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

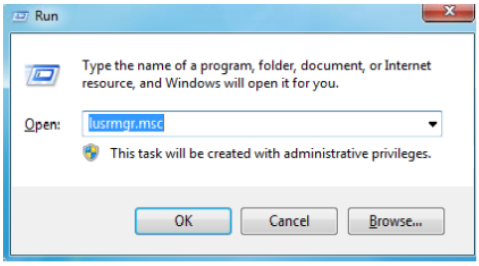
You need to configure DCOM on both server and client machines.

- 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

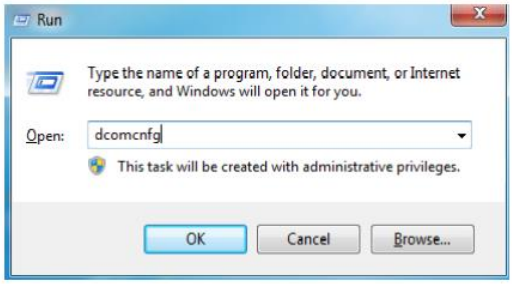
- Configure your computer to be a member of your network (Domain or Workgroup)
  - Workgroup users: Client's logon account and password must be registered on the server PC. And client must log-on by the registered account.
    **OPC Server & client PCs do not need to use the same account and password, though most DOCM 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.

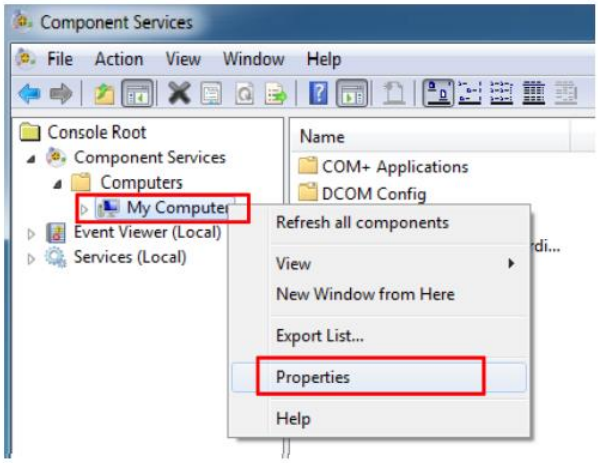
- Add Windows user account
  - In the Start menu, type **"lusrmgr.msc"** and then click OK.
  - Add user account or group and setup **password** for that account.



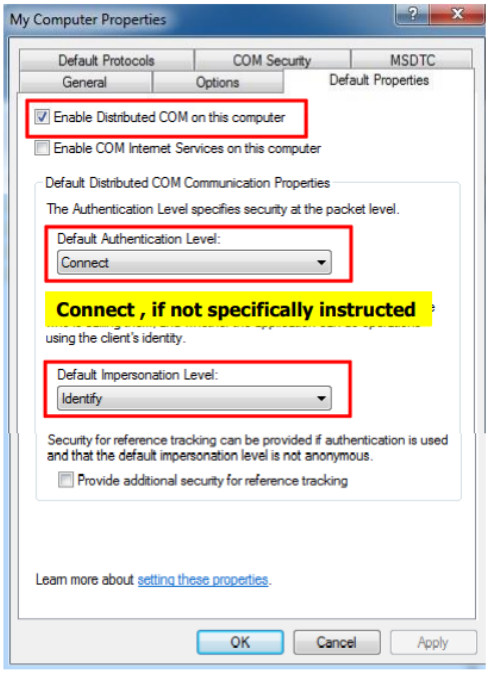
System-wide DCOM Setup

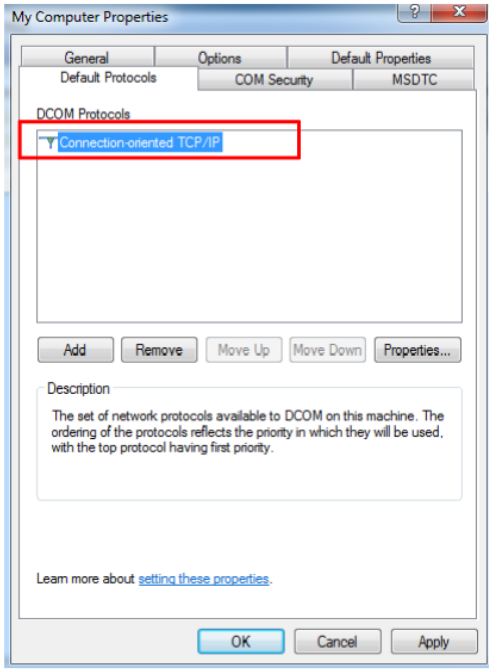
- From the Start menu, type **"dcomcnfg"** in the run command and then click OK
- Alternatively, go to Control Panel > Administrative Tools > Component Services





System-wide DCOM Setup





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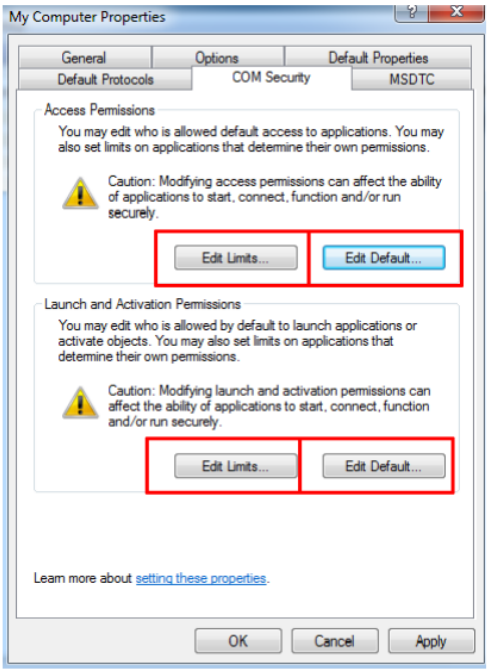
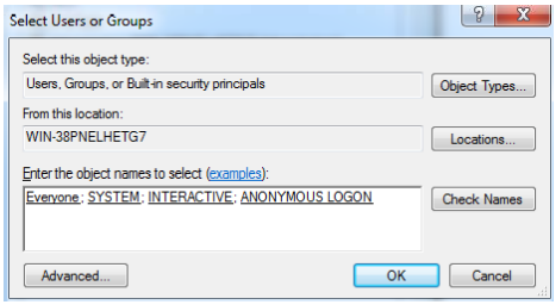


- Give Anonymous Logon, Everyone, Interactive, System accounts (and your specific account) Access Rights.



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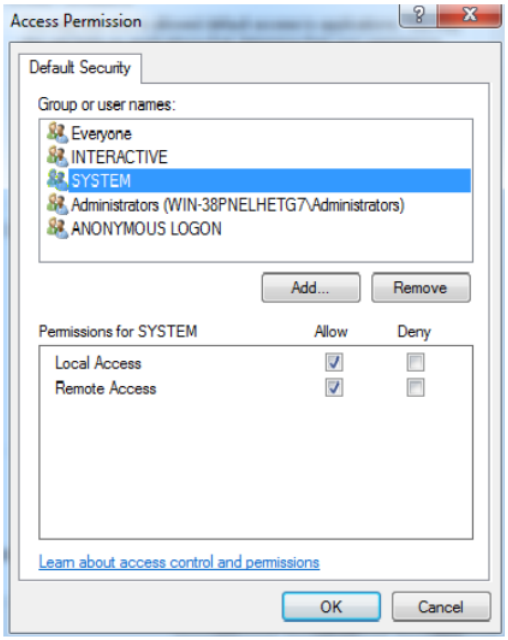

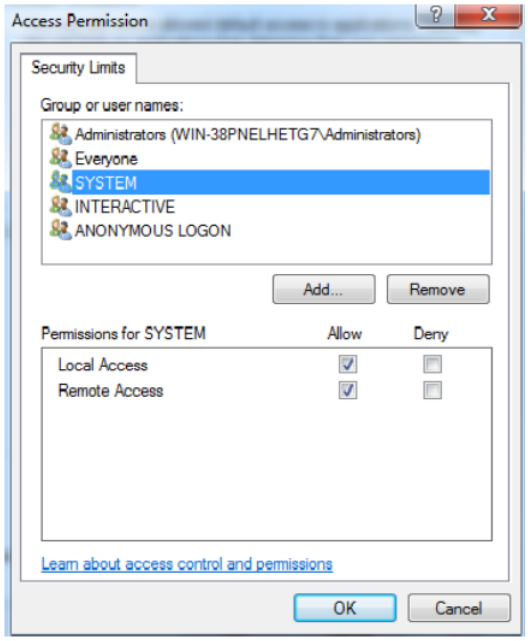

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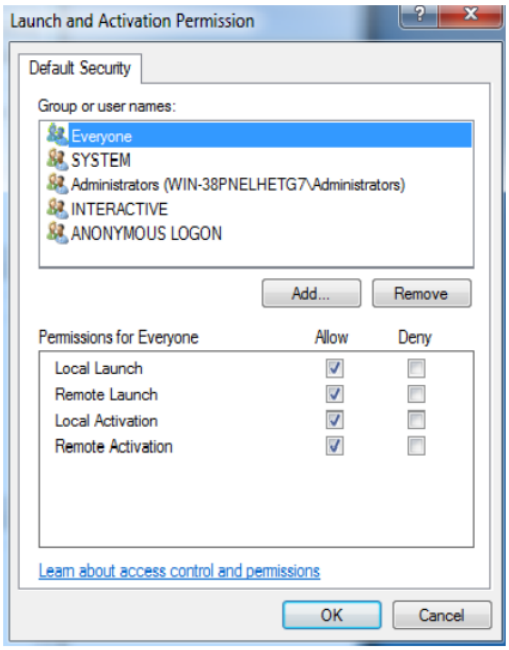
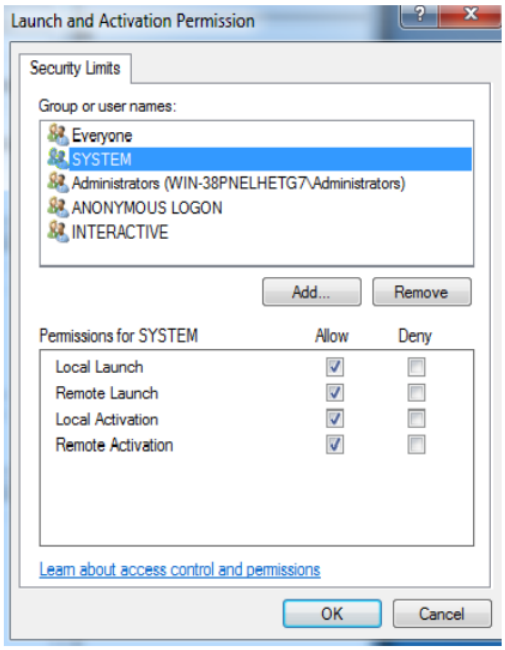
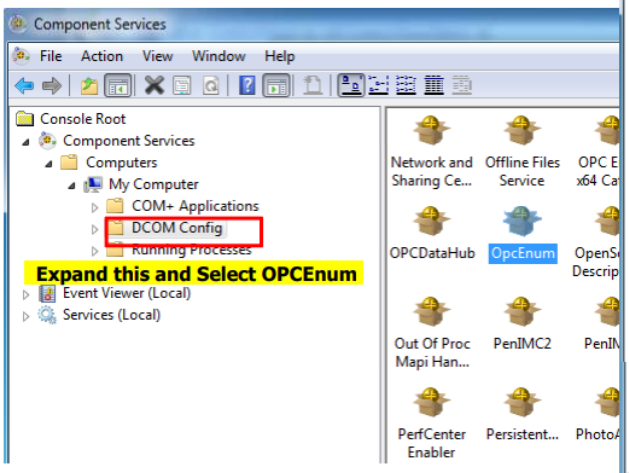
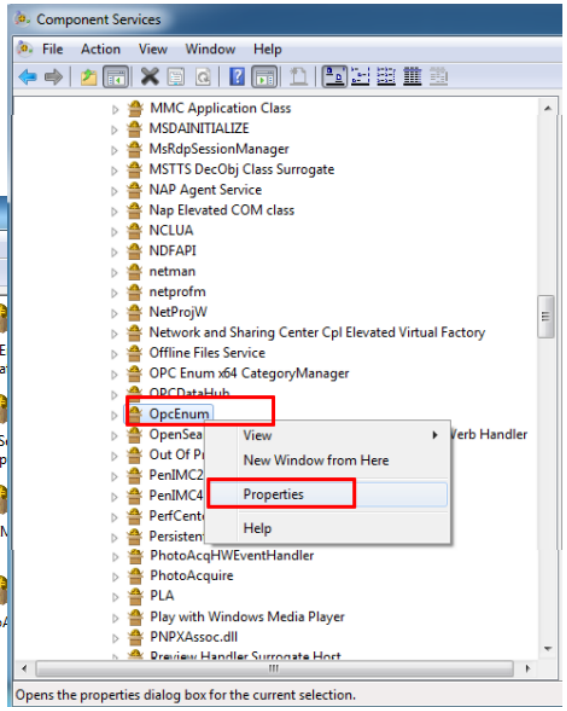




DCOM Setup for OPCEnum

- 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





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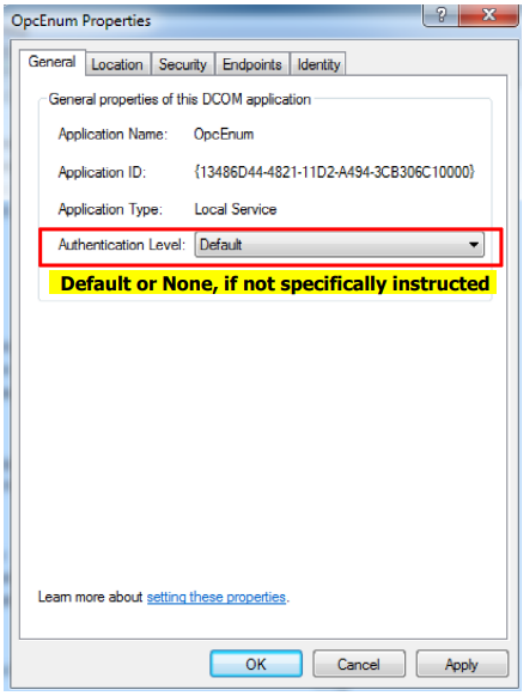

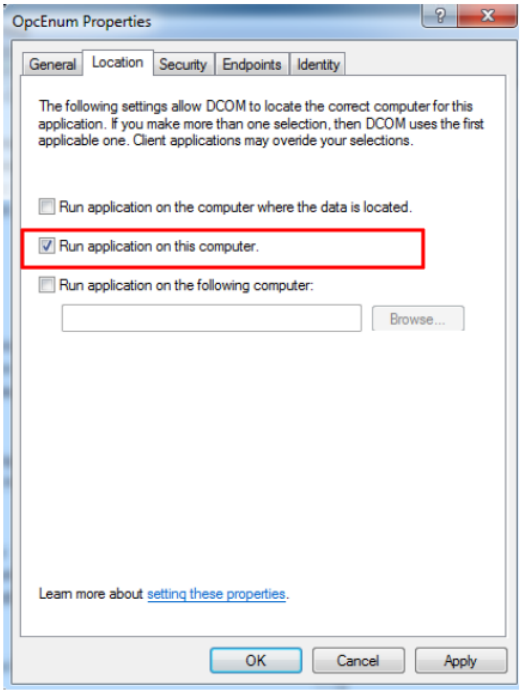

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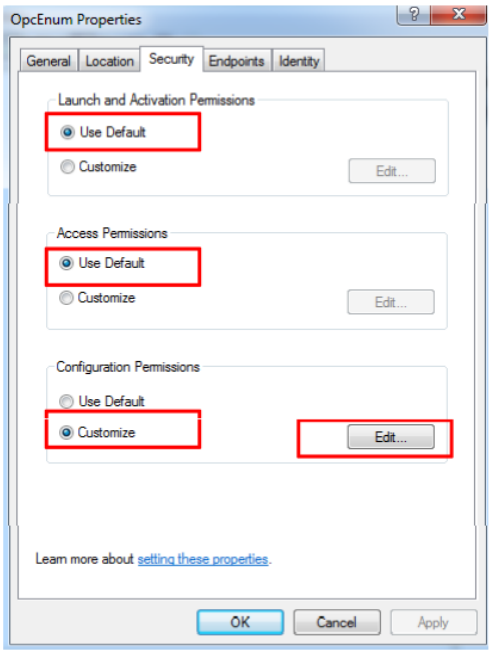

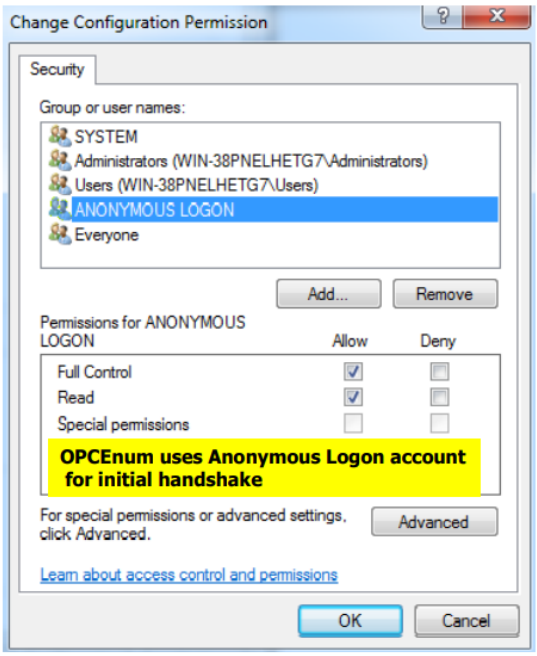

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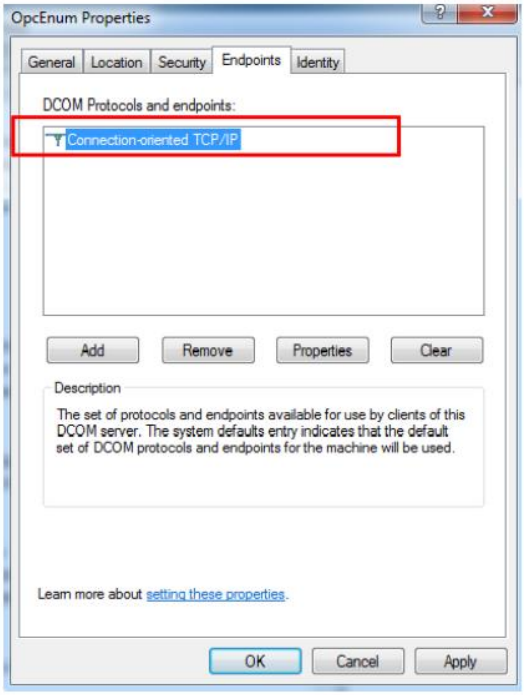
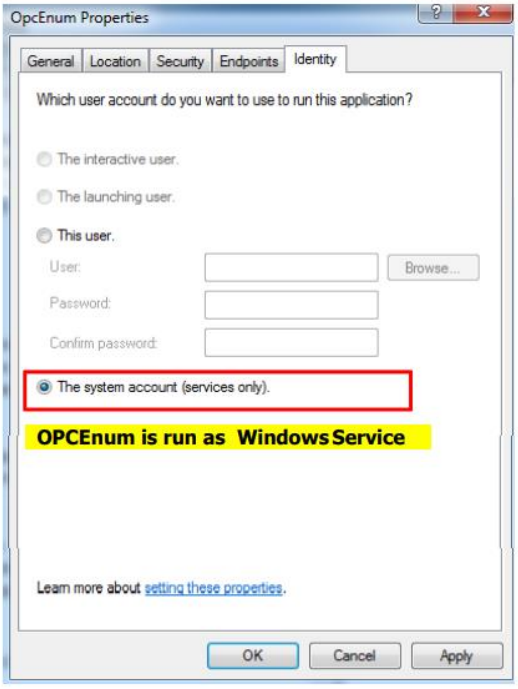
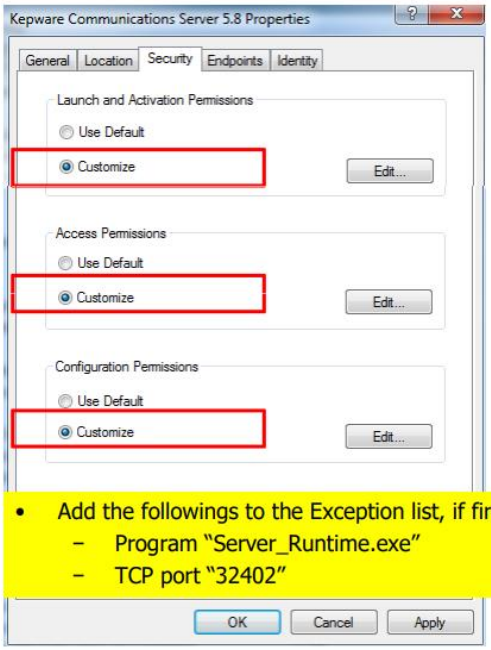
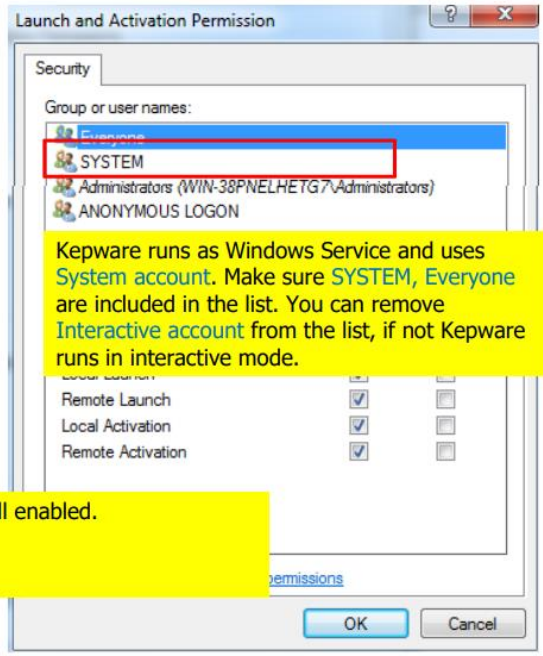




Server-specific DCOM Setup (for Kepware OPC Server)

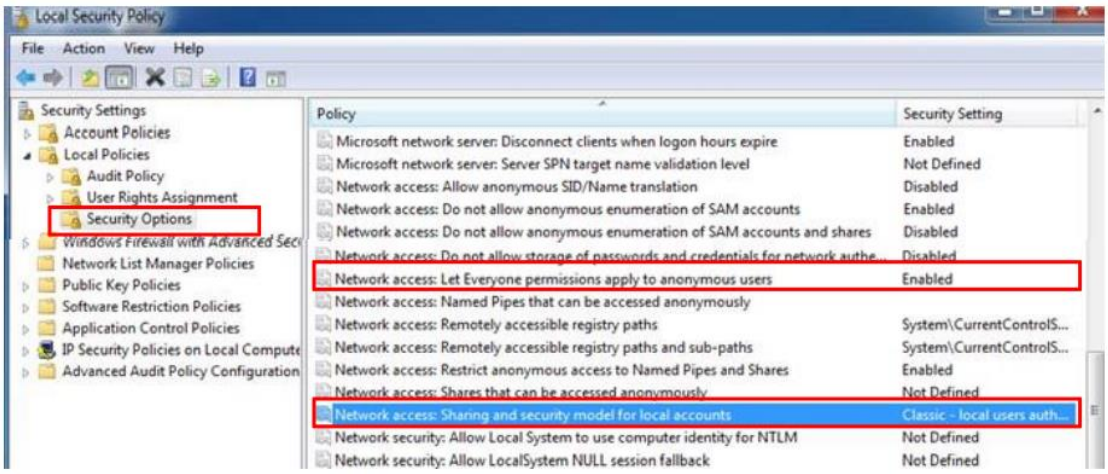




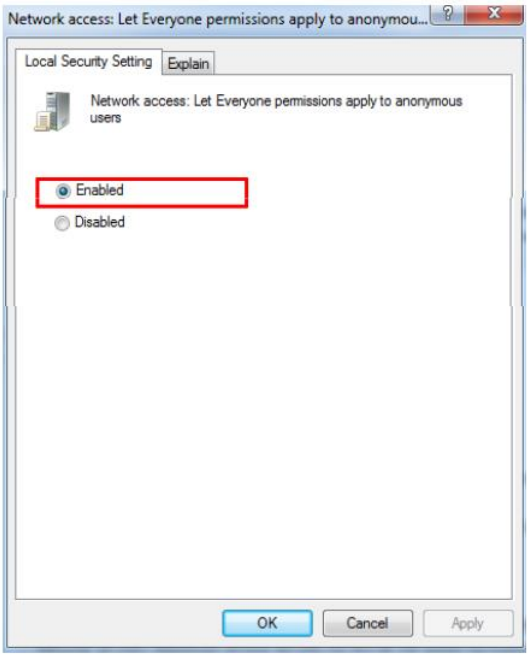
- Add the followings to the Exception list, if firewall enabled.
  - Program "Server_Runtime.exe"
  - TCP port "32402"

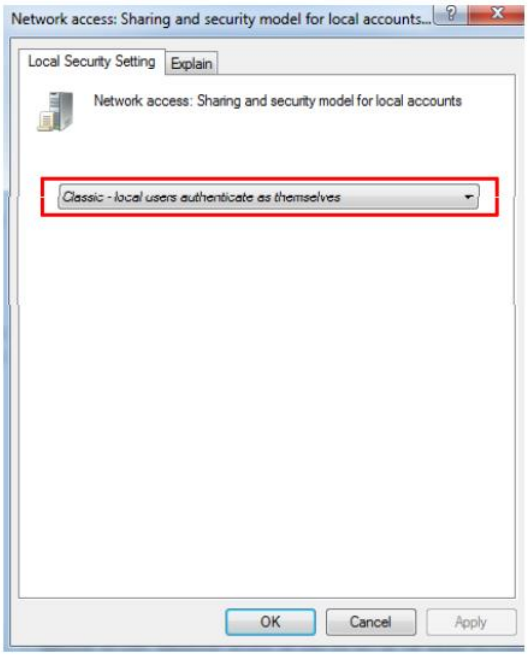
Local Security Policies Setup

- 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



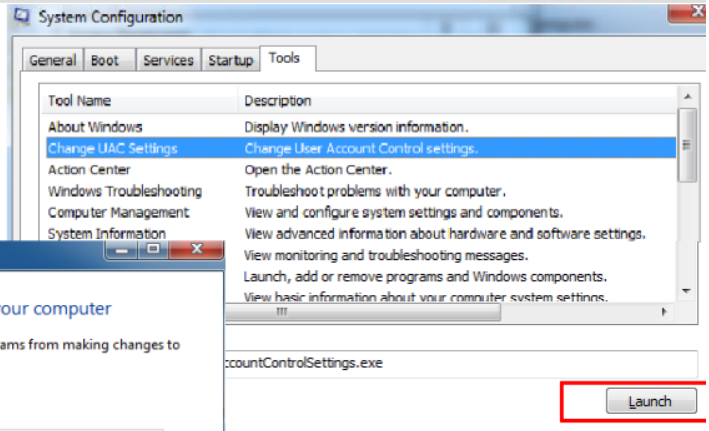


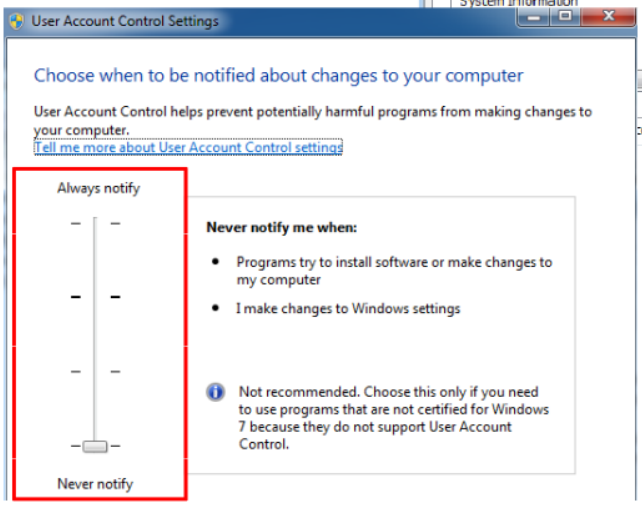
Firewall Setups

- 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