USING ZENWORKS TO DISTRIBUTE THE MICROSOFT WINDOWS INSTALLER

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Brief Overview:
The new Microsoft Windows Installer that ships with Office 2000 (and an integral part of the Windows 2000 OS) is quite a change from the standard setup routines of old. It incorporates a new design based on a relational database that requires a product to identify itself via three major pieces: the product, the features, and the components. Each piece is considered a transaction with the Windows Installer service to identify all files, configurations, system dependencies, setup properties, etc.
In addition, since the Windows Installer is actually a system account enabled service on Windows NT 4.0, it has the ability to distribute Windows Installer compliant applications without a user needing elevated (Administrator) privileges. However, the Windows Installer itself requires elevated privileges to be installed and, by default, does not turn on or create all the registry keys needed to enable elevated privileges for applications. This is where ZENworks comes into the picture.
Using ZENworks, you can push out the Windows Installer by itself prior to installing any Windows Installer compliant applications (ex. Office 2000). In addition, you can use ZENworks application objects to toggle the registry keys on and off to enable and disable elevated privileges as desired on your target workstations.
Using the two together can have some real advantages and compliment each other quite well. In some cases, it is the best solution since ZENworks can only give an application's native setup elevated privileges during the initial installation, and not after a subsequent reboot (which is required for some Office 2000 configurations). Granted, you could use the Dynamic Local User policy to grant the user Administrator group membership temporarily to get around this, but the user is able to do anything during this period of time while your babysitting it (not necessarily a secure method).

Ideal Plan of Attack (but not required):
If you plan on using the following instructions in this document to install Office 2000, the ideal configuration is as follows:

1. Configure an IEAK configuration (Internet Explorer Administration Kit) of Internet Explorer 5 (make sure the Windows Desktop Update is installed) with the desired configuration for your environment on a network server or web server. You will want to push it out to your users BEFORE installing Office 2000. (use the ZENworks Dynamic Local User policy to grant Administrator group membership for the installation).
   Many components of Office 2000 require IE 5 w/Windows Desktop Update to be installed. In addition, there are many known bugs, quirks and issues with the IEAK that is built into Office 2000 and it is not recommended to even use it at all.

This is especially true if you plan on using such features as “Install on First Use” and “Automatic Detect and Repair” of Office 2000.

2. Push out the Microsoft Windows Installer (documented below).
3. Push out the registry changes to turn on elevated privileges (MSI On: documented below).
4. Push out Office 2000 via ZENworks (elevated privileges will not be an issue). It is highly recommended to setup Office 2000 on a network server along with any transforms files to automate the installation completely.
   Note: This step will not work without the Windows Installer and the registry key turned on before-hand.
5. After a successful distribution, push out the registry changes to turn off elevated privileges (MSI Off: documented below).

Notes:
- For more technical information on Office 2000, see the Understanding the Microsoft Office 2000 Installer document at zenworksMASTER.com and Novell’s ZENworks Cool Solutions article on how to distribute Office 2000 with ZENworks.
- IEAK is a free program available from Microsoft at this link.
- Elevated privileges are used by the Windows Installer service and not granted to the user. So, the user will not have any additional rights to the local NT workstation.

Recommended Pre-requisites:

- ZENworks 2.0
- Workstation must be imported
- Microsoft Windows Installer. It located in the \MSI directory of the Office 2000 CD.
  - Instmsiw.exe (for Windows NT)
  - Instmsi.exe (for Windows 9x)
- The latest ZENworks Client installed on all target workstations.
- NWAdmin32 v5.1.2 or greater with the proper ZENworks v2.0 snapins.

Windows Installer Push:

1. Copy the NT Windows Installer file (instmsiw.exe) to a location on the server where the user and workstation object typically have sufficient rights (typically SYS\PUBLIC). For this example, I’ll create an MSI directory under SYS\PUBLIC.
2. In NWAdmin32, create a simple application object (no aot) and have it point to \\SERVER\SYS\PUBLIC\MSI\INSTMSIW.EXE.
3. Key properties (other properties are optional and set as desired):
   a. System Requirements tab
      i. Windows NT
   b. Environment tab
      i. Command Line Parameters: /q
      ii. Run as secure system user

Note: The /q is quiet mode. The Windows Installer will install without any interface or require any interaction from the user. If you decide to install it without the /q switch, the Windows Installer will show a progress screen and prompt the user to click OK when done. In addition, you would need to change the option to "Run as an unsecure system user".

   c. Distribution tab
      i. Reboot: Never

Note: Because instmsiw.exe is actually a wrapper program, the Application Launcher will think it has completed before it actually has. Do not set it to reboot the workstation or the Windows Installer will not get installed correctly. It isn't required anyway.

4. Associate and distribute as desired via the Application Launcher. The Windows Installer will install itself silently and be ready for use immediately.

Registry Key Push for MSI ON:

1. In NWAdmin32, create a simple application object (no aot). Name it as desired. For this example I'll name it **MSI On**. A path to executable is not necessary.
2. Key properties (other properties are optional and set as desired):
   a. System Requirements tab
      i. Windows NT
   b. Environment tab
      i. Run as secure system user
   c. Registry tab.
      i. Here you want to do a File > Import and import the MSI_ON.REG file.
3. Associate and distribute as desired via the Application Launcher. The Windows Installer registry keys will be set to allow any Windows Installer compliant application installation to run without the user needing local NT elevated privileges (ex. Office 2000).

Registry Key Push for MSI OFF:

1. In NWAdmin32, create a simple application object (no aot). Name it as desired. For this example I'll name it **MSI Off**. A path to executable is not necessary.
2. Key properties (other properties are optional and set as desired):
   a. System Requirements tab
      i. Windows NT
   b. Environment tab
      i. Run as secure system user
   c. Registry tab.
      i. Here you want to do a File > Import and import the MSI_OFF.REG file.
3. Associate and distribute as desired via the Application Launcher. The Windows Installer registry keys will be set to NOT allow any Windows Installer compliant

application installation to run without the user having local NT elevated privileges (ex. Office 2000).

The great thing about these two application objects is that they can be used over and over again, as desired, anytime you have any Windows Installer compliant application you want to push out. It's like a light switch that you can manipulate with ZENworks. Really cool!!

Known Caveat: If you try to distribute the Windows Installer and the MSI On app object at the same time (or even if set in an order), the elevated privileges registry keys will not get created/modified. This is due to fact that during the installation of the Windows Installer, these registry keys are set to their default (off). And because the instmsiw.exe is a wrapper program, the Application Launcher will think the installation is complete and run the MSI On application object before the Windows Installer has actually finished, hence, it will get reset right back to the "off" position. It is best to distribute the two separately.

What's In the Registry Files?:

MSI_ON.REG

```
REGEDIT4

[HKEY_CURRENT_USER\SOFTWARE\Policies\Microsoft\Windows\Installer]
"AlwaysInstallElevated"=dword:00000001

[HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Installer]
"AlwaysInstallElevated"=dword:00000001
```

MSI_OFF.REG

```
REGEDIT4

[HKEY_CURRENT_USER\SOFTWARE\Policies\Microsoft\Windows\Installer]
"AlwaysInstallElevated"=dword:00000000

[HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Installer]
"AlwaysInstallElevated"=dword:00000000
```

Note: The above registry keys will not allow elevated privileges on a machine without the Microsoft Windows Installer installed.