Lesson 9

Performing Software Installation with Group Policy

Knowledge Assessment

Matching

Match the following definitions with the appropriate term.

 a. .zap file f. Publish

 b. Assign g. self-healing

 c. Basic User h. distribution share

 d. hash i. .msi file

 e. path rule j. hash rule

**G** 1. This feature of Group Policy software installation will automatically reinstall critical application files if they are accidentally or maliciously deleted. P182

**I** 2. Group Policy software installations rely on this file type to create an installation package that can be cleanly Assigned and Published and that has self-healing capabilities. P182

**C** 3. This Default Security Level in Software Restriction Policies will disallow any executable that requires administrative rights to run. P193

**F** 4. This Group Policy software installation option is not available in the Computer Configuration node.P188

**H** 5. When deploying software with Group Policy, you need to create one or more of these to house the installation files for the applications that you wish to deploy. P184

**J** 6. This software restriction policy rule will prevent executables from running if they have been modified in any way by a user, virus, or piece of malware. P194

**A** 7. If you need to deploy a software installation package that does not have an .msi file available, you can create one of these as an alternative. P184

**D** 8. This describes a series of bytes with a fixed length that uniquely identifies a program or file. P194

**E** 9. This software restriction policy rule will allow or prevent applications from running that are located within a particular folder or subfolder. P194

**B** 10. This GPO software installation method can be used to automatically install an application when a computer starts up or a user logs in. P185

Multiple Choice

1. Which of the following rule types apply only to Windows Installer packages?

a. Hash rules

b. Certificate rules

**c. Internet zone rules**

d. Path rules

**Internet Zone rules in a Software Restriction Policy can only be applied to Microsoft Software Installation files, which are installer files that end in a .MSI file extension. P.194**

2. Which file type is used by Windows Installer?

a. .inf

b. .bat

c. .msf

**d. .msi file**

**Microsoft Software Installation files end in a .MSI file extension. P182**

3. Which of the following is not one of the Default Security Levels that can be used with a software restriction policy?

a. Basic User

b. Unrestricted

**c. Restricted**

d. Disallowed

**Restricted is not a default security level that can be applied within a Software Restriction Policy. P193**

4. As part of your efforts to deploy all new applications using Group Policy, you discover that several of the applications you wish to deploy do not include the necessary installer files. What can you use to deploy these applications?

a. Software restriction policies

b. .msi files

c. .mdb files

**d. .zap files**

**If an application that you want to deploy via GPO does not possess an MSI installer file, you can create a ZAP installation file that will have limited capabilities within GPO software installation. P184**

5. Which of the following describes the mathematical equation that creates a digital "fingerprint" of a particular file?

a. Hash rule

**b. Hash algorithm**

c. Software restriction policy

d. Path rule

**A hash algorithm describes the mathematical equation used to create a digital fingerprint, or hash, of a particular file. P194**

6. Which of the following rules will allow or disallow a script or a Windows Installer file to run on the basis of how the file has been signed?

a. Path rule

b. Hash rule

c. Network zone rule

**d. Certificate rule**

 **A certificate rule within a Software Restriction Policy will allow or prevent executables from running on the basis of the PKI certificate used with the software. P194**

7. You wish to deploy several software applications using Group Policy, such that the applications can be manually installed by the users from the Add/Remove Programs applet in their local Control Panel. Which installation option should you select?

a. Assign

b. Disallowed

**c. Publish**

d. Unrestricted

**By Publishing software via GPO, users have the option to add the published software manually via the Add/Remove programs Control Panel applet. P185**

8. You have assigned several applications using GPOs. Users have complained that there is a delay when they double-click on the application icon, which you know is the result of the application being installed in the background. What option can you use to pre-install assigned applications when users log on or power on their computers?

a. Uninstall when the application falls out of scope

**b. Install This Application At Logon**

c. Advanced Installation Mode

d. Path rule

**When publishing software via GPO, the Install this application at logon option automatically installs all assigned software when the user first logs on, preventing subsequent delays when double-clicking a file associated with an assigned application for the first time. P190**

9. Which of the following is used to develop information systems software through a structured process that includes analysis, design, implementation, and maintenance?

a. Hash algorithm

**b. System Development Life Cycle**

c. Software Restriction Policy

d. Group Policy Object

**The SDLC is used to analyze, deploy, and maintain an organization’s process for deploying mission-critical and line-of-business applications over time. P182**

10. Which of the following Default Security Levels in Software Restriction Policies will disallow any executable from running that has not been explicitly enabled by the Active Directory administrator?

a. Basic User

b. Restricted

**c. Disallowed**

d. Power User

**The Disallowed default security level within a Software Restriction Policy prevents any software from running that an administrator has not explicitly permitted to run. P193**

Case Scenarios

Scenario 9-1: Planning Group Policy Software Deployments

Your company, a healthcare organization, is currently working toward compliance with new government standards on patient confidentiality. Your IT department has decided that using software restriction policies with standard user access permissions will help to fulfill the necessary security requirements. You are preparing an implementation plan that is based on user needs and security requirements. Users should not be able to access any programs with the exception of those that are pertinent to their jobs. In addition, the user needs within the organization are as follows:

* Users only need access to email and a patient database.
* The patient database has its own built-in security access system that is configured for each user based on the user's needs within the program.
* All user accounts are located in containers based on the user's office location.

In addition, the following points should be considered in your implementation plan:

* Software restriction policy settings should not affect settings that are already in place within existing GPOs. If problems arise with software restriction policies, they should be easy to rectify, without affecting other security areas.
* Administrator accounts should not be affected by software restrictions.
* Other applications should not be affected by any of the restrictions.

List the key points that should be part of your implementation plan based on the information provided here.

**Based on the description, the Disallowed default rule should be applied.**

**Software restriction policies should be deployed as separate GPOs so that they can be easily added and removed without affecting existing GPOs.**

**Security filtering should be deployed to ensure that administrators aren't affected by software restriction policies.**

Scenario 9-2: Consulting with Wide World Importers

You have been asked by Max Benson, CEO of Wide World Importers, to advise the company on the software deployment issues they are facing. Wide World Importers is an import/export company handling primarily clothing and textile products. It has offices in New York, New York; San Diego, California; and Fort Lauderdale, Florida. Wide World's network is configured as a single Active Directory domain with sites and OUs for each location. Below each top-level OU is a second layer of OUs representing the functional areas of Shipping, Finance, and Marketing. The users and client computers are distributed as shown in Table 9-1.

Table 9-1

Wide World Importers' Network Structure

|  |  |  |  |
| --- | --- | --- | --- |
| Office/OU | Users | Computers | Operating Systems Used |
| NY/Shipping | 15 | 8 | Windows 2000 Professional |
| NY/Finance | 60 | 60 | Windows 2000 Professional and Windows XP Professional |
| NY/Marketing | 175 | 185 | Windows 2000 Professional and Windows XP Professional |
| CA/Shipping | 55 | 40 | Windows 2000 Professional and Microsoft Windows NT version 4.0 Workstation |
| CA/Finance | 110 | 110 | Windows XP Professional |
| CA/Marketing | 210 | 210 | Windows 2000 Professional and Windows XP Professional |
| FL/Shipping | 25 | 15 | Windows NT version 4.0 Workstation |
| FL/Finance | 20 | 20 | Windows 2000 Professional |
| FL/Marketing | 140 | 150 | Windows 2000 Professional and Windows XP Professional |

The California and New York offices are connected by a dedicated T-1 line. Dedicated 256-Kbps fractional T-1 lines connect the Florida office to the California and New York offices. Several of the Marketing users have mobile computers, and a portion of their time is spent traveling the world. Access to the main network is accomplished by dialing in to a local Internet service provider (ISP) and then establishing a Layer Two Tunneling Protocol (L2TP) virtual private network (VPN) to the California office. Each location has three domain controllers and one file server. The wide area network (WAN) links are used heavily during the day, but Wide World does not plan to upgrade them any time soon. It is important that the software deployment strategy you suggest does not adversely affect the WAN links during business hours.

Max has indicated that he wants more control over software deployment and wants to leverage his investment in Windows Server 2008. The main software requirements of the company include Office 2003 for all users, a third-party program used by Marketing, an application used by Finance for billing and accounting, and a proprietary shipping application developed for Wide World Importers. Although all users utilize Office 2003, they do not all use the same applications. Many users utilize only Outlook and Word, whereas others also make use of Access and PowerPoint. Still others use Excel on a daily basis.

Given the concerns of Wide World Importers, answer the following questions:

1. Utilizing GPO for software deployment, how can you configure the network in a way that will not negatively impact the business by saturating the WAN links during deployment?

 **Deploy distribution shares at each location so that software is not being installed across the WAN.**

2. With respect to the marketing, finance, and shipping applications, what are some of the options and considerations when deciding how to deploy these applications?

 **Each department requires one or more Software Installation packages, which can be deployed through a GPO that is linked to an OU or a site, based on the needs of the individual department.**

3. How do you recommend resolving the issue that many users utilize different parts of the Office 2003 suite of applications?

 **Configure file-activated installation that will allow each individual Office component to be installed as needed, rather than tying up network bandwidth installing components that may or may not be used by each staff member.**

4. The shipping application is a proprietary application that does not have an .msi file associated with it. How would you recommend using Group Policy to deploy this application to the Shipping department?

**Create a .ZAP file to automate the deployment of this application.**