



LS RETAIL

Installing and Activating DCOM for LS Retail

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1 Introduction

This document outlines how to install and configure DCOM for LS Retail. LS Retail offers an online setup. (Many POSs using same database). If the online setup is done with thin clients (Terminal Server Client or Citrix MetaFrame Client) and you want to use OPOS Devices such as Line Display, Cash Drawer etc. you will run into problems because these devices are usually connected to COM ports on the POS and port mapping will not work because some OPOS Drivers do not handle running many instances on the same machine. The solution to this is using DCOM (Distributed Component Object Model). With DCOM LS Retail can instantiate OPOS Controls on the remote machine (the POS) from the Terminal/Citrix Server. However, with more emphasis on security in Windows today (especially Window XP SP2) DCOM configuration has become more difficult and some of these security mechanisms have to be disabled in order for DCOM to work. It is therefore not recommended to use DCOM in an environment that is open to traffic from the internet. LS Retail ehf. takes no responsibility for the changes suggested in this document.

2 Server Installation

The LS Retail Toolbox should be installed on the Terminal/Citrix Server. This will install the OposMap control from LS Retail ehf that handles the DCOM initialization along with other controls and objects needed to run LS Retail.

3 Client Installation

The LS Retail Toolbox should be installed on the Terminal/Citrix Client. This will install and register OPOS Controls (COM objects) for the supported OPOS devices in LS Retail. The DCOM Service must be registered by running the **dcomopos.reg** file which is installed with the toolbox. Typically this file would end up in *C:\Program Files\LS Retail\Toolbox\OPOSControls\Remote*. Double-click on this file and select *yes*. If registry information is not successfully installed you must check your user permission. You must have write access to the registry.

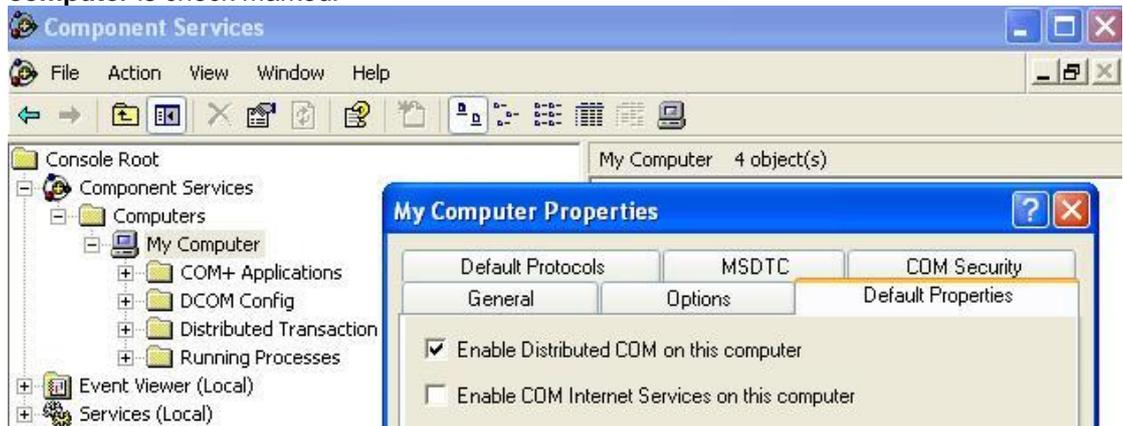
4 Server Configuration (2000 or 2003)

Run DCOM Configuration (Start->Run **dcomcnfg**). Select the Default Properties tab and make sure that **Enable Distributed COM** on this computer is check marked.

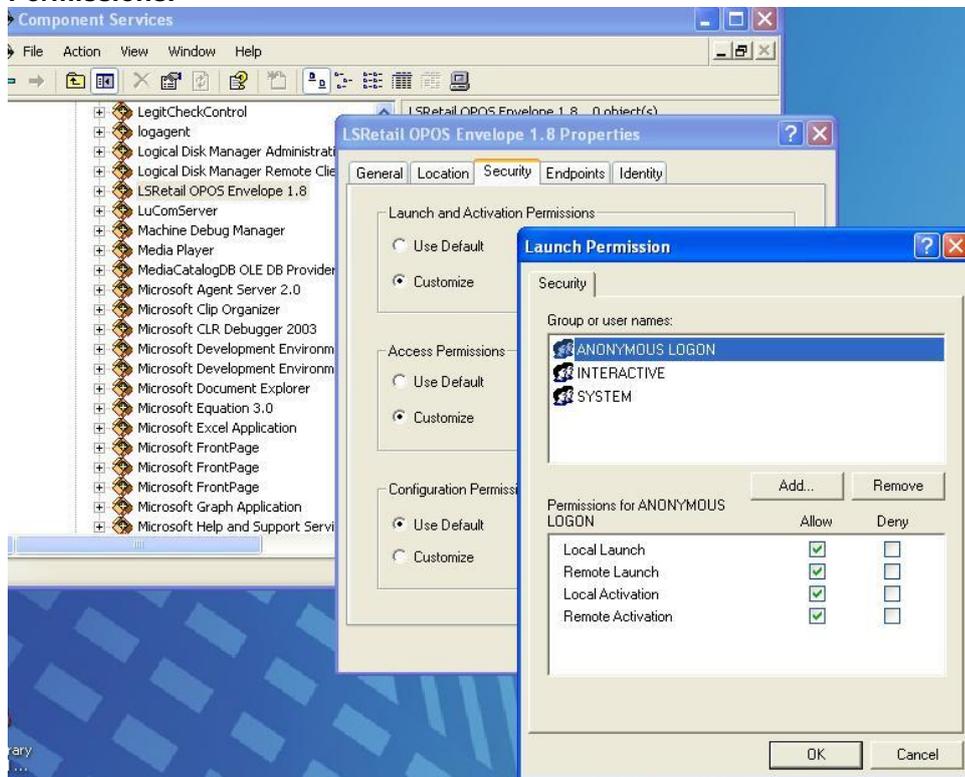
5 Client Configuration

5.1 Windows XP (With Service Pack2 and security updates)

- 1) Run DCOM Configuration (Start->Run **dcomcnfg**). Find **My Computer** under **Component Services** -> **Computers** and open the properties dialog. Select the Default Properties tab and make sure that **Enable Distributed COM on this computer** is check marked.

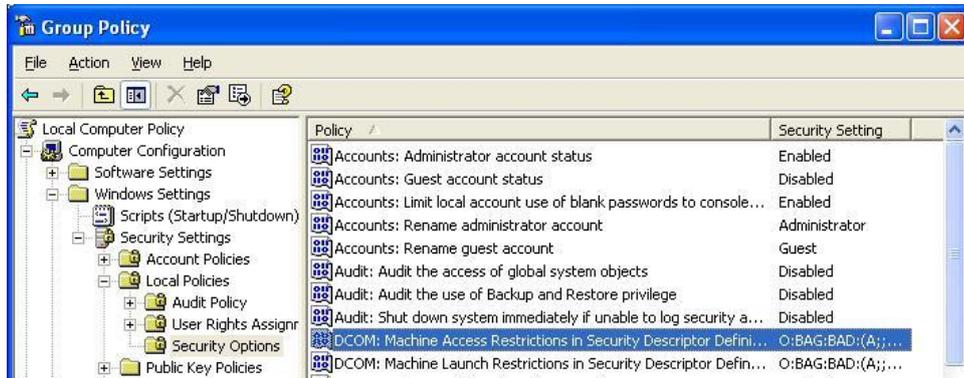


- 2) Find the **LSRetail OPOS Envelope 1.8** in the DCOM Config folder and open properties dialog. Select the Security tab and edit the **Launch and Activation Permissions**.

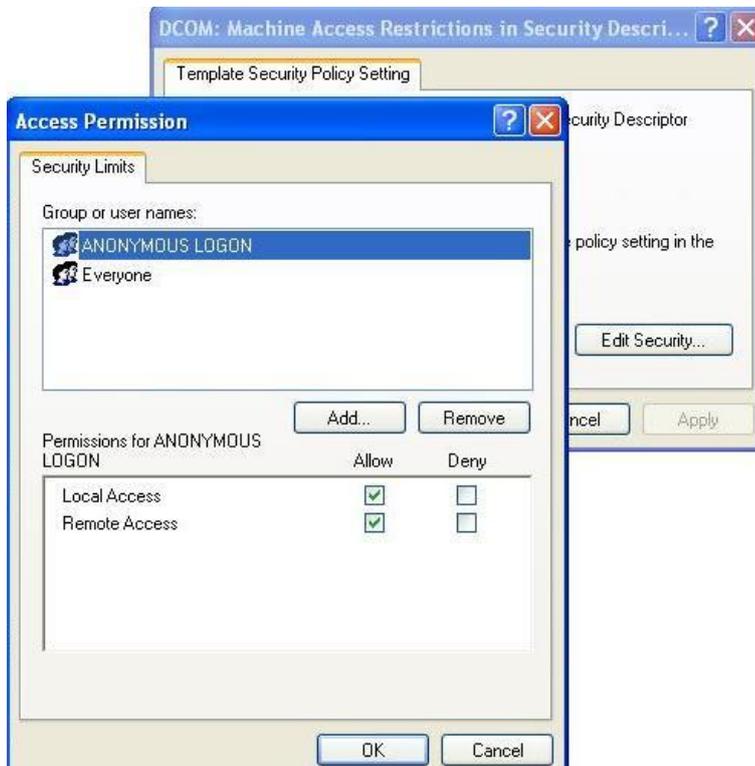


Add **ANONYMOUS LOGON** and give all access. **INTERACTIVE** and **SYSTEM** should have local launch and local activation.

- 3) Change the Local Policy. *XP Service Pack 2* and *XP Security Updates* have tightened the access to DCOM Servers.
 Start -> Run **gpedit.msc**

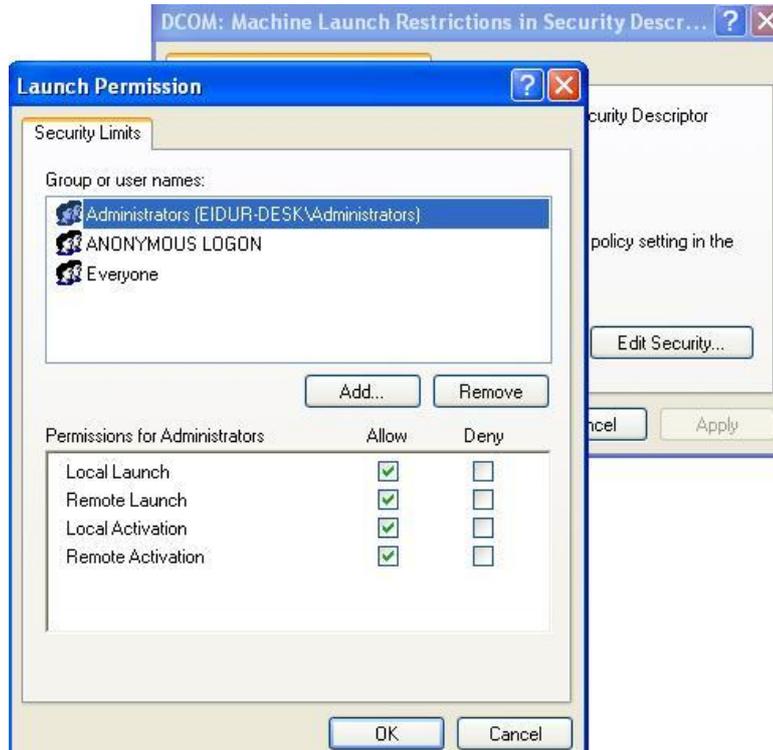


Open **Computer Configuration -> Windows Settings -> Security Settings -> Local Policies -> Security Options**.
 Open (double click) the **DCOM: Machine Access Restrictions in Security Descriptor Language (SDDL) syntax**.



Give **ANONIMOUS LOGON** and **Everyone** all access.

Open (double click) the “**DCOM: Machine Launch Restrictions in Security Descriptor Language (SDDL) syntax**”.



Give **ANONIMOUS LOGON** all access and **Everyone** access to Local Launch and Local Activation.

- 4) If the POS belongs to a workgroup instead of a domain, make sure that it does not use simple file sharing.
Open **Windows Explorer** or double click on **My Computer**, click **Tools**, then go to **Folder Options**, click **View** and uncheck **Use simple file sharing (recommended)** in advanced settings.
- 5) If you are using workgroups or you are crossing domain – for example POS is in a workgroup and Server is on a domain etc. – you should create a local user identical to the user used to logon to the server. This user must have the same username and password as the user used to log on to the server, even if that user is a domain user. You can add users by running **compmgmt.msc** from the run option in start menu.



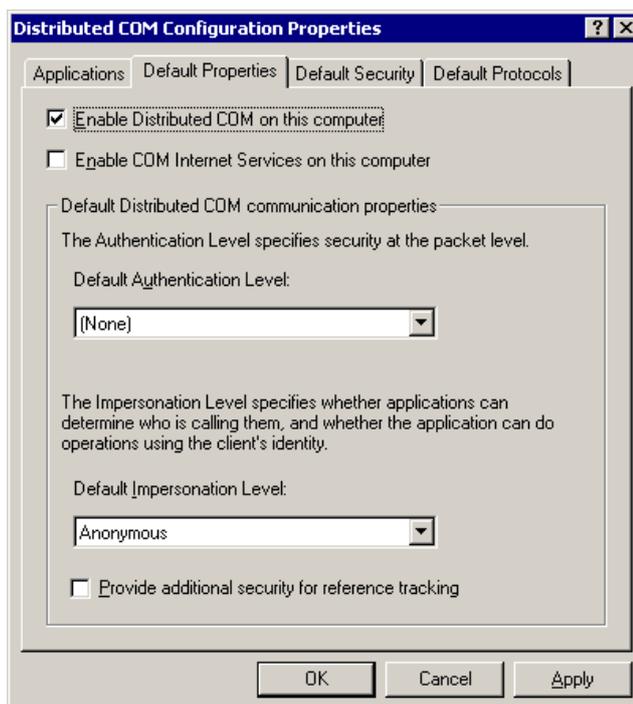
Open **Local Users and Groups** and right-click on the **Users** folder and **New User...**

- 6) Firewalls should be turned off while configuring DCOM to work on Windows XP. If you are using the standard windows XP firewall you can turn it off by opening **Control Panel -> Windows Firewall** and select **Off**.

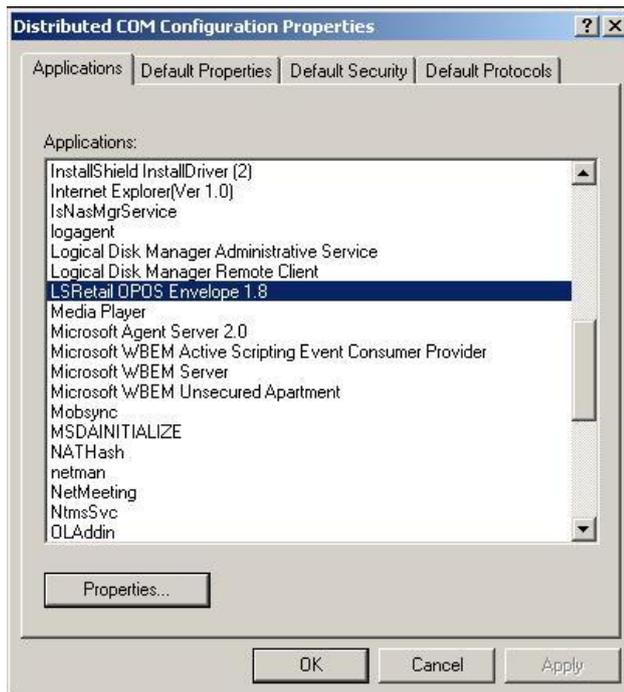


5.2 Windows 2000

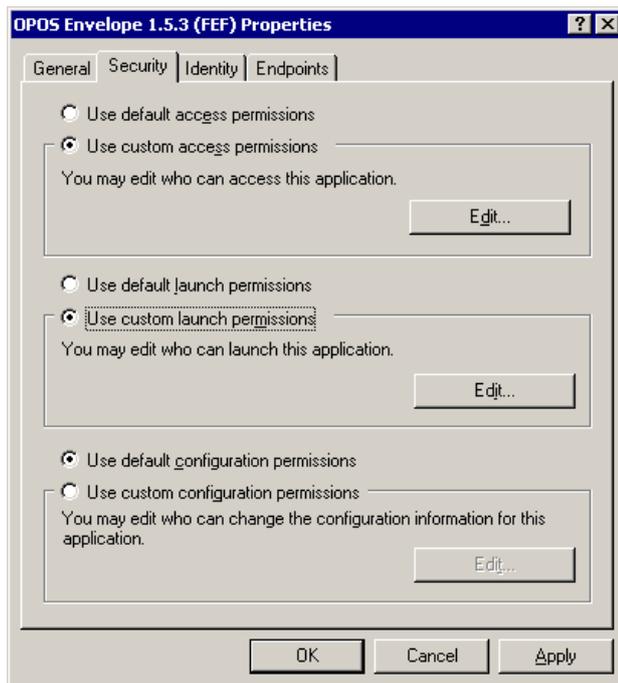
- 1) Run DCOM Configuration (Start->Run **dcomcnfg**).
- 2) On the **Default Properties** tab, activate DCOM by selecting **Enable distributed COM on this computer**.



- 3) On the Applications tab, locate the **LSRetail OPOS Envelope 1.8** icon, (see below).



- 4) Press the Properties button and select the Security tab.



- 5) Select **Use custom access permissions** and then press the Edit Button to add **Everyone** and **Domain Users** to the list of those with access to this DCOM object.
- 6) Select **Use custom launch permissions** and then press the Edit Button to add **Everyone** and **Domain Users** to the list of those with access to this DCOM object.

- 7) If you are using workgroups or you are crossing DOMAIN. E.g. POS is in a WORKGROUP and Server is on a DOMAIN etc. You have to create a local user identical to the user used to logon to the server. This user must have the same username and password as the user used to log on to the server, even if that user is a domain user.
You can add users by running “compmgmt.msc” from the run option in start menu.



Open **Local Users and Groups** and right click on the **Users** folder and **New User...**

6 Troubleshooting

Because of the complexity in Windows Client Server communication regarding roles, permissions etc. there are many things that can cause DCOM not to work. Especially in Windows XP(Sp2). The Configuration in earlier chapters should cover the most common cases. There is however a possibility that you have gone through the configuration above but your DCOM Solution is still not working. Here are some of the know issues.

6.1 Use Local System account for the RPC Service

Your hardware is not compatible to new Windows XP Security Updates. This is a strange error that happens on some PC and seems to be hardware related. The RPC (Remote Procedure Call) Service on the client cannot be contacted by the server and therefore DCOM cannot be activated.

Solution:

Change the “**Log On As**” for the RPC Service to “**Local System**”.

- a) Run “services.msc”
- b) Find the “Remote Procedure Call (RPC)” Service and open the properties dialog.
- c) Select the “Log On” tab, click on the “Local System Account” and select OK.
- d) Restart the computer.

6.2 Enable Dynamic Client Name in Citrix Client Configuration

You citrix client is not configured to use Dynamic Client Name. If you specify a Client Name in the ICA Setting in Citrix Client Config the server might not be able to find the client (POS) to activate the DCOM Server.

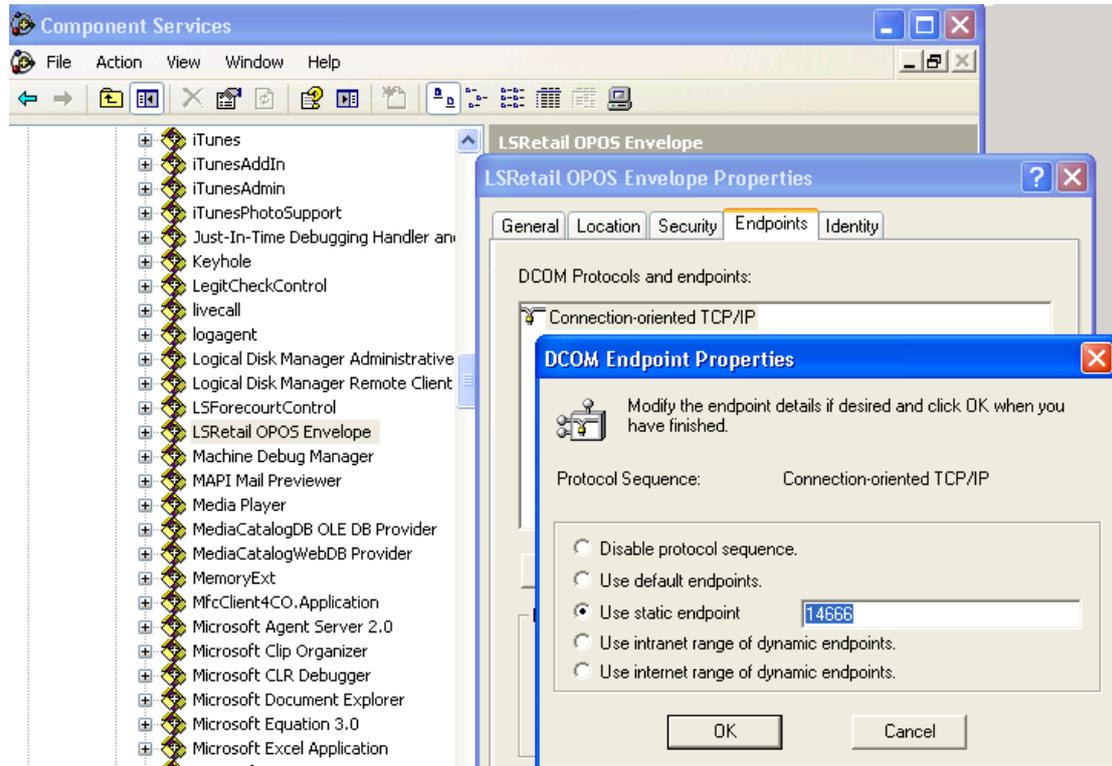
Solution:

Enable Dynamic Client Name in ICA Setting in Citrix Client Configuration.

6.3 Use Static Endpoint for the DCOM application

If you are having problems with firewalls you might have specify a static endpoint (port) for the LS Retail OPOS Envelope DCOM application.

This is done by opening properties dialog for the „LSRetail OPOS Envelope“ in the DCOMCNFG console. Select the „Endpoints“ tab and then properties button for the „Connection-oriented TCP/IP“ protocol. Then you can select to Use static endpoint.



In this example the port number is set to 14666 but this can be basically any available port number.

If you run into further problems with DCOM that are not listed here please send detailed information on your problem to support@lsretail.com