

## Physical Desktop as a Thin Client

### 1. What it can do?

A thin client is a stateless, fanless desktop terminal that has no hard drive. Thin clients provide businesses a cost-effective way to access virtual desktop infrastructures (VDI). To simplify the operation steps to access VDI, some features are embedded in thin clients. For example,

- Launch the RDP client default
- Hide desktop/task bar
- Disable system options to prevent user using other applications
- And so on

This application will convert physical desktop as a thin client. It will restrict end-users' behaviors when users log into physical desktops. After user logged in, Horizon view client will be launched automatically and other applications are forbidden to switch. Physical desktop will log off automatically once user exit Horizon view clients.(see Fig.1).

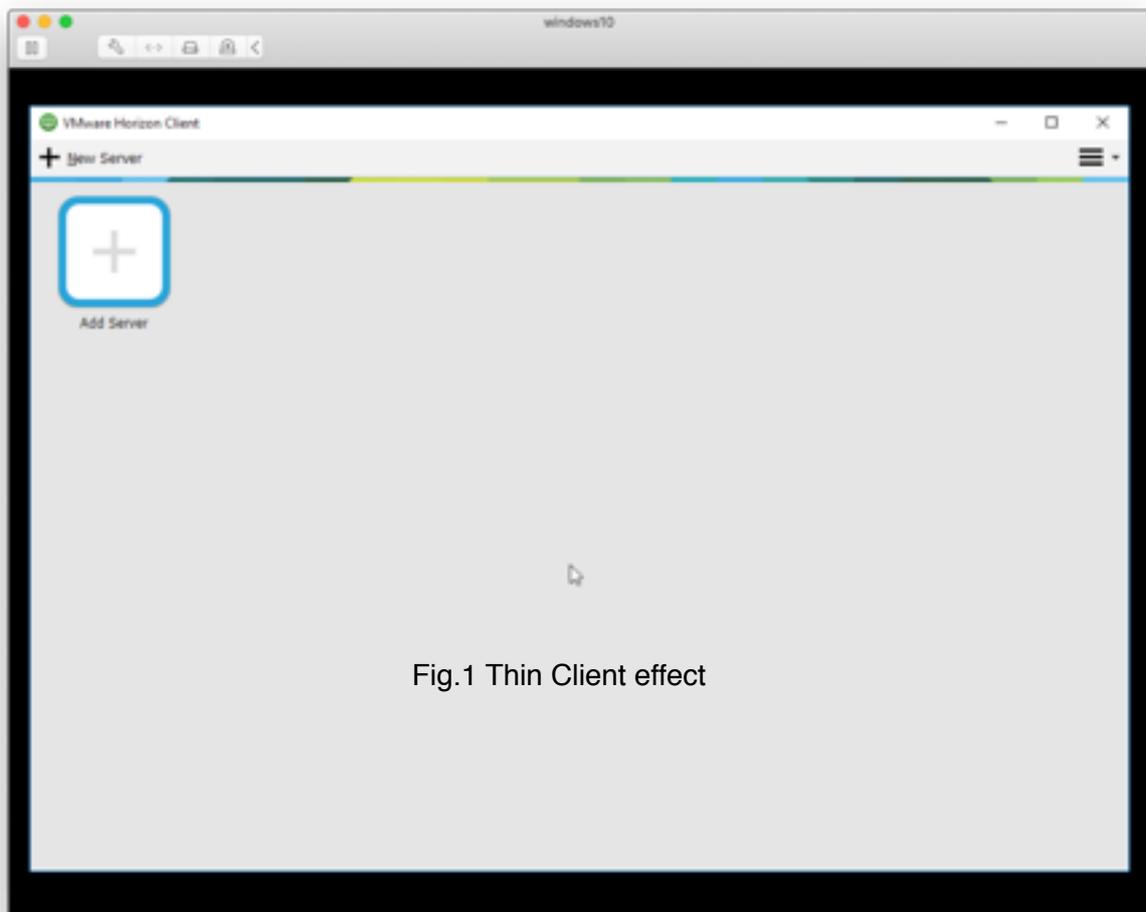


Fig.1 Thin Client effect

### 2. How to use it?

There are some requirements before we can use it:

- 1) This program should be run in the active directory(AD) server with administrator permissions.
- 2) Group policy management console(GPMC) should be installed on the AD server, it is installed by default when installing AD server.

- 3) Make sure that all domain machines can access the sharing folder \\<domain>\SYSVOL, and domain users have permissions to read it. The sharing folder is created by default when installing AD server.
- 4) .NET 4.5 framework should be installed on the AD server.

There are two setting sections in this program's main form(see Fig.2), the domain settings help you select users or groups that you want to restrict, and the program settings provide more advanced options.

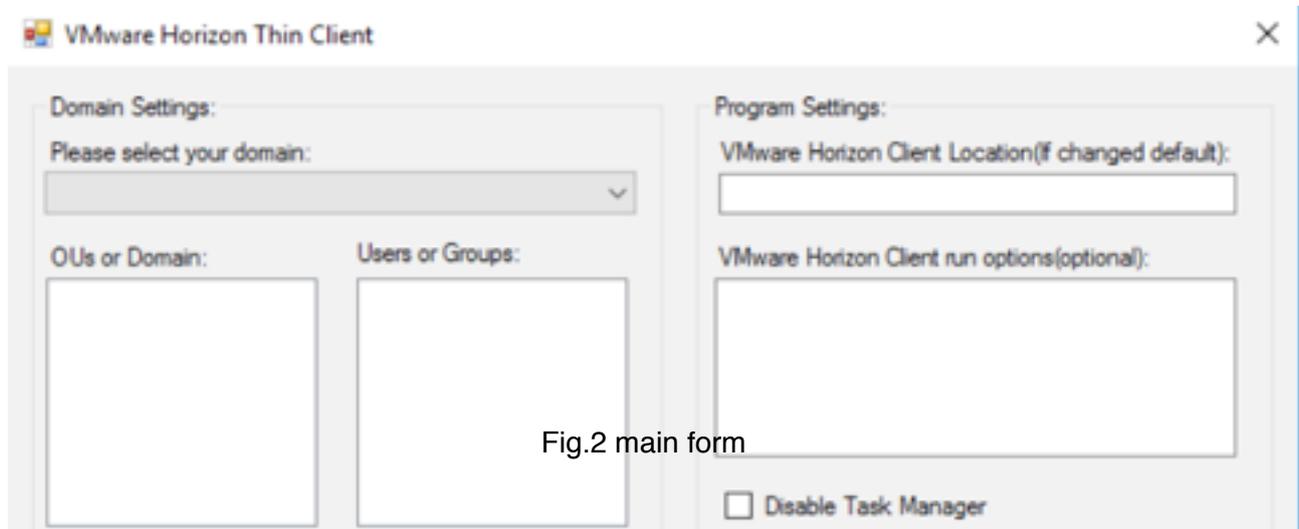


Fig.2 main form

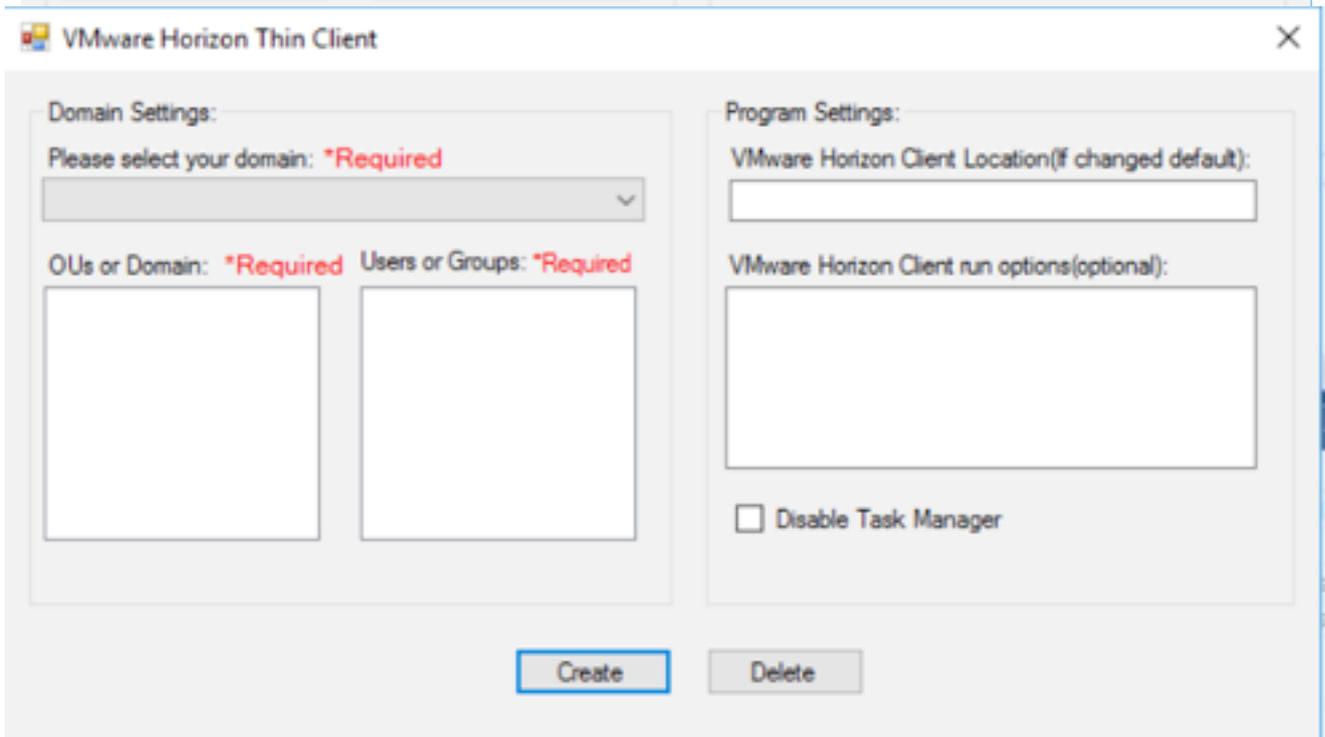


Fig.3 Exist GPO in this domain

Domain Settings:

All domain settings are required, the program will hint you in main form and prevent the creation(see Fig.3).

- 1) "please select your domain": All domains in the AD are listed here. When a domain is selected,

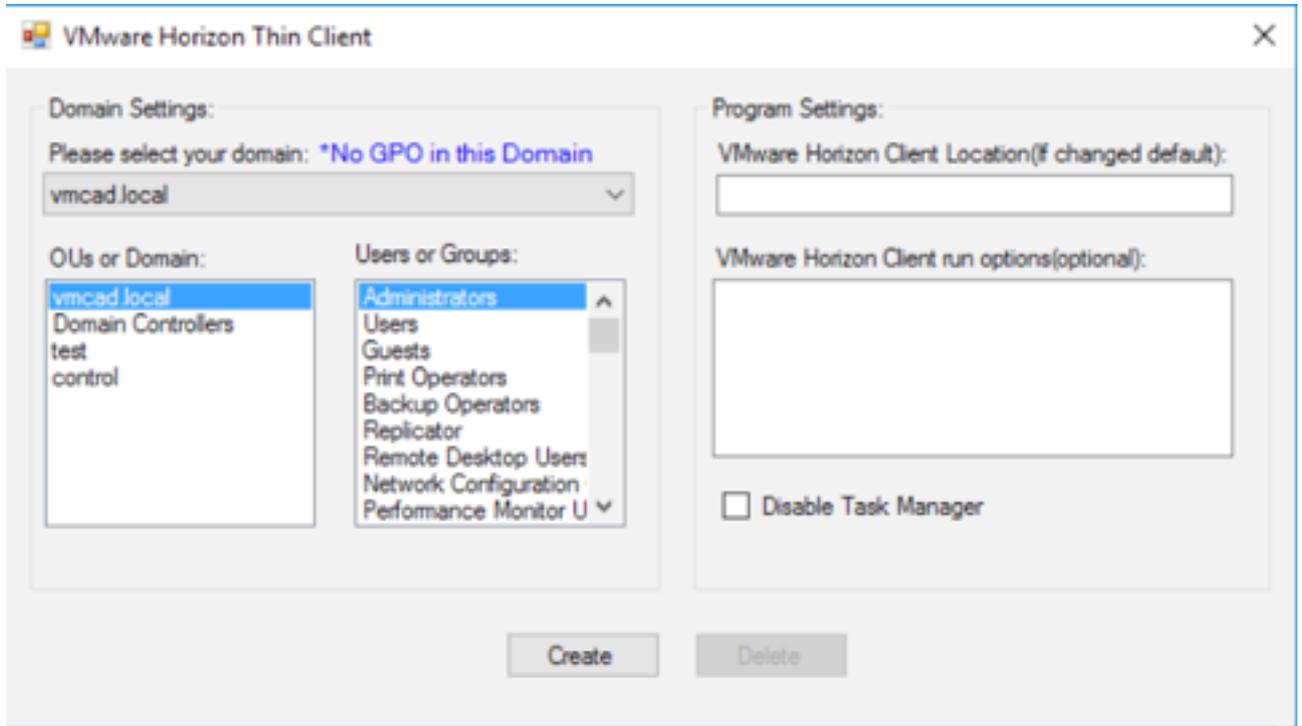


Fig.4 No GPO in this domain

the program prompts you that whether there is an existing GPO created by the

program(see Fig.4, Fig.5).

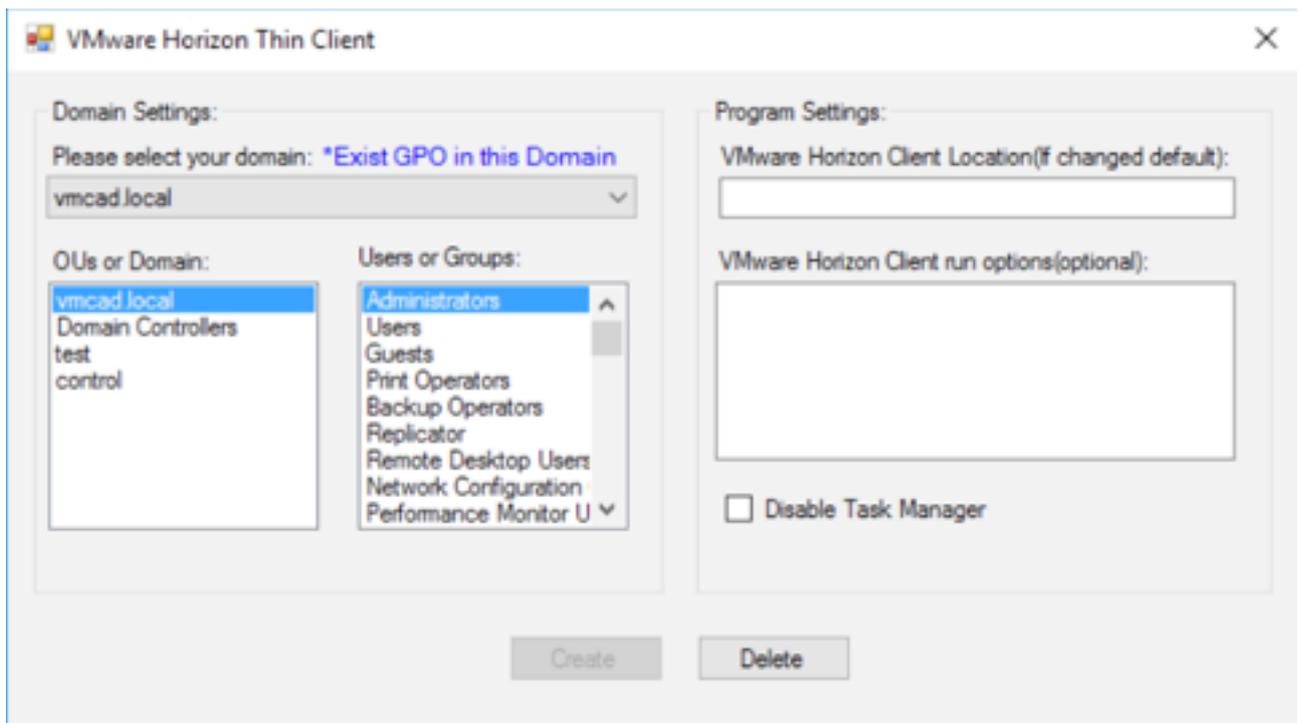


Fig.5 Required settings

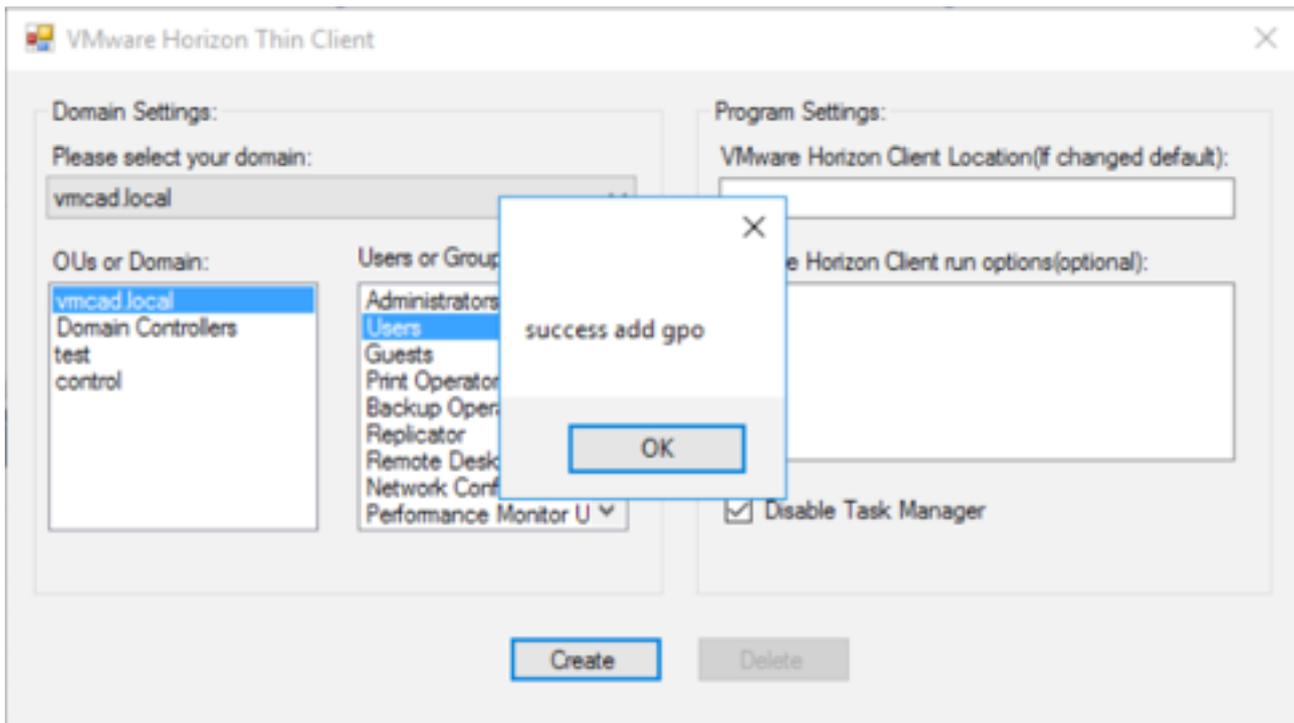


Fig.6 Message: Add GPO successfully

- 2) OUs or Domain: OUs and Domain of selected domain will be shown here. Users or groups are listed on the right which is decided by selected OUs or domain.
- 3) Users or Groups: The GPO will be apply to selected users and groups.

#### Program Settings:

1) VMware Horizon Client location: The Horizon view client has its default installation path. On 32-bit systems, the path is C:\Program Files\VMware\VMware Horizon View Client\vmware-view.exe.

On 64-bit systems, the path is C:\Program Files (x86)\VMware\VMware Horizon View Client\vmware-view.exe.

If the VMware Horizon view Client is an older version or the installation location is changed, Please complete this setting.

2) VMware Horizon Client run options: Those options will be passed to Horizon view client, check the following link for more information.

<https://docs.vmware.com/en/VMware-Horizon-Client-for-Windows/4.6/com.vmware.horizon.windows-client-46-install/GUID-B9209C56-A6DE-4FAA-BE21-A4244E201D44.html>

3) Disable Task Manager: Check this options to disable task manager when users log in, shortcut keys will be disabled too.

Create button:

The program will create new GPO in this domain and you will be informed that the GPO is successfully created.(see Fig.6)

Delete button:

The program will delete the GPO created by the program and you will be informed that the GPO is successfully deleted(see Fig.7).

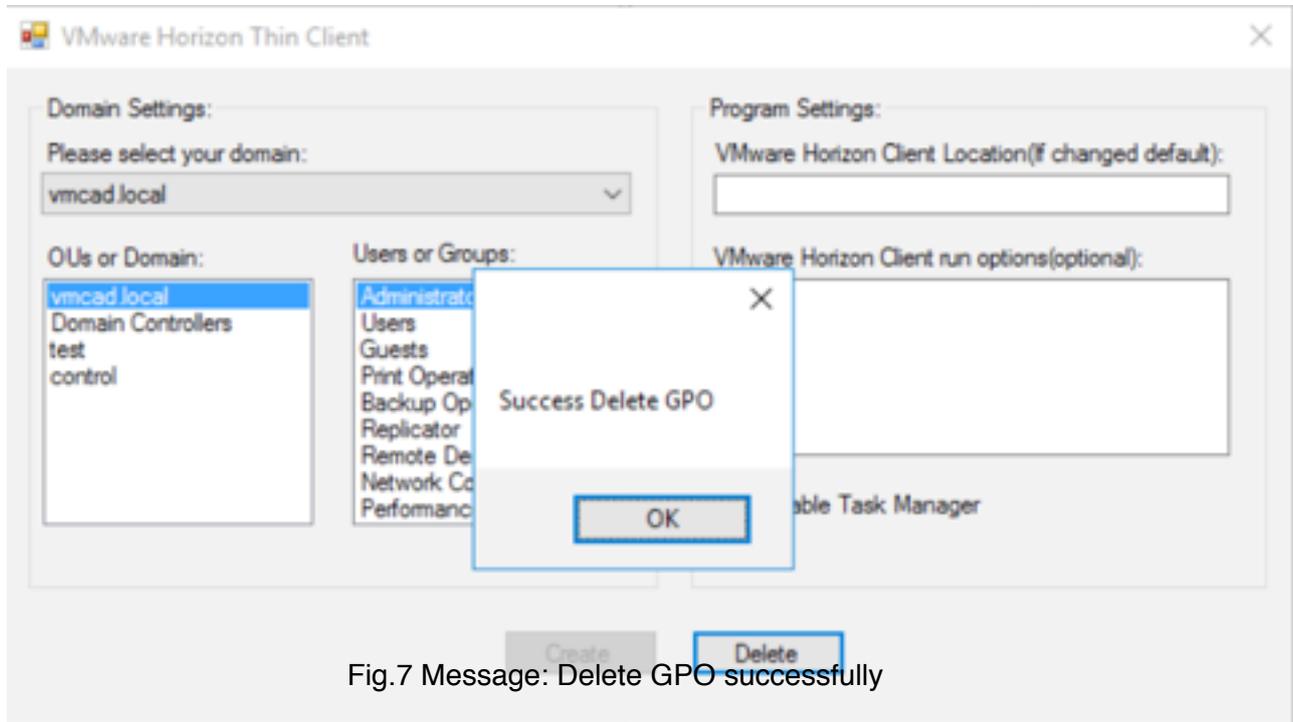


Fig.7 Message: Delete GPO successfully

### 3. Technical details

This section will describe the technical details about this tool.

This tool will create a GPO named "Thin Client Group Policy" for the selected domain and you can use group policy management console(GPMC) to check it(see Fig.7).

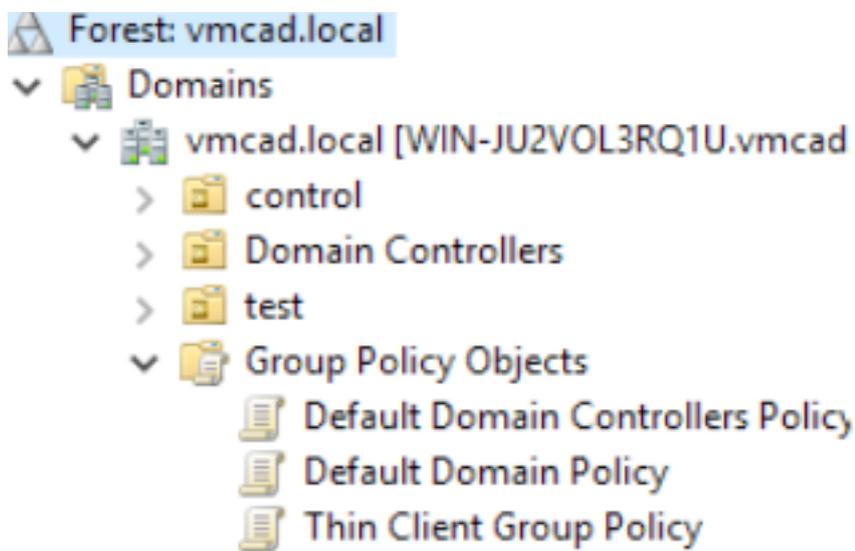


Fig.8 the program creates a GPO in selected domain

The GPO includes 3 policies and you can find it in the settings tab in GPMC:

1)Policies > Administrator Templates > System > custom user interface

This program specifies a bat script as user interface, and the bat is placed in the shared folder \<selected domain>\SYSVOL. The bat script file start VMware Horizon View Client and keep it run silently. The bat also log off the system once the VMware Horizon View Client is closed.

2)Policies > Administrator Templates > System > ctrl + alt + del options > Remove Task Manger

This policy disables task manager and corresponding shortcut keys.

3)Policies > Administrator Template > Windows Components > Internet Explorer > Internet Control Panel > Security page > site to zone assignment list

This policy adds the shared folder's location to system's internet trust zone, and this policy prevents insecurity warning when executing the logon bat script .

The program records some information in the registry. All registry values that is created by the program are located within the registry key

HKEY\_LOCAL\_MACHINE\SOFTWARE\VMware\_horizon\_thin\_client. The program use those records to find GPO and bat script file when deleting GPO in appointed domain.