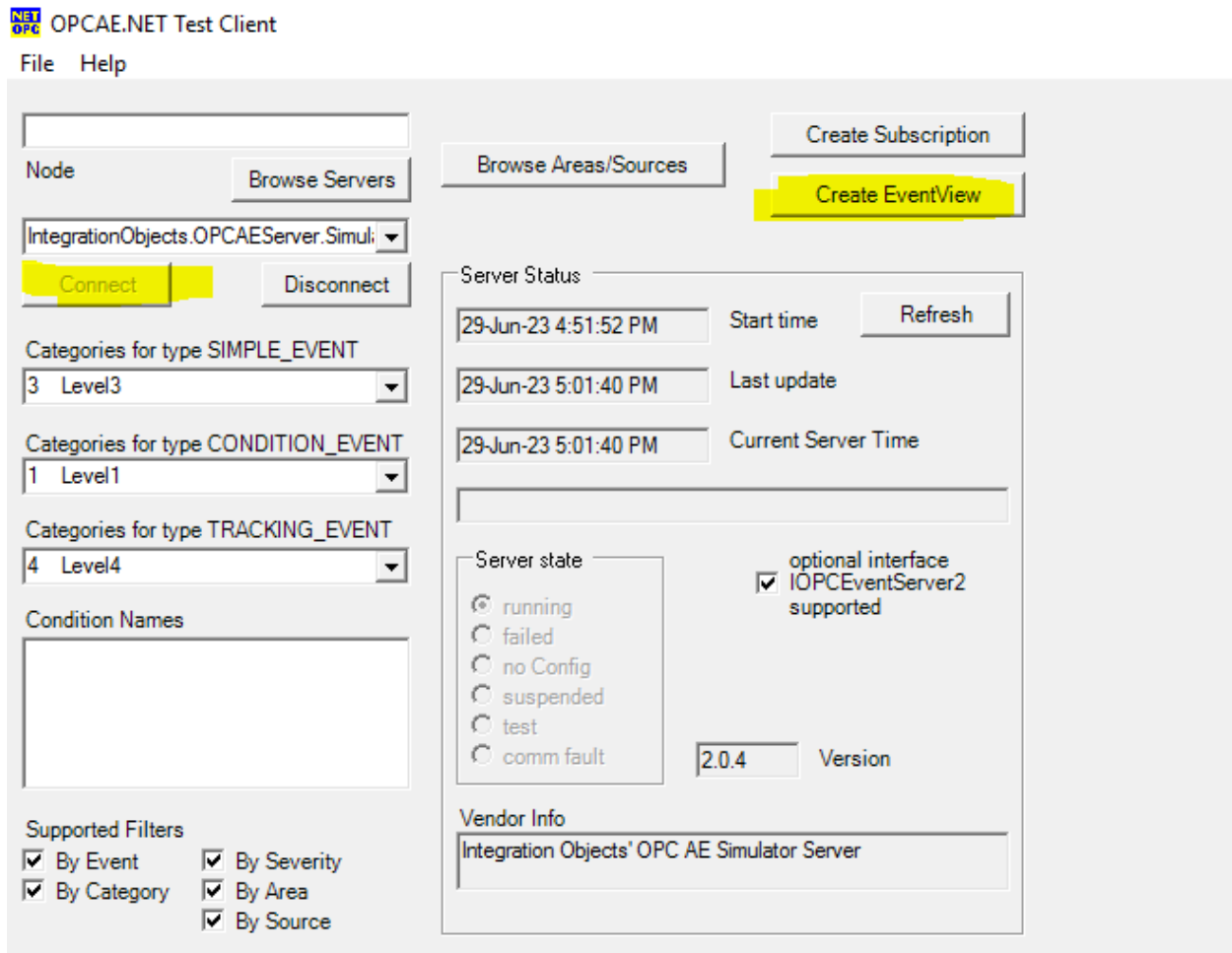
Click on Brose Servers



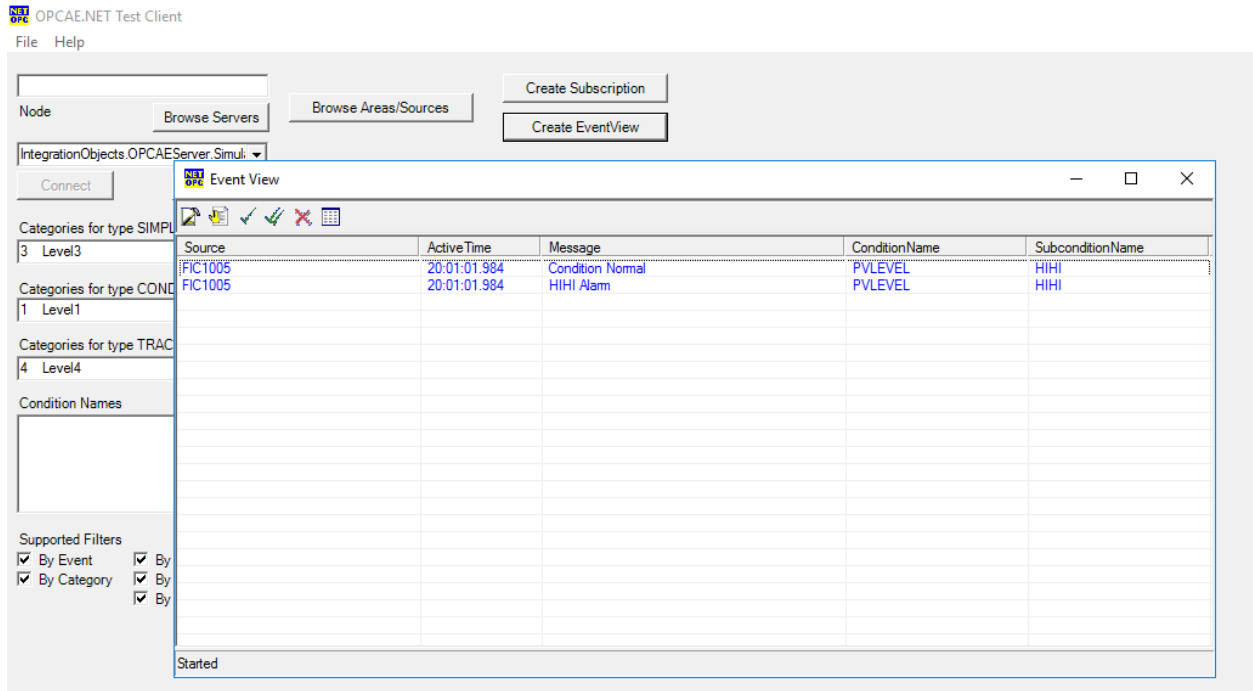
Select Integration Objects OPCA Server Simulator from Dropdown



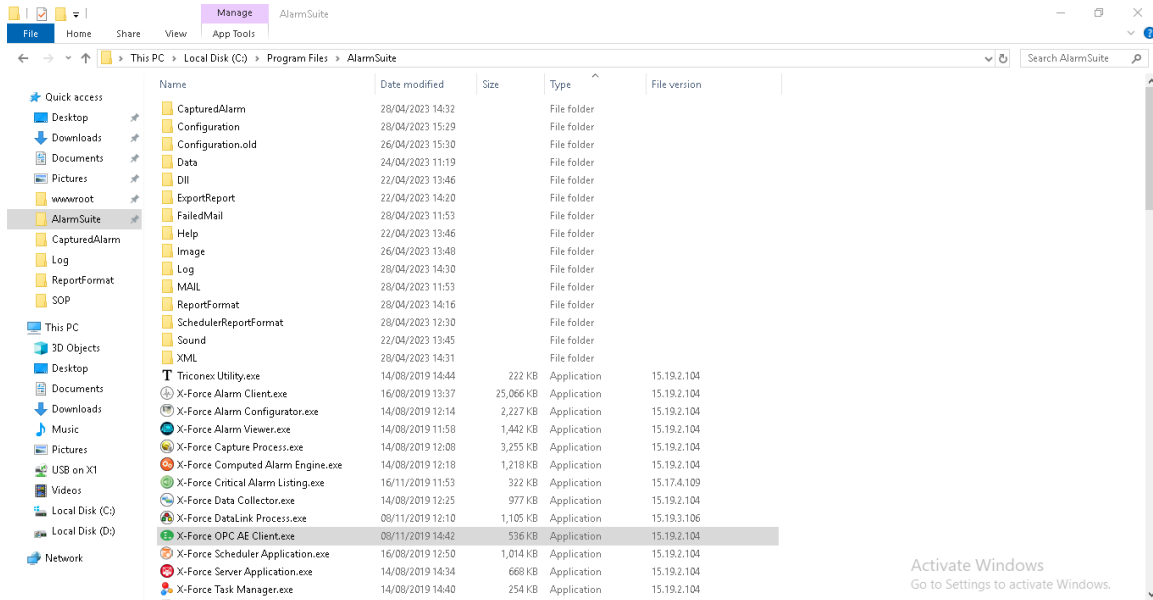
Click on Connect and After that Create EventView



After Clicking on Create EventView Below Event View Appear As Shown Below.



## Now Open X-Force OPC AE Client in 10.2.8.201

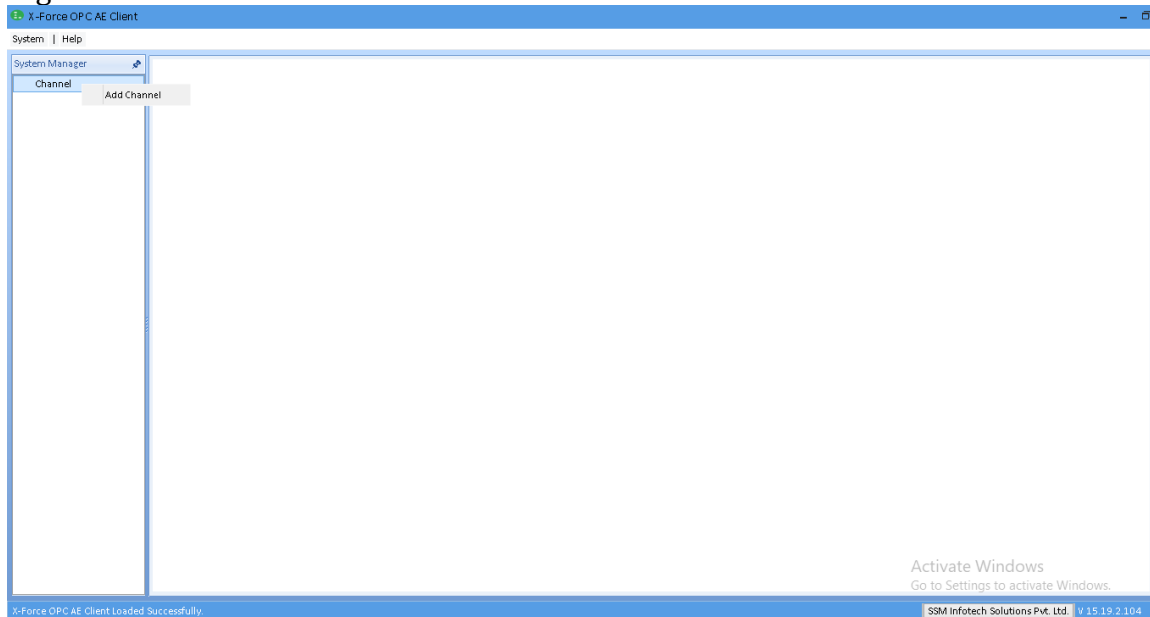




## Channel Configuration:

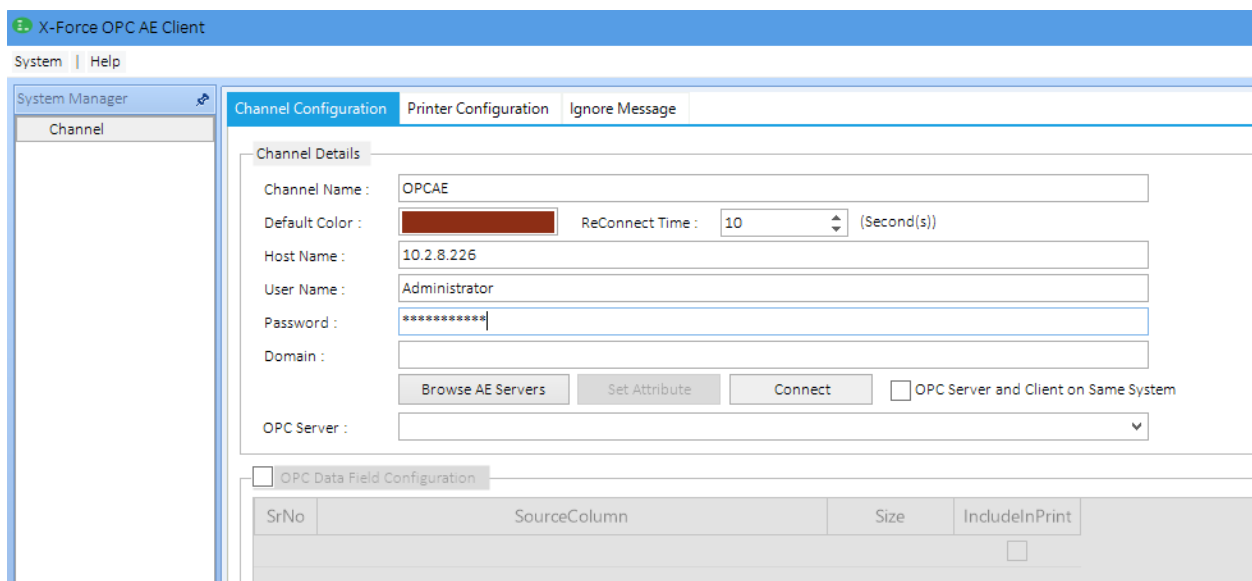
To Add Channel in X-force OPC AE Client

Right Click on Channel Then Click Add Channel.



So channel Configuration are loaded and add details as mention in below.

- Add Channel Name.
- Select Default Color for the channel.
- Select Reconnect time for the OPC server. In any case if OPC Server get disconnect then it will be connecting automatically after given time.
- Enter Host name, User Name, Password and Domain Name of the system.

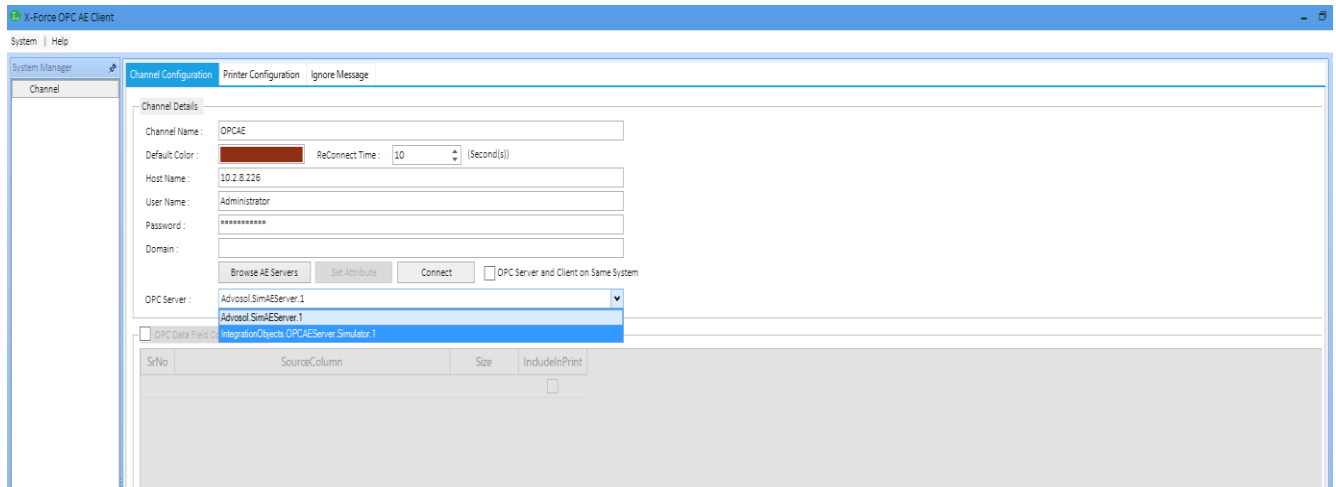


SrNo	SourceColumn	Size	IncludeInPrint
			<input type="checkbox"/>

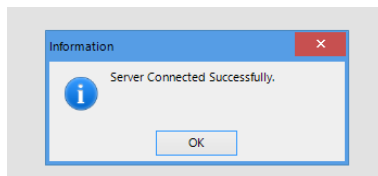
- Then click on browse Servers. So we Get the all the OPC server list.
- Select appropriate OPC server from the list.
- And Click on Connect Button to connect the Server.

(If you have server and client on same system then check OPC server and client on same system option.)

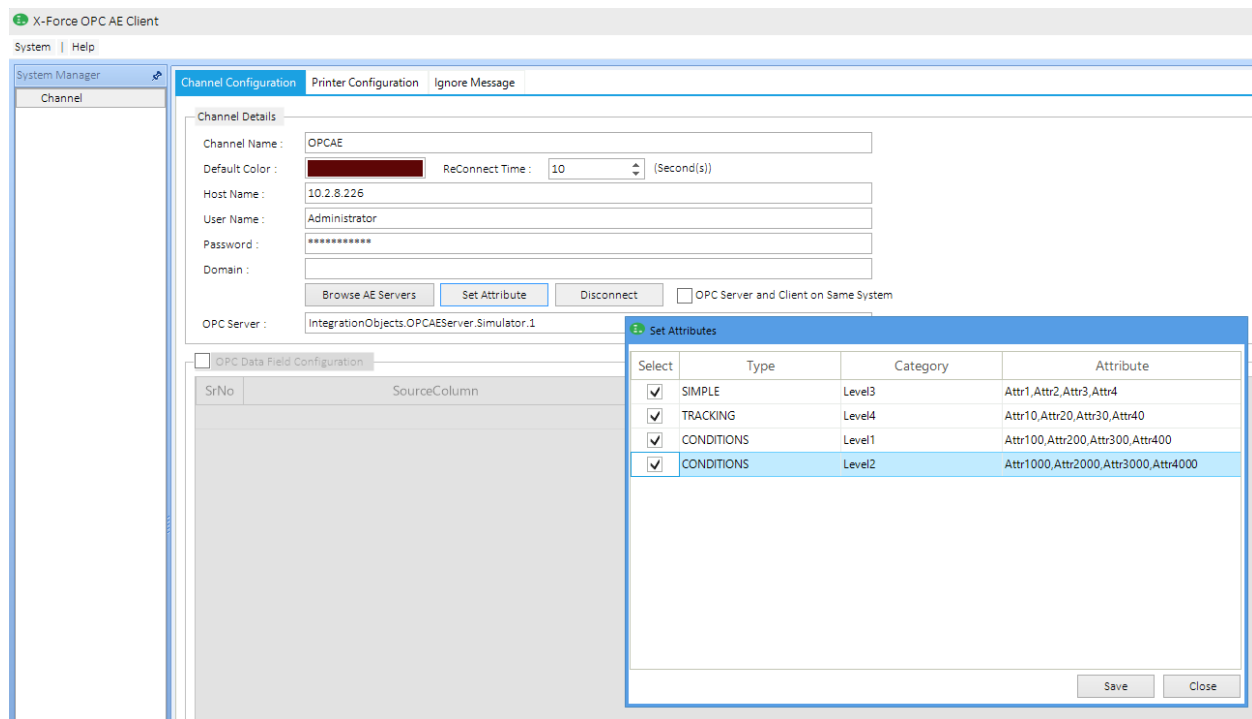
Select Integration Objects OPCAE Server Simulator from Dropdown and Click on Connect.



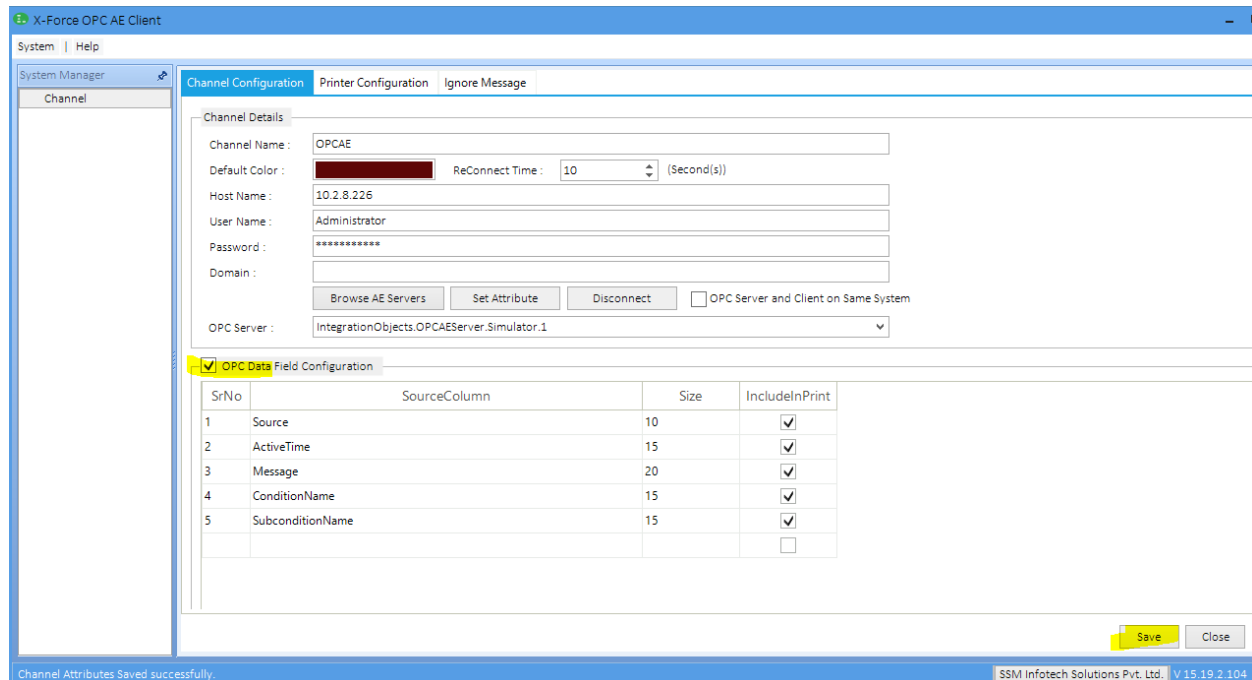
After Clicking on Connect Server Connected Successfully Appear, Click on OK



Click on Set attribute. Select all available option and Click on save.



Now for the Field Mapping, Click on OPC Data field configuration and Click on Save.



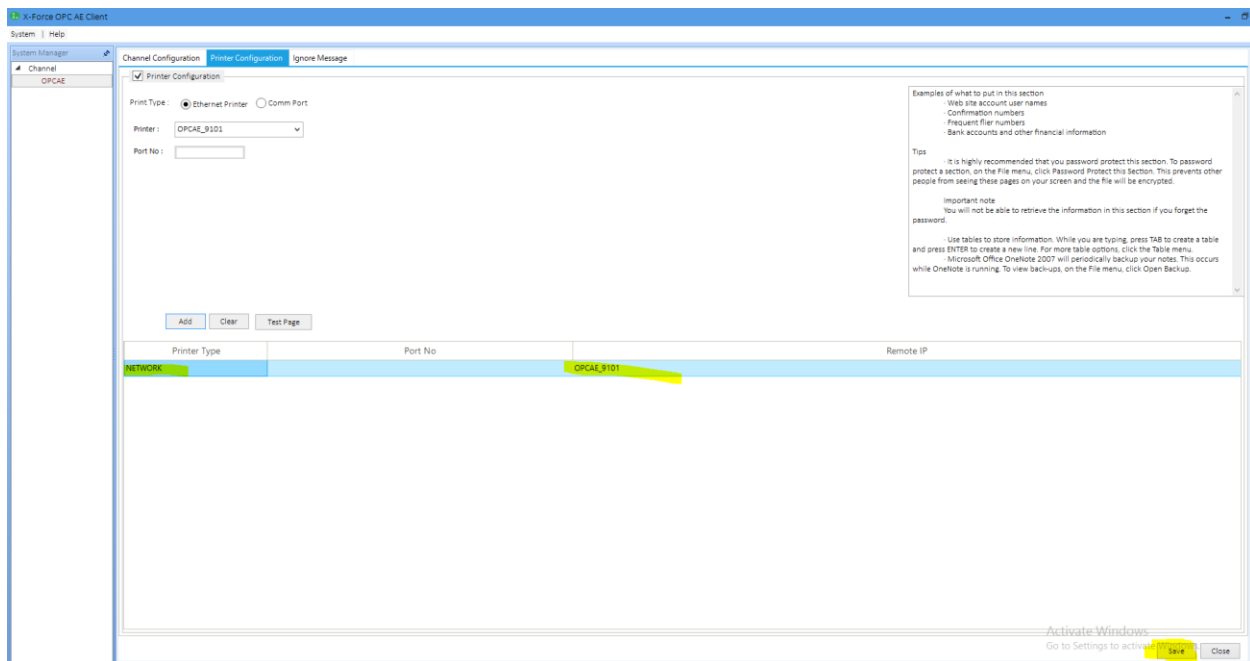
## Now in Printer Configuration:

- Check to Enable Printer Configuration
- Select Ethernet printer and Select printer selection select printer which you install on system (Virtual printer OPCAE\_9101).
- Click on Add

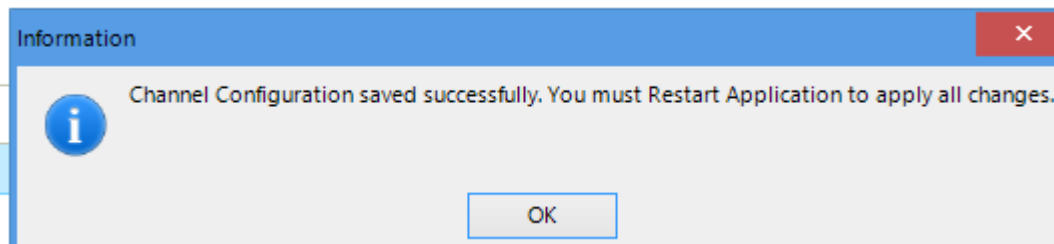
The screenshot shows the 'X-Force OPC AE Client' application window. The 'System Manager' tab is active, and the 'Printer Configuration' sub-tab is selected. The 'Printer Configuration' checkbox is checked. The 'Print Type' is set to 'Ethernet Printer'. The 'Printer' dropdown menu is set to 'OPCAE\_9101'. The 'Port No.' field is empty. At the bottom, there are 'Add', 'Clear', and 'Test Page' buttons. A table at the bottom of the window has two columns: 'Printer Type' and 'Port No'.

Printer Type	Port No
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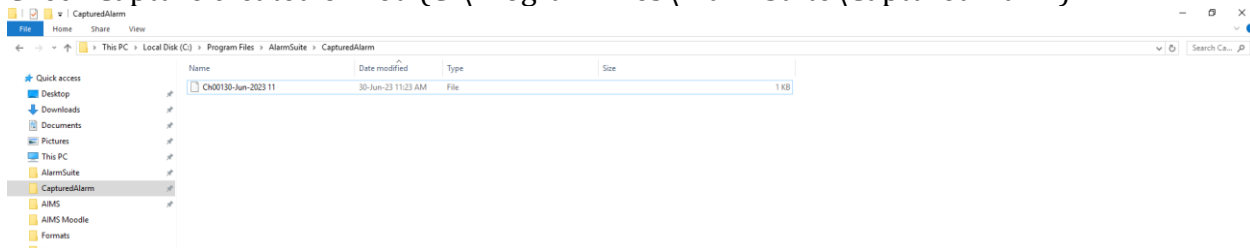
After Clicking on ADD, Below Screen Appear then click on Save



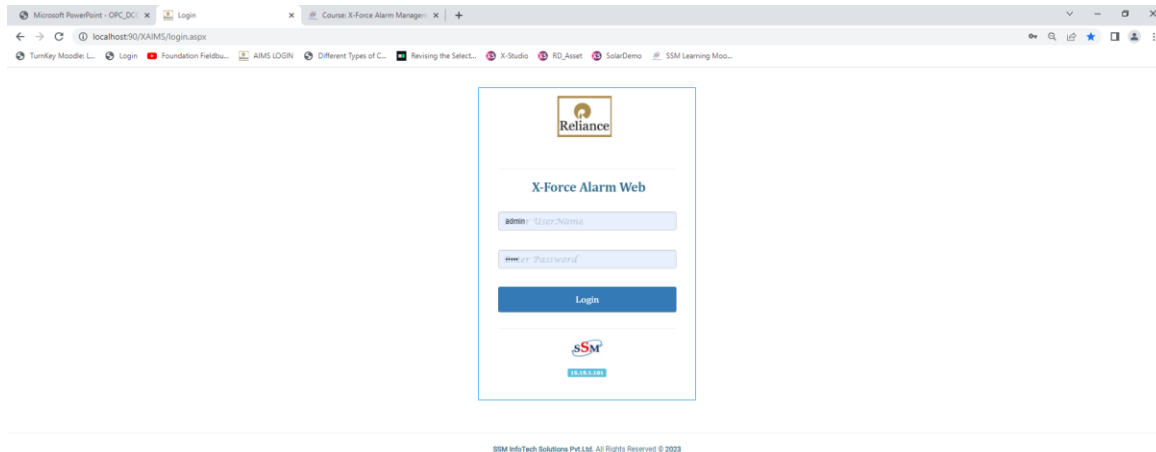
After clicking on Save below message Appear. Click on OK. Application close automatically. Open X-Force OPC AE application.



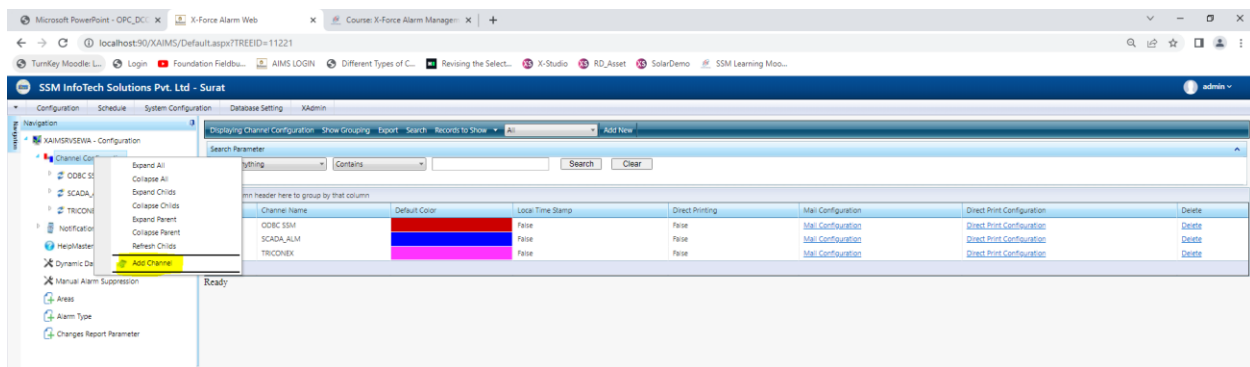
Check Capture created or not. (C:\Program Files\AlarmSuite\CapturedAlarm)



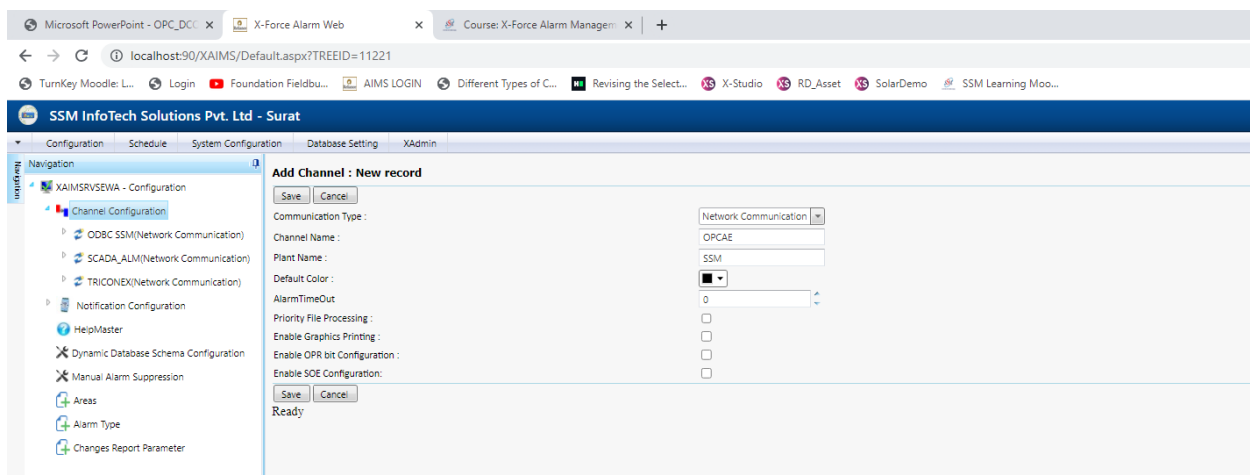
To create new Channel, In X-Force Alarm Web Configuration. Login with credential (User Name and Password)



Click on Configuration, Expand configuration click on channel configuration and right click on it and select **ADD channel**.



Add Details like communication type (Network Communication), Channel name, Plant Name, Set Default Color Then click on save





As Shown Below write local IP, Remote IP, Backup IP, Port No, Select Terminator 1 and 2, Set Minimum Length Data accordingly. And click on save.

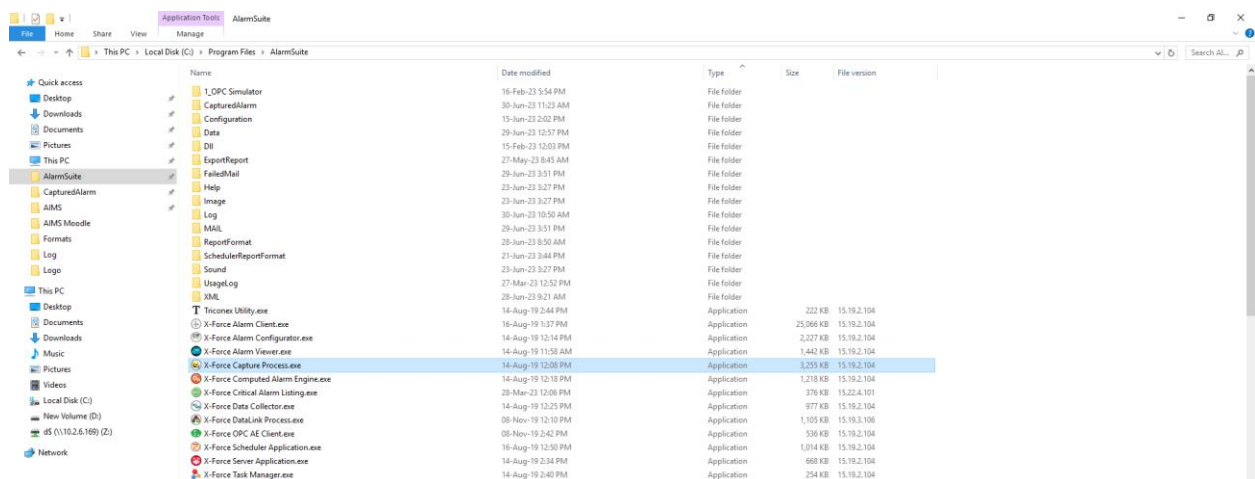
The screenshot shows the 'Network Channel Configuration' form in the X-Force Alarm Manager web application. The form includes fields for Channel Name, Local IP Address, Remote IP Address, Backup IP Address, Port No, Terminator 1, Terminator 2, and Minimum Length. The 'Save' button is visible at the bottom of the form.

Channel is Appear here as shown below.

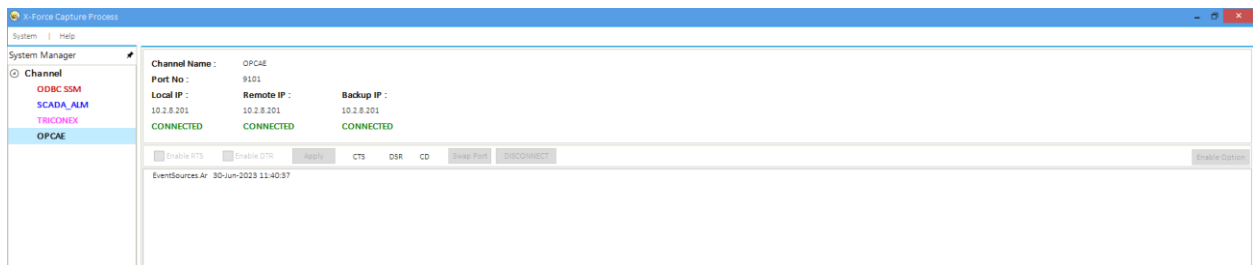
The screenshot shows the 'Channel Configuration' table in the X-Force Alarm Manager web application. The table displays a list of channels with columns for Channel Name, Default Color, Local Time Stamp, Direct Printing, Mail Configuration, Direct Print Configuration, and Delete.

Channel Name	Default Color	Local Time Stamp	Direct Printing	Mail Configuration	Direct Print Configuration	Delete
ODBC SSM	Red	False	False	<a href="#">Mail Configuration</a>	<a href="#">Direct Print Configuration</a>	<a href="#">Delete</a>
SCADA_ALARM	Blue	False	False	<a href="#">Mail Configuration</a>	<a href="#">Direct Print Configuration</a>	<a href="#">Delete</a>
TRICONEX	Green	False	False	<a href="#">Mail Configuration</a>	<a href="#">Direct Print Configuration</a>	<a href="#">Delete</a>
OPC	Yellow	False	False	<a href="#">Mail Configuration</a>	<a href="#">Direct Print Configuration</a>	<a href="#">Delete</a>

Open X-Force Capture Process application.



Click on OPCAE Channel and Check Alarm Lines Coming or not.



Open X-Force DataLink Process application and Restore X-Force DataLink Process application

Click on OPCAE Channel and Check Alarm Lines Coming or not.

