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7197A

**Managing Enterprise Desktops Using the  
Microsoft® Desktop Optimization Pack**

*Companion Content*

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# Module 2

## **Controlling Group Policy Using Advanced Group Policy Management**

### **Contents:**

Lab Answer Keys

2

# Lab Answer Keys

## Lab: Controlling Group Policy Using AGPM

### Answer Key

Exercise 1: Installing Advanced Group Policy Management

Exercise 2: Managing Controlled Group Policy Objects

Logon Information:

- Virtual Machines: **7197A-SEA-DC1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 60 minutes

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### Exercise 1: Installing Advanced Group Policy Management

The main tasks for this exercise are as follows:

1. Start the virtual machines, and log on.
2. Install Advanced Group Policy Management Server.
3. Install Advanced Group Policy Management Client.
4. Create a GPO, and then add the Advanced Group Policy Management Template.
5. Configure AGPM Policies.
6. Create additional Policies.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. Log on to 7197A-SEA-DC1 as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
4. Minimize the Lab Launcher window.

#### ► Task 2: Install Advanced Group Policy Management Server

1. On SEA-DC1, click **Start**, and then click **Run**.
2. In the **Open** box, type **D:\labfiles\AGPM\Server**, and then click **OK**.
3. Double-click **AgpmServer.msi**.
4. On the **Microsoft Advanced Group Policy Management – Server Setup** wizard, click **Next**.
5. On the **Microsoft Software License Terms** page, select **I accept the license terms**, and then click **Next**.
6. On the **Application Path** page, accept the default setting **C:\Program Files\Microsoft\AGPM\Server**, and then click **Next**.
7. On the **Archive Path** page, type the path **C:\Archive**, and then click **Next**.

8. On the **AGPM Service Account** page, select **Local System**, and then click **Next**.
9. On the **Archive Owner** page, specify **Contoso\Administrator**, and then click **Next**.
10. On the **Ready to install Microsoft Advanced Group Policy Management – Server** page, click **Install**.
11. In the **Completed the Microsoft Advanced Group Policy Management – Server Setup** wizard, click **Finish**. Close the Server window.

► **Task 3: Install Advanced Group Policy Management Client**

1. On SEA-DC1, click **Start**, and then click **Run**.
2. In the **Open** box, type **D:\labfiles\AGPM\Client**, and then click **OK**.
3. Double-click **AgpmClient.MSI**.
4. On the **Microsoft Advanced Group Policy Management – Client Setup** wizard, click **Next**.
5. On the **Microsoft Software License Terms** page, select **I accept the license terms**, and then click **Next**.
6. On the **Application Path** page, accept the default setting **C:\Program Files\Microsoft\AGPM\Client**, and then click **Next**.
7. On the **AGPM Server** page, specify **SEA-DC1.Contoso.com** in the **Name** field, and **4600** in the **Port** field. Click **Next**.
8. On the **Ready to install Microsoft Advanced Group Policy Management – Client** page, click **Install**.
9. On the **Completed the Microsoft Advanced Group Policy Management – Client Setup** Wizard, click **Finish**.
10. Close the Client window.

► **Task 4: Create a GPO and add the Advanced Group Policy Management Template**

1. On SEA-DC1, click **Start**, point to **Administrative Tools** and then click **Group Policy Management**.
2. In the Group Policy Management console, expand **Forest: Contoso.com**, and then expand **Domains**.
3. Click **Contoso.com**.
4. Right-click **Contoso.com**, and then click **Create and Link a GPO here**.
5. In the **New GPO** box, type **AGPM Configuration Policy**, and then click **OK**.
6. Right-click **AGPM Configuration Policy**, and then select **Edit**.
7. In the **Group Policy Object Editor**, right-click **Administrative Templates**, and then click **Add/Remove Templates...**
8. In the Add/Remove Templates window, click **Add...**
9. Select the **agpm.adm** file, and then click **Open**.
10. In the Add/Remove Templates window, click **Close**.

► **Task 5: Configure AGPM Policies**

1. In the **Group Policy Object Editor**, expand **Computer Configuration**, expand **Administrative Templates**, expand **Windows Components**, and then click **AGPM**.

2. In the details pane, double-click **AGPM Logging**.
3. Enable **AGPM Logging**, select **Errors Only**, and then click **OK**.
4. Expand **User Configuration**, expand **Administrative Templates**, expand **Windows Components**, and then click **AGPM**.
5. Double-click **AGPM Server (all domains)**.
6. Enable **AGPM Server (all domains)**, set the server to **SEA-DC1.Contoso.com:4600**, and then click **OK**.
7. Close the Group Policy Object Editor window.

► **Task 6: Create additional Policies**

1. In the Group Policy Management console, right-click **Contoso.com**, and then click **Create and Link a GPO here**.
2. In the **New GPO** box, type **Branch Office Policy**, and then click **OK**.

## Exercise 2: Managing Controlled Group Policy Objects

The main tasks for this exercise are as follows:

1. Configure AGPM Security.
2. Configure Special Permissions.
3. Take control of an Existing GPO.
4. Create a Controlled GPO.
5. Restore a Deleted GPO.
6. Create a Template.
7. Deploy a GPO from a Template.

► **Task 1: Configure AGPM Security**

1. In the Group Policy Management console, expand **Contoso.com**, and then click **Change Control**.
2. Select the **Domain Delegation** tab.
3. Fill in the following information:
  - From: **AGPMService@Contoso.com**
  - To: **Arlene@Contoso.com**
  - SMTP server: **SEA-DC1**
  - User name: **AGPMService**
  - Password: **Pa\$\$w0rd**
  - Confirm password: **Pa\$\$w0rd**
4. Click **Apply**.
5. Click **Add**.
6. Type **Arlene**, and then click **Check Names**.
7. Click **OK**.

8. Select **Arlene Huff**, and then click **Advanced...**
9. In the **Permissions for Contoso.com** box, select **Arlene Huff**. Clear the **Editor Allow** check box, select the **Approver Allow** check box, and then click **OK**.
10. Click **Add**.
11. Type **Don**, and then click **Check Names**.
12. Click **OK**.

► **Task 2: Configure Special Permissions**

1. In the **Domain Delegation** tab, click **Advanced...**
2. In the **Permissions for Contoso.com** dialog box, click **Advanced**.
3. Click the **Permissions** tab.
4. In the **Advanced Security Settings for Contoso.com** dialog box, select **Arlene Huff**, and then click **Edit**.
5. From the **Apply onto** drop-down menu, select **This object and nested objects**, and then click **OK**.
6. In the **Advanced Security Settings for Contoso.com** dialog box, select **Don Hall**, and then click **Edit**.
7. Clear the **Allow** check box for **Create Template**.
8. Click **OK** three times.
9. Close the Group Policy Management console.

► **Task 3: Take control of an existing GPO**

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Don**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. In the details pane, click the **Uncontrolled** tab.
7. Right-click **Branch Office Policy**, and then click **Control**.
8. In the **Comment** box, type **Don**, and then click **Submit**. An AGPM progress window will appear.
9. When the overall progress is complete, click **Close**.
10. Click the **Pending** tab. The GPO is listed on the **Pending** tab.
11. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Arlene**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. Click the **Pending** tab.
7. Right-click **Branch Office Policy**, and then click **Approve**.
8. Type **Approved**, and then click **Yes**. An AGPM progress window will appear.
9. When the overall progress is complete, click **Close**.
10. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Don**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. In the details pane, click the **Controlled** tab.
7. Right-click **Branch Office Policy**, and then click **History**.
8. Close the History window.

### ► Task 4: Create a Controlled GPO

1. In the Group Policy Management console tree, click **Change Control**.
2. Right-click the **Change Control** node, and then click **New Controlled GPO**.
3. Make the following changes to the **Submit New Controlled GPO Request** dialog box:
  - a. In the **GPO Name** field, type **Marketing Interns**, and enter a comment.
  - b. Click **Create offline** so the new GPO will not be deployed until review and approval.
  - c. Click **Submit**.
  - d. Click **OK**.

4. On the **AGPM Progress – Completed** box, click **Close**.
5. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Arlene**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. Click the **Pending** tab.
7. Right-click **Marketing Interns**, and then click **Approve**.
8. Type **Approved**, and then click **Yes**. An AGPM progress – Completed window will appear.
9. When the overall progress is complete, click **Close**.
10. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools** and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Don**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. In the details pane, click the **Controlled** tab.
7. Right-click **Marketing Interns**, and then click **Check Out**.
8. Type **editing**, and then click **OK**. An AGPM progress window will appear.
9. When the overall progress is complete, click **Close**.
10. On the **Controlled** tab, right-click **Marketing Interns**, and then click **Edit**.
11. When the Group Policy Object Editor opens, maximize the window.
12. In the Group Policy Object Editor, expand **User Configuration**, expand **Administrative Templates**, and then click **Control Panel**.
13. In the details pane, double-click **Prohibit access to the Control Panel**.

14. In the Properties window, click **Enabled**, and then click **OK**.
15. In the Group Policy Object Editor, under **Administrative Templates**, expand **Network**, and then click **Network Connections**.
16. In the details pane, double-click **Prohibit access to the Advanced Settings item on the Advanced menu**.
17. In the Properties window, click **Enabled**, and then click **OK**.
18. In the Group Policy Object Editor, under **Administrative Templates**, click **System**.
19. In the details pane, double-click **Prevent access to registry editing tools**.
20. In the Properties window, click **Enabled**, in the drop-down box, click **No**, and then click **OK**.
21. In the Group Policy Object Editor, under **Administrative Templates**, click **Start Menu and Taskbar**.
22. In the details pane, double-click **Remove My Network Places icon from Start Menu**.
23. In the Properties window, click **Enabled**, and then click **OK**.
24. In the Group Policy Object Editor window, click **Close**.
25. Right-click **Marketing Interns**, and then click **Check In**.
26. Type **done**, and then click **OK**. An AGPM progress window will appear.
27. When the overall progress is complete, click **Close**.
28. Right-click **Marketing Interns**, and then click **Deploy**.
29. Type **Please Deploy**, and then click **Submit**. An AGPM progress window will appear.
30. When the overall progress is complete, click **Close**.
31. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Arlene**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. Click the **Pending** tab.
7. Double-click **Marketing Interns**. This will display the GPO history.
8. In the History for Marketing Interns window, right-click the Marketing Interns entry with the most recent timestamp, click **Settings**, and then click **HTML Report**. Click **OK** in the Information Bar message.
9. In the Internet Explorer window, click the security warning, and then click **Allow Blocked Content**.

10. In the **Security Warning** dialog box, click **Yes**.
11. Click **show all** to expand the settings list, and then examine the report.
12. In the Internet Explorer window, click **Close**.
13. In the History window, click **Close**.
14. Right-click **Marketing Interns**, and then click **Reject...**
15. Type **Does not meet security standards for Intern users**, and then click **OK**.
16. When the overall progress is complete, click **Close**.
17. Click the **Controlled** tab. The Marketing Interns GPO is listed with a state of Checked In.
18. Right-click **Marketing Interns**, and then click **Delete**.
19. In the **Delete** dialog box, select **Delete GPO from archive only**, enter a comment, and then click **OK**.
20. Click **Yes**, and then click **Close**.
21. Close the Group Policy Management console.

#### ► Task 5: Restore a Deleted GPO

##### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Don**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. In the details pane, click the **Recycle Bin** tab.
7. Right-click **Marketing Interns**, and then click **Restore**.
8. Type **Please Keep**, and then click **OK**.
9. Click **Close**.

#### ► Task 6: Create a Template

1. Click the **Controlled** tab.
2. Right-click **Marketing Interns**, and then attempt to click **Save as Template**.



**Note:** Remember that you took this permission away from Don earlier.

3. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **Group Policy Management**.
2. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
3. In the Group Policy Management console, click **Change Control**.
4. Click the **Controlled** tab.
5. Right-click **Marketing Interns**, and then click **Save as Template**.
6. Type a name of **Secure Template**, and then click **OK**. An AGPM progress window will appear.
7. When the overall progress is complete, click **Close**.
8. Close the Group Policy Management console.

### ► Task 7: Deploy a GPO from a Template

#### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Don**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. In the details pane, click the **Templates** tab.
7. Right-click **Secure Template**, and then click **New Controlled GPO**.
8. In the **Submit New Controlled GPO Request** dialog box, type **Marketing Interns – User GPO**.
9. Click **Create offline**.
10. For **From GPO template**, verify that the **Secure Template** is selected.
11. Click **Submit**. An AGPM progress window will appear.
12. When the overall progress is complete, click **Close**.
13. Close the Group Policy Management console.

#### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Arlene**

- Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
  5. Under Contoso.com, click **Change Control**.
  6. Click the **Pending** tab.
  7. Right-click **Marketing Interns – User GPO**, and then click **Approve...**
  8. Type **Approved**, and then click **Yes**. An AGPM progress window will appear.
  9. When the overall progress is complete, click **Close**.
  10. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
2. Click **Run as**.
3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
  - User name: **Contoso\Don**
  - Password: **Pa\$\$w0rd**
4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
5. Under Contoso.com, click **Change Control**.
6. Right-click **Marketing Interns – User GPO**, and then click **Check Out**.
7. Enter a comment, and then click **OK**. An AGPM progress window will appear.
8. When the AGPM progress window indicates that overall progress is complete, click **Close**.
9. Right-click **Marketing Interns – User GPO**, and then click **Edit**.
10. When the Group Policy Object Editor appears, maximize the window.
11. Expand **User Configuration**, expand **Administrative Templates**, and then click **Start Menu and Taskbar**.
12. In the details pane, double-click **Add Logoff to the Start Menu**.
13. In the Properties window, click **Enabled**, and then click **OK**.
14. Close the **Group Policy Object Editor**.
15. Right-click **Marketing Interns – User GPO**, and then click **Check In**.
16. Enter a comment, and then click **OK**. An AGPM progress window will appear.
17. When the AGPM progress window indicates that overall progress is complete,click **Close**.
18. Right-click **Marketing Interns – Users GPO**, and then click **Deploy**.
19. Click **Submit**. An AGPM progress window will appear.
20. When the AGPM progress window indicates that overall progress is complete, click **Close**.
21. Close the Group Policy Management console.

### Switch users

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then right-click **Group Policy Management**.
  2. Click **Run as**.
  3. In the **Run As** box, select **The following user**, enter the following information, and then click **OK**:
    - User name: **Contoso\Arlene**
    - Password: **Pa\$\$w0rd**
  4. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
  5. Under Contoso.com, click **Change Control**.
  6. Click the **Pending** tab.
  7. Right-click **Marketing Interns – User GPO**, click **Differences**, and then click **Template**.
  8. In the **Template** drop-down menu, select **Secure Template**.
  9. Ensure that **HTML Report** is selected, and then click **OK**. Click **OK** at the Information Bar message.
  10. In the Internet Explorer window, click the **Security Warning**, and then click **Allow Blocked Content...**
  11. In the **Security Warning** dialog box, click **Yes**.
  12. Scroll down to **Add Logoff to the Start Menu**.
  13. Close the Internet Explorer window.
  14. On the **Pending** tab, right-click **Marketing Interns – Users GPO**, and then click **Approve**.
  15. Enter a comment to include in the GPO history.
  16. Click **Yes**. An AGPM progress window will appear.
  17. When the AGPM progress window indicates that overall progress is complete, click **Close**.
  18. Close the Group Policy Management console.
- **Task 8: Close all virtual machines, and discard undo disks**
1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
  2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
  3. Close the 7197A Lab Launcher.

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# Module 3

## Monitoring Desktops Using System Center Desktop Error Monitoring

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab A: Installing Desktop Error Monitoring

### Answer Key

Exercise 1: Checking the Prerequisites for Desktop Error Monitoring

Exercise 2: Installing Desktop Error Monitoring

Logon Information:

- Virtual Machines: **7197A-SEA-DC1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 60 minutes

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### Exercise 1: Checking the Prerequisites for Desktop Error Monitoring

The main tasks for this exercise are as follows:

1. Start the virtual machines, and log on.
2. Run Desktop Error Monitoring Setup.
3. Install the .NET Framework 3.0 and Windows PowerShell.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. Log on to 7197A-SEA-DC1 as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
4. Minimize the Lab Launcher window.

#### ► Task 2: Run Desktop Error Monitoring Setup

1. On SEA-DC1, open **Windows Explorer**, and then browse to the folder **D:\Labfiles\DEM**.
2. Double-click **DEMSetup.exe**.
3. On the **Welcome to the System Center Operations Manager 2007 Setup Wizard**, click **Next**.
4. On the **End User License Agreement** page, select **I accept the license terms in the license agreement**, and then click **Next**.
5. On the **Product Registration** page, click **Next**.
6. On the **Custom Setup** page, click **Next**.
7. On the **Prerequisite Check Did Not Pass** page, click **View Log**.

**Question:** Why did the Prerequisite Check Fail?

**Answer:** .NET Framework 3.0 Components and Windows PowerShell is not installed.

8. Click **Close**, and then click **Cancel**.

9. Click **Yes**, and then click **Finish**.

► **Task 3: Install the .NET Framework 3.0 and Windows PowerShell.**

1. In Windows Explorer, in the **D:\Labfiles\DEM** folder, double-click **dotnetfx3.exe**.
2. In the **Microsoft .NET Framework 3.0 Setup** box, click **I have read and ACCEPT the terms of the License Agreement**. Click **Install**, and then click the message in the notification area to restore the installation progress.
3. On the **Setup Complete** page, click **Exit**.
4. To install Windows PowerShell, in the **D:\Labfiles\DEM** folder, double-click **WindowsServer2003 – KB926139-x86-ENU.exe**, and then click **Run**.
5. On the **Windows PowerShell 1.0** page, click **Next**.
6. On the **License Agreement** page, select **I agree**, and then click **Next**.
7. On the **Completing the Windows PowerShell 1.0 Installation Wizard** page, click **Finish**.

## Exercise 2: Installing Desktop Error Monitoring

The main tasks for this exercise are as follows:

1. Run Desktop Error Monitoring Setup.
2. Install Operations Manager 2007 Reporting.

► **Task 1: Run Desktop Error Monitoring Setup**

1. In Windows Explorer in the **D:\Labfiles\DEM** folder, double-click **DEMSetup.exe**.
2. On the **Welcome to the System Center Operations Manager 2007 Setup Wizard** page, click **Next**.
3. On the **End-User License Agreement** page, select **I accept the terms in the license agreement**, and then click **Next**.
4. On the **Product Registration** page, click **Next**.
5. On the **Custom Setup** page, click **Browse**, change the folder location to **D:\Program Files\System Center Operations Manager 2007\**, and then click **OK**. Click **Next**.
6. On the **Prerequisite Check Passed with Warnings** page, click **View Log**.

**Question:** What warning is in the Prerequisite log?

**Answer:** Physical memory is low, and the installation is taking place on a Domain controller.

7. Click **Close**, and then click **Next**.
8. On the **Management Group Configuration** page, type in the Management Group name: **DEM LAB**, and then click **Next**.
9. On the **SQL Server Database Instance** page, click **Next**.
10. On the **Database and Log File Options** page, click **Advanced**, and then change the data file and log file locations as follows:
  - Data file: **D:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data**
  - Log file: **D:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Log**
11. Click **OK**, and then click **Next**.

12. On the **Management Server Action Account** page, select **Local System**, and then click **Next**.
13. On the **SDK and Config Service Account** page, select **Local System**, and then click **Next**.
14. On the **Web Console Authentication Configuration** page, select **Use Windows Authentication (Recommended)**, and then click **Next**.
15. On the **Operation Manager Error Reports** page, click **Next**.
16. On the **Customer Experience Improvement Program** page, click **Next**.
17. On the **Ready to Install the Program** page, click **Install**.
18. On the **Completing the System Center Operations Manager 2007 Setup Wizard** page, clear the **Start the Console** check box, and then click **Finish**. The Operations Manager 2007 Reporting begins to install.

► **Task 2: Installing Operations Manager 2007 Reporting**

1. On the **Welcome to Operations Manager 2007 Reporting Setup** page, click **Next**.
2. On the **End-User License Agreement** page, select **I accept the terms in the license agreement**, and then click **Next**.
3. On the **Product Registration** page, click **Next**.
4. On the **Custom Setup** page, click **Browse**, change the folder location to **D:\Program Files\System Center Operations Manager 2007\**, click **OK**, and then click **Next**.
5. On the **Prerequisite Check Passed with Warnings** page, click **Next**.
6. On the **Connect to the Root Management Server** page, type **SEA-DC1.Contoso.com**, and then click **Next**.
7. On the **SQL Server Database Instance** page, click **Next**.
8. On the **Database and Log File Options** page, click **Advanced**, and then change the data file and log file locations as indicated:
  - Data file: **D:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data**
  - Log file: **D:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Log**
9. Click **OK**, and then click **Next**.
10. On the **SQL Server Reporting Services Instance** page, click **Next**.
11. On the **Data Warehouse Write Account** page, enter the following data, and then click **Next**:
  - User Account: **Administrator**
  - Password: **Pa\$\$w0rd**
  - Domain: **Contoso**
12. On the **Data Reader Account** page, enter the following data, and then click **Next**:
  - User Account: **Administrator**
  - Password: **Pa\$\$w0rd**
  - Domain: **Contoso**
13. On the **Operational Data Reports** page, click **Next**.

14. On the **Ready to Install the Program** page, click **Install**.
15. On the final page of the wizard, click **Finish**.
16. Restart SEA-DC1.
17. After SEA-DC1 restarts, log on as **Administrator** using the password **Pa\$\$w0rd**.

## LAB B: Monitoring Desktops Using System Center DEM

### Answer Key

Exercise 1: Configuring a Management Server for Client Monitoring

Exercise 2: Deploying Client Monitoring using Group Policy

Exercise 3: Configuring Error Transmission, Data Collection, and Notification

Exercise 4: Using the Desktop Error Monitoring Console

Exercise 5: Using Reporting in the Desktop Error Monitoring Console

Logon Information:

- Virtual Machines: **7197A-SEA-DC1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 60 minutes

---

## Exercise 1: Configuring a Management Server for Client Monitoring

The main task for this exercise is:

- Configure agentless monitoring

### ► Task 1: Configure agentless monitoring

1. On SEA-DC1, click **Start**, click **All Programs**, click **System Center Operations Manager 2007**, and then click **Operations Console**.
2. In the Operations console, click **Administration**.
3. In the Administration pane, expand **Administration**, expand **Device Management**, and then click **Management Servers**.
4. In the Management Servers pane, right-click **SEA-DC1**, and then click **Configure Client Monitoring**.
5. On the **Introduction** page of the **Client Monitoring Configuration Wizard**, click **Next**.
6. On the **Customer Experience Improvement Program** page, click **Yes, use the selected Management Server to collect and forward CEIP data to Microsoft**.
7. Clear the **Use Secure Sockets Layer (SSL) Protocol** check box, and then click **Next**.
8. On the **Error Collection** page, in the **File Share Path** field, type **D:\ErrorData**.
9. Click **Collect error reports from Windows Vista-based or later clients**.
10. Leave the default Port number as **51906**.
11. Clear the **Use Secure Sockets Layer (SSL) protocol** check box.

12. In the **Organization name** field, type **Contoso**, and then click **Next**.
13. On the **Error Forwarding** page, click **Forward all collected errors to Microsoft (recommended)**, and then click **Next**.
14. On the **Create File Share** page, click **Existing user account**, and then click **Next**.
15. On the **Create file Share: Task Status** page, after the file share has been successfully created, click **Next**.
16. On the **Client Configuration Settings** page, note the location of the Administrative Template file that contains the Client Monitoring Group Policy settings, and then click **Finish**.
17. Minimize the System Center Desktop Error Monitoring console.

## Exercise 2: Deploying Client Monitoring using Group Policy

The main task for this exercise is:

- Modify a GPO and import the client monitoring ADM template.

### ► Task 1: Modify a GPO and import the client monitoring ADM template

1. Click **Start**, point to **Administrative Tools**, and then click **Group Policy Management**.
2. In the Group Policy Management console, expand **Forest: Contoso.com**, expand **Domains**, and then expand **Contoso.com**.
3. Right-click the **Default Domain Policy**, and then click **Edit**.
4. In the console tree, expand **Computer Configuration**, expand **Administrative Templates**, expand **System**, expand **Internet Communication Management**, and then click **Internet Communication settings**.
5. In the details pane, double-click **Turn off Windows Error Reporting**, click **Enabled**, and then click **OK**.
6. In the console tree, right-click **Administrative Templates**, and then click **Add/Remove Templates**.
7. Click **Add**.
8. Browse to **D:\Program Files\System Center Operations Manager 2007**, select **SEA-DC1.Contoso.com.adm**, and then click **Open**.
9. Click **Close**.
10. In the console tree, navigate to **Computer Configuration/Administrative Templates/Microsoft Applications/System Center Operations Manager (SCOM)**.
11. Click **SCOM Client Monitoring CEIP Settings**.
12. In the details pane, double-click **Configure CEIP (Customer Experience Improvement Program)**, click **Enabled**, and then click **OK**.
13. In the console tree, select **SCOM Client Monitoring**.
14. In the **details** pane, double-click **Configure Error Reporting for Windows Vista and later operating systems**, click **Enabled**, and then click **Next Setting**.
15. In the **Configure Error Notification** dialog box, click **Enabled**, and then click **Next Setting**.
16. In the **Configure Error Reporting for Windows Operating Systems older than Windows Vista** dialog box, click **Enabled**, and then click **OK**.

17. In the **details** pane, double-click **Advanced Error Reporting settings**.
18. In the **details** pane, double-click **Application reporting settings (all or none)**, click **Enabled**, and then click **Next Setting**.
19. In the **Report operating system errors** dialog box, click **Enabled**, and then click **Next Setting**.
20. In the **Report unplanned shutdown events** dialog box, click **Enabled**, and then click **OK**.
21. In the console tree, click **SCOM Client Monitoring for Office 10.0 Applications**.
22. In the details pane, double-click **Configure Error Notification**, click **Enabled**, and then click **Next Setting**.
23. In the **Configure Error Reporting for Windows Operating Systems older than windows Vista** dialog box, click **Enabled**, and then click **OK**.
24. In the console tree, click **SCOM Client Monitoring for Windows Media Player**.
25. In the **details** pane, double-click **Configure Error Notification**, click **Enabled**, and then click **Next Setting**.
26. In the **Configure Error Reporting for Windows Operating Systems older than windows Vista** dialog box, click **Enabled**, and then click **OK**.
27. Close the **Group Policy Object Editor**.
28. Close **Group Policy Management**.

### Exercise 3: Configuring Error Transmission, Data Collection, and Notification

The main tasks for this exercise are as follows:

1. Configure Privacy Settings.
2. Configure Notifications.

#### ► Task 1: Configure Privacy Settings

1. Restore the **System Center Desktop Error Monitoring** console.
2. In the Operations console, click the **Administration** node.
3. In the **Administration** pane, click **Settings**.
4. In the **Settings** pane, under **Type: General**, right-click **Privacy**, and then click **Properties**.
5. In the **Global Management Group Settings – Privacy** dialog box, click the **CEIP** tab.
6. Select the **Join the Customer Experience Improvement Program (recommended)** check box.
7. In the **Global Management Group Settings – Privacy** dialog box, click the **Operational Data Reports** tab.
8. Select the **Yes, send operational data reports to Microsoft (recommended)** check box.
9. In the **Global Management Group Settings – Privacy** dialog box, click the **Error Reporting** tab.
10. Review the available settings.
11. In the **Global Management Group Settings – Privacy** dialog box, click the **Error Transmission** tab.
12. On the **Error Transmission** tab, click **Filter**.

13. In the **Error Forwarding Filters** dialog box, review each of the available criteria.
14. Select the **that come from specific computers** check box.
15. In the **Criteria** description section, click the **specific** hyperlink.
16. In the **Add Computers** dialog box, click **Browse**.
17. In the **Select Computers** dialog box, type **SEA-DC1**, click **Check Names**, and then click **OK**.
18. Click **OK**, and then click **OK** again.
19. On the **Error Transmission** tab, click to select the **Upload diagnostic data collection requests** check box.
20. Enable all of the sub-check boxes below the **Upload diagnostic data collection requests**.
21. Leave the **Set Maximum number of CAB files to send to Microsoft per error group** default value at **10**.
22. Enable the **Display links to solution from Microsoft on error reporting computers** check box.
23. Enable the **Display links to surveys from Microsoft on error reporting computers** check box.
24. In the default solution link field, type **support.contoso.com**, and then click **OK**.

► **Task 2: Configure Notifications**

1. In the **Settings** pane, under **Type: General**, right-click **Notification**, and then click **Properties**.
2. In the **Global Management Group Settings – Notification** dialog box, select the **Enable e-mail notification** check box, and then click **Add**.
3. In the **SMTP server (FQDN)** field, type **SEA-DC1.Contoso.com**, and then click **OK**.
4. In the **Return address** field, type **administrator@Contoso.com**, and then click **OK**.

## Exercise 4: Using the DEM Console

The main task for this exercise is as follows:

- Examine Monitoring.

► **Task 1: Examine Monitoring**

1. If necessary, on SEA-DC1, click **Start**, click **All Programs**, click **System Center Operations Manager 2007**, and then click **Operations Console**.
2. Click **Monitoring** in the bottom left corner.
3. Expand the **Agentless Exception Monitoring** node, and then click **Application Error Events**. Note that there is no data currently showing, since this is a new installation; however this is where you would view error events.

## Exercise 5: Using Reporting in the DEM Console

The main tasks for this exercise are:

1. Examine Desktop Error Monitoring Reports.
2. Close all virtual machines, and discard undo disks.

► **Task 1: Examine Desktop Error Monitoring Reports**

1. In the Desktop Error Monitoring console, click **Reporting** in the bottom, left hand corner.

2. Under the **Reporting** node, click **Client Monitoring Views Library**. Notice the list of reports in the details pane.
  3. Under the **Reporting** node, click **Microsoft Generic Report Library**.
  4. In the list of reports, double-click the **Health** report.
  5. Click the **From** drop-down list box, and select **Previous year | First day**.
  6. In the **Objects** box, click **Add Object**.
  7. In the **Add Object** box, configure the **Object name** box to state Contains SEADC1. Click Search.
  8. Select the **SEA-DC1.Contoso.com** Windows Computer type. Click **Add** and then click **OK**.
  9. Click **Run**.
  10. From the generated report, scroll down to review the data.
  11. Close the report.
- **Task 2: Close all virtual machines, and discard undo disks**
1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
  2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
  3. Close the 7197A Lab Launcher.

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# Module 4

## **Managing Software Inventory Using the Asset Inventory Service**

### **Contents:**

Lab Answer Keys

2

# Lab Answer Keys

## Lab : Deploying the Asset Inventory Service (AIS) Client

### Answer Key

Exercise 1: Deploying the AIS client using Group Policy

Exercise 2: Configuring computer group membership

Exercise 3: Simulation of the Asset Inventory Service

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 30 minutes

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### Exercise 1: Deploying the AIS Client Using Group Policy

The main tasks in this exercise are as follows:

1. Start the virtual machines, and log on.
2. Configure a shared folder to host the AIS client.
3. Configure a Group Policy Object (GPO) to deploy the AIS client using a software installation policy.
4. Verify that the GPO is applied to the client, and that the AIS client is installed.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-CL1, click **Launch**.
4. Log on to both computers as **Contoso\Administrator** with the password **Pa\$\$w0rd**.
5. Minimize the Lab Launcher window.

#### ► Task 2: Configure a shared folder to host the AIS client

1. On SEA-DC1, click the **Start** button, click **My Computer**, and then doubleclick **Local Disk(C)**.
2. Click **File**, click **New**, click **Folder**, and then name the folder **AISInstall**.
3. Right-click on the **AISInstall** folder, and then click **Properties**.
4. Click the **Sharing** tab, select **Share This Folder**, and then click **OK**.
5. Browse to **D:\LabFiles\AIS**, select **SCOnlineClient.msi**, click **Edit**, and then click **Copy**.
6. Open the **C:\AISInstall** folder, click **Edit**, and then click **Paste**.
7. Close the Windows® Explorer window.

► **Task 3: Configure a Group Policy Object (GPO) to deploy the AIS client using a Software installation policy**

1. On SEA-DC1, click **Start**, point to **Administrative** tools, and then click **Group Policy Management**.
2. Expand the **Forest: Contoso.com** node.
3. Expand **Domains**, and then expand **Contoso.com**.
4. Right-click on **Contoso.com**, select **Create and then link a GPO here**.
5. In the **New GPO** box, type **Install AIS Client**, and then click **OK**.
6. Right-click **Install AIS Client**, and then click **Edit**.
7. Under the Computer Configuration node, expand the **Software Settings** node.
8. Right-click **Software Installation**, click **New**, and then click **Package**.
9. Type `\\sea-dc1\AISInstall\SCOnlineClient.msi`, and then click **Open**.
10. In the **Deploy Software** box, click **Assigned**, and then click **OK**.
11. Close the Group Policy Object Editor and Group Policy Management.

► **Task 4: Verify that the GPO is applied to the client, and the AIS client is installed**

1. On SEA-CL1, click **Start**, click **All Programs**, click **Accessories**, and then click **Command Prompt**.
2. At the command prompt, type `gpupdate/force`.
3. Type **Y**, and then press ENTER to restart the computer.
4. Log on to SEA-CL1 as **Administrator** using the password **Pa\$\$w0rd**.
5. Open Windows Explorer, and browse to **C:\Program Files**. Verify that Microsoft System Center Online Client is installed.
6. Close the Windows Explorer window.

## Exercise 2: Configuring Computer Group Membership

The main tasks for this exercise are as follows:

1. Import the `sconline.adm` template.
2. Configure a group name for Asset Inventory Service.
3. Verify that the group policy is applied to the client, and that the group is configured.

► **Task 1: Import the sconline.adm template**

1. On SEA-DC1, click **Start**, point to **Administrative tools**, and then click **Group Policy Management**.
2. Expand the **Forest: Contoso.com** node.
3. Expand **Domains**, and then expand **Contoso.com**.
4. Right-click the GPO named **Install AIS Client**, and then click **Edit**.
5. Under **Computer Configuration**, right-click **Administrative Templates**, and then click **Add/Remove Templates**.
6. In the **Add/Remove Templates** dialog box, click **Add**.
7. Browse to **D:\Labfiles\AIS**, select `sconline.adm`, and then click **Open**.

8. Click **Close** to close the Add/Remove Templates dialog box.

► **Task 2: Configure a group name for Asset Inventory Service**

1. Under Computer Configuration, expand **Administrative Templates**.
2. Click **System Center Online Client**.
3. In the details pane, double-click **Add the client to a group**.
4. In the **Add the client to a group Properties** dialog box, click the **Enabled** option button, type **7197A\_TEST** for a group name, and then click **OK**.
5. Close the Group Policy Object Editor.
6. Close the Group Policy Management console.

► **Task 3: Verify that the group policy is applied to the client, and that the group is configured**

1. On **SEA-CL1**, click **Start**, click **All programs**, click **Accessories**, and then click **Command Prompt**.
2. At the command prompt type **gpupdate/force**, and press ENTER.
3. Press **Y**, and then press ENTER to restart the computer.
4. Log on to **SEA-CL1** as **Administrator** using the password **Pa\$\$w0rd**.
5. Click the **Start** menu, and then click **Run**.
6. In the **Open** box, type **MMC**, and then click **OK**.
7. In the Console1 window, click **File**, and then click **Add/Remove Snap-in**.
8. In the **Add/Remove Snap-in** box, click **Add**.
9. In the **Add Standalone Snap-ins** selection box, click **Resultant Set of Policy**, and then click **Add**.
10. Click **Close**, and then click **OK**. Maximize the **Console1** window.
11. In the Console1 window, right-click **Resultant Set of Policy**, and then click **Generate RSoP Data**.
12. In the **Resultant Set of Policy Wizard**, on the **Mode Selection** page, click **Logging mode**, and then click **Next**.
13. On the **Computer Selection** page, click **This computer**, and then click **Next**.
14. On the **User Selection** page, click **Display policy settings for Current user**, and then click **Next**.
15. On the **Summary of Selections** page, click **Next**, and then click **Finish**.
16. In the MMC console, expand **Computer Configuration**, expand **Administrative Templates**, and then click **System Center Online Client**.
17. Double-click **Add the client to a group**.
18. Verify **7197A\_TEST** has been configured on SEA-CL1 as a client name, and then click **OK**.
19. Close the Console1 window. Do not save changes to the console.

### Exercise 3: Simulation of the Asset Inventory Service

The main tasks for this exercise are as follows:

1. Task Setup.

2. Use the Asset Inventory Service.
3. Close all virtual machines, and discard undo disks.

► **Task 1: Task Setup**

1. Open Windows Explorer and browse to **D:\Lab Files\PowerPoint Viewer 2007**.
2. Double-click **PowerPointViewer.exe**, and then click **Run**.
3. On the **License Terms** page, select the check box to accept the license terms, click **Continue**, and then click **OK**.
4. In the **D:\Lab Files\PowerPoint Viewer 2007** folder, double-click **7197A04\_Ex3.ppt**.
5. In the **Office PowerPoint Viewer**, click **Accept**. The Asset Inventory Service simulation starts.

► **Task 2: Use the Asset Inventory Service**



**Note:** Press ENTER or click the mouse button to simulate each step below.

1. To log into the **Asset Inventory Service**, provide the appropriate credentials, and then click **Sign in**.
2. Click the **Computers Node**.
3. Verify that **SEA-CL2** has reported to the service in the computers node.
4. Verify that **SEA-CL2** is assigned to the correct group, **7197A\_TEST**.
5. Click **SEA-CL2**, and then click **Run Report**.
6. Click the scroll bar, and then click **Review Installed Software in the Report**. You can now see an inventory of installed programs.
7. Close the Internet Explorer window, which will close the report.
8. Click **Management and Support node**, and then review available options.
9. Click **Client Deployment**. This is where you can download the Client application and the AIS administrative template.
10. Click the **Software** node. Notice that you can view all software that has been reported.
11. Click the **Reports** node.
12. View a program report, and view a change report.

► **Task 3: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

# Module 5

## Repairing and Diagnosing Computer Systems Using the Diagnostics and Recovery Toolset

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab: Repairing a Computer Using DaRT

### Answer Key

Exercise 1: Creating the ERD Commander Disk

Exercise 2: Experimenting with ERD Recovery Tools

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL1, 7197A-SEA-CL3**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 30 minutes

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### Exercise 1: Creating the ERD Commander Disk

#### The main tasks for this exercise are:

1. Start the virtual machines, and log on.
2. Install DaRT 5.0.
3. Install Debugging Tools for Windows.
4. Use the ERD Commander Boot Media wizard to create an ISO.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to **7197A-SEA-DC1**, click **Launch**.
3. In the Lab Launcher, next to **7197A-SEA-CL1**, click **Launch**.
4. Log on to both computers as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
5. Minimize the Lab Launcher window.

#### ► Task 2: Install DaRT 5.0

1. On SEA-CL1, click the **Start** button, click **My Computer**, and then double-click **Drive D**.
2. Browse to the **LabFiles\Dart** folder, and then double-click **MSDaRT50.msi**.
3. In the **Microsoft Diagnostics and Recovery Toolset 5.0 Setup Wizard**, click **Next**.
4. On the **End-User License Agreement** page, click **I Agree**.
5. In the **Select Installation Folder** dialog box, leave the default options, and then click **Next**.
6. In the **Choose Setup Type** dialog box, click **Complete**.
7. In the **Ready to Install** dialog box, click **Install**.
8. When the installation wizard is complete, click **Finish**.
9. Close the DaRT window.

► **Task 3: Install Debugging Tools for Windows**

1. On SEA-CLI, click the **Start** button, click **My Computer**, and then double-click **Drive D**.
2. Browse to the **LabFiles\debugTool** folder, and then double-click **dbg\_x86\_6.8.4.0.msi**. Click **Run**.
3. In the **Debugging Tools for Windows Setup Wizard**, click **Next**.
4. On the **End-User License Agreement** page, click **I agree**, and then click **Next**.
5. On the **User Information** page, click **Next**.
6. In the **Select an Installation Type** dialog box, click **Typical**, and then click **Next**.
7. In the **Select an Installation Location**, leave the default options, and then click **Next**.
8. In the **Begin Update** dialog box, click **Next**.
9. When the installation wizard is complete, click **Finish**.
10. Close the debugTool window.

► **Task 4: Use the ERD Commander Boot Media wizard to create an ISO**

1. On SEA-CLI, click **Start**, click **All Programs**, click **Microsoft Diagnostics and Recovery Toolset**, and then click **ERD Commander Boot Media Wizard**.
2. In the ERD Commander Boot Media Wizard, click **Next**.
3. In the **Preparing Files** dialog box, click **Next**.
4. In the **Tool Selection** dialog box, ensure that all tools are listed in the **Include these tools** column, and then click **Next**.
5. In the **Crash Analyzer Wizard** dialog box, leave the default option for the Windows debugging tools path, and then click **Next**.
6. In the **Additional Storage Drivers** dialog box, click **Next**.



**Note:** This is where you are required to add drivers if you need to support custom storage systems.

7. In the **Additional Network Controller Drivers** dialog box, click **Next**.



**Note:** This is where you would be required to add drivers if you needed to support custom network systems.

8. In the **Additional Files** dialog box, leave the default options, and then click **Next**.
9. In the **Create Startup Image** dialog box, click **Browse**, click **Desktop**, click **Save**, and then click **Next**.
10. On the **Burn to a recordable CD** page, click **Next**, and then click **Finish**.

## Exercise 2: Experimenting with the ERD Recovery Tools

The main tasks for this exercise are:

1. Analyze a .dmp file using the Crash Analyzer Wizard.

2. Reboot SEA-CL1 into the ERD Commander Environment.
3. Review computer management settings.
4. Reset the administrative password.
5. Reboot SEA-CL1 into Windows® XP.
6. Verify that the password was changed on the target computer.
7. Restore a file using File Restore.
8. Start SEA-CL3 into the System Recovery environment using DaRT 6.0.
9. Close all virtual machines, and discard undo disks.

► **Task 1: Analyze a .dmp file using the Crash Analyzer Wizard**

1. On **SEA-CL1**, click **Start**, click **All Programs**, click **Microsoft Diagnostics and Recovery Toolset**, and then click **Crash Analyzer Wizard**.
2. On the **Welcome** page, click **Next**.
3. In the **Specify Microsoft Debugging Tools for Windows** dialog box, note the path for Windows Debug Tools, and then click **Next**.
4. In the **Specify Symbol Files Location** dialog box, select **Use symbol files located in this directory**.
5. Click the browse button (...), browse to **D:\labfiles\debugTool\symbols**, click **OK**, and then click **Next**.
6. In the **Specify Dump File** dialog box, click the browse button (...), open **D:\labfiles\debugtool\memory.dmp**, click **OK**, and then click **Next**.
7. After the Crash Analyzer has completed, note the displayed message. Click **details** to view additional .dmp file details.
8. Click **OK** to close the Analysis Details window. Click **Next**.
9. Read the recommendations and then click **Finish**.

► **Task 2: Reboot SEA-CL1 into the ERD Commander environment**

1. On your host machine, open the **Virtual Server Administration Website**.
2. In the Administration console, in the left-hand pane, under **Virtual Machines**, click **Configure**.
3. Click **7197-SEA-CL1**.
4. In the details pane, under “**7197-SEA-CL1 Configuration**”, click **CD\DVD**.
5. On the “**7197-SEA-CL1**” **CD/DVD Drive Properties** page, click the **Known image files** option.
6. In the **Fully qualified path to file** box, type **C:\Program Files\Microsoft Learning\7197\Drives\ERD50.iso**, click **OK**, and then minimize the **Administration** console.
7. On SEA-CL1, in the **ERD** dialog box, click **Cancel**.
8. Click **Start**, and then click **Shut Down**. In the **Shut Down Windows** dialog box, click **Restart**, and then click **OK**. The computer restarts using the bootable ISO file.
9. In the ERD commander window, choose **C:\Windows**, choose your keyboard type and your time zone, and then click **OK**.

► **Task 3: Review computer management settings**

1. Click **Start**, click **Administrative Tools**, and then click **System Information**. This opens a Microsoft Management Console (MMC) that displays system information in the right pane.
2. In the left pane, expand the **Event Viewer** node. Review the Event Viewer log files.
3. In the left pane, expand the **Autoruns** node.
4. Click **System**, and review software in the right pane that runs automatically.
5. In the left pane, click **Services and Drivers**.
6. Click **Drivers**, double-click any driver in the list, review the path to the driver, and look at the Startup Type.
7. Click the drop-down menu to review startup options, and then close the **Driver** dialog box.
8. Click **Services**, and then click **Review Services**.
9. Click **Disk Management**, and then review the setting in the right pane.
10. Close the Computer Management console.

► **Task 4: Reset the administrative password**

1. Click the **Start Menu**, click **System Tools**, and then click **Locksmith**.
2. In the **Locksmith Wizard**, click **Next**.
3. Select the **Administrator** account.
4. In the **New Password** and **Confirm Password** boxes, type **Pa\$\$w0rd1**, and then click **Next**.
5. Click **Finish**.

► **Task 5: Reboot SEA-CL1 into Windows XP**

1. On SEA-CL1, click **Start**, and then click **Log off**.
2. Choose **Restart**, and then click **OK**.
3. On your **host** machine, restore the **Virtual Server Administration Website**.
4. In the Administration console, in the left pane, under **Virtual Machines**, click **Configure**.
5. Click **7197-SEA-CL1**.
6. In the details pane, under “**7197-SEA-CL1 Configuration**”, click **CD/DVD**.
7. On the “**7197-SEA-CL1**” **CD/DVD Drive Properties** page, click the **no media** option, and then click **OK**.
8. Close the Administration console.

► **Task 6: Verify that the password was changed on the target computer**

1. On SEA-CL1, log onto the computer as **SEA-CL1\Administrator** using the password **Pa\$\$w0rd1**. This is the new password configured in the ERD environment.
2. Log off of SEA-CL1.

► **Task 7: Restore a file using File Restore**

1. Log on to SEA-CL1 as **Contoso\Administrator** with the password of **Pa\$\$w0rd**.

2. On SEA-CL1, browse to **D:\Labfiles**.
3. Delete the **Excel Viewer** folder, and empty the **Recycle Bin**.
4. To restore the deleted files, click **Start**, point to **All Programs**, point to **Microsoft Diagnostics and Recovery Toolset**, and then click **File Restore**.
5. In the **File Restore** box, in the **Look in** box, select **Drive D**.
6. Select the check box next to **Search for files in deleted directories**.
7. Click **Search**. All deleted files are listed.
8. Right-click **xlviewer.exe**, and then click **Copy to Folder**.
9. In the **Browse for Folder** box, click **Desktop**, and then click **OK**.
10. Close the File Restore application. Xlviewer should be visible on the desktop.

► **Task 8: Start SEA-CL3 into the System Recovery environment using DaRT 6.0**

1. Restore the Lab Launcher window.
2. In the Lab Launcher, next to **7197A-SEA-CL3**, click **Launch**.
3. On your host machine, open the **Virtual Server Administration Website**.
4. In the Administration console, in the left-hand pane, under **Virtual Machines**, click **Configure**.
5. Click **7197-SEA-CL3**.
6. In the details pane, under “**7197-SEA-CL3 Configuration**”, click **CD\DVD**.
7. On the “**7197-SEA-CL3**” **CD/DVD Drive Properties** page, click the **Known image files** option.
8. In the **Fully qualified path to file** box, type **C:\Program Files\Microsoft Learning\7197\Drives\ERD60.iso**. Click **OK**.
9. Click **7197A-SEA-CL3** and then click **Reset**. Click **OK**. SEA-CL3 starts using the attached bootable ISO file.
10. In the **NetStart** box, click **Yes**.
11. In the **System Recovery Options** box, click **Next**.
12. Click **Next** again to load the **System Recovery Options** page. You are presented with a dialog box with various recovery tools.
13. Click **Microsoft Diagnostics and Recovery Toolset**.
14. Browse through the various tools.
15. When you are finished, click **Close**.
16. On your host machine, restore the **Virtual Server Administration Website**.
17. In the Administration console, in the left-hand pane, under **Virtual Machines**, click **Configure**.
18. Click **7197-SEA-CL3**.
19. In the details pane, under “**7197-SEA-CL3 Configuration**”, click **CD\DVD**.
20. On the “**7197-SEA-CL3**” **CD/DVD Drive Properties** page, click the **no media** option, and then click **OK**.

21. Close the Administration console.

► **Task 9: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

# Module 6

## Introduction to the Microsoft Application Virtualization Management System

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab: Examining Application Virtualization Basics

### Answer Key

Exercise 1: Examining an Application Virtualization Package

Exercise 2: Examining Standard Application Installation

Exercise 3: Examining Virtualized Applications

Logon Information:

- Virtual Machine: **7197A-SEA-DC1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**
- Virtual Machine: **7197A-SEA-CL2**
- User Name: **Ben**
- Password: **Pa\$\$w0rd**

Estimated time: 30 minutes

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### Exercise 1: Examining an Application Virtualization Package

The main tasks for this exercise are:

1. Start the virtual machines and log on.
2. Examine the Word Viewer 2003 Application Virtualization package.
3. Compare the Word Viewer 2003 Application Virtualization package to the Word Viewer 2003 installation files.

#### ► Task 1: Start the virtual machines and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. Log on to **SEA-DC1** as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
4. Minimize the Lab Launcher window.

#### ► Task 2: Examine the Word Viewer 2003 Application Virtualization package

1. Click **Start**, and then click **Run**.
2. In the **Run** dialog box, type **\\SEA-DC1\Content**, and then click **OK**.
3. Open the **\\SEA-DC1\Content\MS\_WordViewer\_Pilot** folder.

**Question:** What files are found in the MS\_WordViewer\_Pilot package?

**Answer:** MSWordViewer\_Pilot Icons folder, MSWordViewer\_Pilot.osd, MSWordViewer\_Pilot.sft, MSWordViewer\_Pilot.sprj, and MSWordViewer\_Pilot\_manifest.xml.

**Question:** How large is the MS\_WordViewer\_Pilot package? Which file is the largest?

**Answer:** The MS\_WordViewer\_Pilot package is approximately 43 megabyte (MB). The largest file is MSWordViewer\_Pilot.sft file.

**Question:** Why is the MSWordViewer\_Pilot.sft file so large?

**Answer:** This file contains all the files that make up the virtual environment.

► **Task 3: Compare the MS\_WordViewer\_Pilot Application Virtualization package to the Word Viewer 2003 Installation Files**

1. Click **Start**, and then click **Run**
2. In the **Run** dialog box, type **\\SEA-DC1\Install\Word Viewer 2003**, and then click **OK**.

**Question:** How large is the Word Viewer 2003 file, wdviewer.exe?

**Answer:** Approximately 12 MB in size.

**Question:** Why is the Application Virtualization package so much larger than the Installation files?

**Answer:** The Application Virtualization package includes the virtual environment as well as the application.

3. Close all open windows and log off of SEA-DC1.

## **Exercise 2: Examining Standard Application Installation**

The main tasks for this exercise are:

1. Start the SEA-CL2 virtual machine and log on.
2. Examine the operating system.
3. Attempt to install Word Viewer 2003.
4. Grant user rights to allow application installation.
5. Install Word Viewer 2003.
6. Examine system changes.
7. Attempt to install Word Viewer 2007.
8. Shut down and discard changes to SEA-CL2.

► **Task 1: Start the SEA-CL2 virtual machine and log on**

1. In the Lab Launcher, next to 7197A-SEA-CL2, click **Launch**.
2. Log on to **SEA-CL2** as **Contoso\Ben** using the password **Pa\$\$w0rd**.
3. Minimize the Lab Launcher window.

► **Task 2: Examine the operating system**

1. Open Windows® Explorer, browse to **C:\Program Files**, and note which folders are in C:\Program Files.

2. Close Windows Explorer.
3. Click **Start**, and then click **Run**.
4. In the **Run** dialog box, type **REGEDT32**, and then click **OK**.
5. Expand and browse to **HKEY\_Local\_Machine\Software\Microsoft\Office\11.0**.

**Question:** What keys can you see?

**Answer:** The Registration key.

► **Task 3: Attempt to install Word Viewer 2003**

1. Click **Start**, and then click **Run**.
2. In the **Run** dialog box, type: **\\SEA-DC1\Install\Word Viewer 2003**, and then click **OK**.
3. Double-click the **wdviewer.exe** file, and then click **Run**.
4. Read the **Microsoft Office Word Viewer 2003 Setup** message, and then click **OK**.
5. On the **Microsoft Office Word Viewer 2003 Setup** dialog box, click **OK**.
6. Log off of SEA-CL2.

► **Task 4: Grant user rights to allow application installation**

1. Log on to **SEA-CL2** as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
2. Click **Start**, right-click **My Computer**, and then select **Manage**.
3. Expand **Local Users and Groups**, and then click **Groups**.
4. Double-click **Administrators**.
5. Click **Add...**
6. **Type Contoso\Ben**, click **Check Names**, and then click **OK**.
7. In the **Administrators Properties** dialog box, click **OK**.
8. Log off of SEA-CL2.

► **Task 5: Install Word Viewer 2003**

1. Log on to **SEA-CL2** as **Contoso\Ben**, using the password **Pa\$\$w0rd**.
2. Click **Start**, and then click **Run**.
3. In the **Run** dialog box, type **\\SEA-DC1\Install\Word Viewer 2003**, and then click **OK**.
4. Double-click the **wdviewer.exe** file, and then click **Run**.
5. On the **Microsoft Office Word Viewer 2003 Setup** dialog box, select the **I accept the terms in the License Agreement** check box, and then click **Next**.
6. On the **Microsoft Office Word Viewer 2003 Setup** dialog box, click **Install**.
7. On the **Microsoft Office Word Viewer 2003 Setup** dialog box, click **OK**.
8. Close the Word Viewer 2003 window.

► **Task 6: Examine System Changes**

1. Open Windows Explorer and browse to **C:\Program Files**.

**Question:** Are there any additional folders in C:\Program Files?

**Answer:** Yes, Microsoft® Office.

2. Close Windows Explorer.
3. Click **Start**, and then click **Run**.
4. In the **Run** dialog box, type **REGEDT32**, and then click **OK**.
5. Expand **HKEY\_Local\_Machine**, expand **Software**, expand **Microsoft**, expand the **Office** key, and then expand **11.0**.

**Question:** What keys can you see?

**Answer:** Common, Delivery, Registration, and Wordview.

6. Close the Registry Editor.

► **Task 7: Attempt to install Word Viewer 2007**

1. Click **Start**, and then click **Run**.
2. In the **Run** dialog box, type **\\SEA-DC1\Install\Word Viewer 2007**, and then click **OK**.
3. Double-click the **wordview\_en-us.exe** file, and then click **Run**.
4. Read the **Microsoft Office Word Viewer** dialog box, and then click **No**.

**Question:** Why were you unable to Install Word Viewer 2007?

**Answer:** A previous version is already installed.

► **Task 8: Shut down and discard changes to SEA-CL2**

1. On SEA-CL2, close the Virtual Machine Remote Control (VMRC) window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.

### **Exercise 3: Examine Virtualized Applications**

The main tasks for this exercise are:

1. Start the 7197A-SEA-CL2 virtual machine and log on.
2. Enable the virtualized applications.
3. Examine the operating system.
4. Test the Application Virtualization Client.
5. Examine system changes.
6. Shut down all virtual machines.

► **Task 1: Start the 7197A-SEA-CL2 virtual machine and log on**

1. In the Lab Launcher, next to **7197A-SEA-CL2**, click **Launch**.

2. Log on to **SEA-CL2** as **Contoso\Ben** using the password **Pa\$\$w0rd**.
3. Minimize the Lab Launcher window.

► **Task 2: Enable the Virtualized Applications**

1. Log on to **SEA-DC1** as **Administrator** with the password of **Pa\$\$w0rd**.
2. Click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
3. Click the **Applications** node.
4. Right-click **Word Viewer 2007**, and then click **Properties**.
5. On the **Shortcuts** tab, select the check box next to **Publish to User's Desktop**, and then click **OK**.
6. Right-click **MS Word Viewer\_Pilot**, and then click **Properties**.
7. On the **Shortcuts** tab, select the check box next to **Publish to User's Desktop**, and then click **OK**.

► **Task 3: Examine the Operating System**

1. On SEA-CL2, open **Windows Explorer** and browse to **C:\Program Files**.
2. Verify that the **Microsoft Office** folder does not exist.
3. Close Windows Explorer.

► **Task 4: Test the Application Virtualization desktop client**

1. In the notification area, right-click the **Application Virtualization** desktop client, and then select **Refresh Applications**.
2. Double-click the **MS Word Viewer\_Pilot** shortcut on the desktop.

**Question:** How long did Microsoft Office Word Viewer 2003 take to start? Why did it take so long?

**Answer:** It took about a minute, because the virtual environment needed to be downloaded.

3. In the **Open** dialog box, click **Cancel**.
4. In **Microsoft Word Viewer**, click **Help**, and then select **About Microsoft Word Viewer**.

**Question:** What is the Version number?

**Answer:** Microsoft Office Word Viewer 2003 (11.6506.6505) SP1

5. On the **About Microsoft Word Viewer** dialog box, click **OK**.
6. Close Microsoft Word Viewer.
7. Double-click the MS Word Viewer\_Pilot shortcut on the desktop.

**Question:** How long did it take to start? Why was it quicker?

**Answer:** It only took a few seconds this time, because the virtual environment was already downloaded.

8. In the **Open** dialog box, click **Cancel**.
9. Close Microsoft Word Viewer.
10. Double-click the **Word Viewer 2007** shortcut on the desktop.

11. In the **Open** dialog box, click **Cancel**.
12. In **Microsoft Word Viewer**, click **Help**, and then select **About Microsoft Word Viewer**.

**Question:** What is the Version number?

**Answer:** Microsoft Office Word Viewer (11.8169.8172) SP3

13. In the **About Microsoft Word Viewer** dialog box, click **OK**.
14. Close Microsoft Word Viewer.

#### ► **Task 5: Examine system changes**

1. Open Windows Explorer and browse to C:\Program Files.

**Question:** Is there a Microsoft Office folder? Why or Why not?

**Answer:** No, the virtual environment installs in a different location.

2. Close Windows Explorer.
3. Click **Start**, and then click **Run**.
4. In the **Run** dialog box, type **REGEDT32**, and then click **OK**.
5. Expand **HKEY\_Local\_Machine**, expand **Software**, expand **Microsoft**, expand the **Office** key, and then expand **11.0**.

**Question:** What keys can you see? Why?

**Answer:** You can see the Registration key, installing the virtual environment does not write to this registry key.

6. Expand **HKEY\_Local\_Machine**, expand **Software**, expand **Microsoft**, expand **SoftGrid**, expand **4.5**, expand **Client**, and then expand **Applications**.

**Question:** What is the **DescriptionURL** for the **MS Word Viewer\_Pilot** application?

**Answer:** C:\Documents and Settings\All Users\Documents\SoftGrid Client\OSD Cache\{GUID}.

**Question:** What is the **OriginalDescriptionURL** for the **MS Word Viewer\_Pilot** application?

**Answer:** \\SEA-DC1\Content\ MS Word Viewer\_Pilot\ MS Word Viewer\_Pilot.osd.

7. Under the **Client** key, click **AppFS**.

**Question:** Where are the virtual environments stored on the physical system?

**Answer:** (GlobalFileSystemStorage) -- C:\Documents and Settings\All Users\Documents\SoftGrid Client\AppFS Storage.

8. Close the Registry Editor.

#### ► **Task 6: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

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# Module 7

## Application Virtualization Management Architecture

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab: Using the Microsoft Application Virtualization Streaming Server

### Answer Key

Exercise 1: Installing a Microsoft Application Virtualization Streaming Server.

Exercise 2: Copying a Package onto the Microsoft Application Virtualization Streaming Server.

Exercise 3: Configuring a Client to use the Microsoft Application Virtualization Streaming Server.

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-SVR1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**
- Virtual Machine: **7197A-SEA-CL2**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 30 minutes

---

## Exercise 1: Installing a Microsoft Application Virtualization Streaming Server

The main tasks for this exercise are:

1. Start the virtual machines, and log on.
2. Install the Application Virtualization Streaming Server.
3. Share the Content Folder.

### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-SVR1, click **Launch**.
4. Log on to each computer as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
5. Minimize the Lab Launcher window.

### ► Task 2: Install the Application Virtualization Streaming Server

1. On SEA-SVR1, click **Start**, click **Run** and in the Open box type: **\\SEA-1\MSAppVirt\MSAppVirt\_streaming\_server\_setup\_4.5.0.606**, and then click **OK**.
2. Double click **Setup.exe**, and then click **Run**.
3. On the **Welcome to the Microsoft System Center Virtual Application Server Install Wizard** page, click **Next**.

4. On the **License Agreement** page, check **I accept the licensing terms and conditions**, and then click **Next**.
5. On the **Customer Information** page, type the following information, and then click **Next**:
  - User Name: **Admin**
  - Organization: **Contoso**
6. On the **Installation Path** page, click **Next**.
7. On the **SoftGrid Secure Communication Mode** page, click **Next**.
8. On the **SoftGrid Port Settings** page, click **Next**.
9. On the **Content Root** page, click **Next**.
10. On the **Advanced Settings** page, set the Package Detection Interval to **300 seconds**, and then click **Next**.
11. On the **Ready to Install the Program** page, click **Install**.
12. On the **InstallShield Wizard Complete** page, click **Finish**.
13. Close the Windows® Explorer window.

► **Task 3: Share the Content Folder**

1. Open a **Windows Explorer** window, and browse to **C:\Program Files\Microsoft SoftGrid\Microsoft System Center Virtual Application Server\SoftGrid Server**.
2. Right-click the **Content** folder, and then click **Sharing and Security...**
3. On the **content Properties, Sharing** tab, select **Share this folder**, and then click **OK**.
4. Leave Windows Explorer open for the next exercise.

## Exercise 2: Copying a Package onto the Microsoft Application Virtualization Streaming Server

The main tasks for this exercise are:

1. Copy the Word 2003 package to the Content share.
2. Configure the Application Virtualization Management Server.

► **Task 1: Copy the Word 2003 package to the Content share**

1. On SEA-SVR1, click **Start**, click **Run**, in the **Open** box, type: **\\SEA-DC1\Content**, and then click **OK**.
2. Copy the **MS\_WordViewer\_Pilot** folder from the **Content** folder on SEA-DC1 to the **Content** folder on SEA-SVR1.
3. Close both Windows Explorer windows.

► **Task 2: Configure the Application Virtualization Management Server**

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
2. In the Console tree, expand **SEA-DC1**.
3. Select **Applications**.

4. In the details pane, right-click **MS Word Viewer\_Pilot**, and then click **Properties**.
5. On the **Shortcuts** page, check **Publish to User's Desktop**.
6. On the **Access Permissions** page, verify that the **Word Viewer Pilot Group** has permissions, and then click **OK**.
7. Close the SoftGrid Management Console and log off of SEA-DC1.

### Exercise 3: Configure a Client to use the Microsoft Application Virtualization Streaming Server

The main tasks for this exercise are:

1. Start the SEA-CL2 virtual machine and log on.
  2. Configure the Microsoft Application Virtualization Streaming Server as the DC Refresh server.
  3. Force a DC Refresh on the streaming server.
  4. Force a DC Refresh on the Default management server.
  5. Configure the Client registry settings.
  6. Force a DC Refresh.
  7. Close all virtual machines, and discard undo disks.
- **Task 1: Start the SEA-CL2 virtual machine and log on**
1. In the Lab Launcher, next to **7197A-SEA-CL2**, click **Launch**.
  2. Log on as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
  3. Minimize the Lab Launcher window.
- **Task 2: Configure the Microsoft Application Virtualization Streaming Server as the DC Refresh server**
1. On SEA-CL2, click **Start**, point to **All Programs**, point to **Administrative Tools**, and then click **Application Virtualization Client**.
  2. Right-click **Desktop Configuration Servers**, and then select **New Server...**
  3. On the **New Desktop Configuration Server – Step 1** page, in the **Display Name:** field, type **Streaming Server**. From the **Type:** dropdown list box, select **SoftGrid Virtual Application Server**, and then click **Next**.
  4. On the **New Desktop Configuration Server – Step 2** page, in the **Host Name:** field, type **SEA-SVR1.Contoso.Com**, and then click **Finish**.
- **Task 3: Force a DC Refresh on the Streaming server**
1. In the Application Virtualization Client, select the **Desktop Configuration Servers** node.
  2. Right-click **Streaming Server**, and then select **Refresh Server**.

**Question:** What were the results? Why?

**Answer:** A SoftGrid error box pops up. The streaming server doesn't have the ability to perform a DC Refresh.

3. In the **Dialog** box, click **OK**.
4. Right-click **Streaming Server**, select **Delete**, and then click **Yes**.

► **Task 4: Force a DC Refresh on the Default Management Server**

1. In the Application Virtualization Client, select the **Desktop Configuration Servers** node.
2. Right-click **SEA-DC1**, and then select **Refresh Server**.

**Question:** What were the results?

**Answer:** The server refreshed because the client is currently connecting to the main management server (SEA-DC1).

► **Task 5: Configure the Client registry settings**

1. On SEA-CL2, click **Start**, click **Run**, in the **Open** box type: **Regedit**, and then click **OK**.
2. Expand **HKEY\_Local\_Machine**, expand **Software**, expand **Microsoft**, expand **SoftGrid**, expand **4.5**, expand **Client**, and then select **Configuration**.
3. Set the following values:
  - a. ApplicationSourceRoot **RTSP://SEA-SVR1.Contoso.Com**
  - b. IconSourceRoot **\\SEA-SVR1.Contoso.Com\Content**
  - c. OSDSourceRoot **\\SEA-SVR1.Contoso.Com\Content**
4. Close the Registry Editor.
5. Restart SEA-CL2.
6. Log on as **Contoso\Administrator** using the password **Pa\$\$w0rd**.

► **Task 6: Force a DC Refresh**

1. Click **Start**, point to **All Programs**, point to **Administrative Tools**, and then click **Application Virtualization Client**.
2. In the Application Virtualization Client, select the **Desktop Configuration Servers node**.
3. Right-click **SEA-DC1** and then select **Refresh Server**.

**Question:** What were the results?

**Answer:** The server still refreshes.

4. On the Desktop, double-click the **MS Word Viewer\_Pilot** icon.
5. In the **Open** dialog box, click **Cancel**.
6. Close the Microsoft Word Viewer.
7. In the Application Virtualization Client, select **Applications**.
8. Right-click the **MS Word Viewer\_Pilot 2003** application, and then select **Properties**.
9. Click the **Package** tab.

**Question:** What is the Package URL for the application?

**Answer:** RTSP://SEA-SVR1.Contoso.com/MS\_WordViewer\_Pilot/MSWordViewer\_Pilot.sft

► **Task 7: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

# Module 8

## Planning and Deploying the Application Virtualization Management System

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab: Installing the Application Virtualization Management Server

### Answer Key

Exercise 1: Verifying Pre-Installation Requirements

Exercise 2: Installing the Application Virtualization Management Server

Exercise 3: Preparing the Content Directory for Application Streaming

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-SVR1**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**
- Virtual Machine: **7197A-SEA-CL2**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 30 minutes

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### Exercise 1: Verifying Pre-Installation Requirements

The main tasks for this exercise are as follows:

1. Start the virtual machines and log on.
2. Create Groups for Application Virtualization.
3. Start the SEA-SVR1 virtual machine and log on.
4. Run the Application Virtualization setup program.
5. Configure Internet Information Services (IIS) to support the Application Virtualization Management Server.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. Log on as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
4. Minimize the Lab Launcher window.

#### ► Task 2: Create Groups for Application Virtualization

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **Active Directory Users and Computers**.
2. Expand **Contoso.com**, and then click the **Users container**.

3. Right-click **Users**, point to **New**, and then select **Group**.
  4. Fill in the **New Object – Group dialog** box with **Group Name: AppVirt Administrators**.
  5. On the **New Object – Group** dialog box, click **OK**.
  6. Double-click **AppVirt Administrators**.
  7. Select the **Members** tab, and then click **Add...**
  8. In the **Select Users, Contacts, Computers, or Groups** dialog box, type **Domain Admins**.
  9. Click **Check Names**, and then click **OK**.
  10. In AppVirt Administrators Properties window, click **OK**.
  11. Right-click **Users**, point to **New**, and then select **Group**.
  12. Fill in the **New Object – Group** dialog box with **Group Name: AppVirt Users**.
  13. In the **New Object – Group** dialog box, click **OK**.
  14. Double-click **AppVirt Users**.
  15. Select the **Members** tab, and then click **Add...**
  16. In the **Select Users, Contacts, or Computers** dialog box, type **Administrator**.
  17. Click **Check Names**, and then click **OK**.
  18. In AppVirt Users Properties window, click **OK**.
  19. Close Active Directory Users and Computers.
  20. Log off of SEA-DC1.
- **Task 3: Start the SEA-SVR1 virtual machine and log on**
1. In the Lab Launcher, next to 7197A-SEA-SVR1, click **Launch**.
  2. Log on as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
  3. Minimize the Lab Launcher window.
- **Task 4: Run the Application Virtualization setup program**
1. On SEA-SVR1, click **Start**, click **Run**, in the **Open** box, type **\\SEA-DC1\MSAppVirt**, and then click **OK**.
  2. Double-click the **MSAppVirt\_server\_setup\_4.5.0.606** folder.
  3. Double-click **Setup.exe**, and then click **Run**.
  4. On the Warning message, click **OK**. MMC 3.0 has already been installed.
  5. On the **Welcome to the Microsoft System Center Virtual Application Server Install Wizard** page, click **Next**.
  6. On the **License Agreement** page, check **I accept the license terms and conditions**, and then click **Next**.
  7. On the **Registering Information** page, under **Name**, type **Admin**. Under **Organization**, type **Contoso**, and then click **Next**.
  8. On the **Setup Type** page, select **Custom**, and then click **Next**.

**Question:** Which components are installed with this setup program?

**Answer:** Virtual Application Server, Management Console, and Management Web Service.

9. On the **Custom Setup** page, click **Next**.
10. Read the **Required Software** page, and then click **Finish**.
11. Read the **InstallShield Wizard Completed** page, and then click **Finish**.

**Question:** What Windows® 2003 components are missing?

**Answer:** Microsoft .NET Framework Version 2.0, and Microsoft Internet Information Server Web Service.

► **Task 5: Configure IIS to support the Application Virtualization Management Server**

1. Click **Start**, point to **Control Panel**, and then click **Add or Remove Programs**.
2. Click **Add/Remove Windows Components**.
3. Click **Application Server**, and then click **Details...**
4. Check **Internet Information Services (IIS)**.
5. Check **ASP.Net**, and then click **OK**.
6. On the **Windows Components** page, click **Next**.
7. On the **Completing the Windows Components Wizard** page, click **Finish**.
8. Close Add or Remove Programs.

## Exercise 2: Installing the Application Virtualization Management Server

The main task for this exercise is as follows:

- Perform a typical installation of the Application Virtualization Server.

► **Task: Perform a typical installation of the Application Virtualization Server**

1. If necessary, on SEA-SVR1, click **Start**, click **Run**, in the **Open** drop-down combo box, type **\\SEA-DC1\MSAppVirt**, and then click **OK**.
2. Double-click the **MSAppVirt\_server\_setup\_4.5.0.606** folder.
3. Double-click **Setup.exe**, and then click **Run**.
4. On the Warning message, click **OK**. MMC 3.0 has already been installed.
5. On the **Welcome to the Microsoft System Center Virtual Application Server Install Wizard** page, click **Next**.
6. On the **License Agreement** page, select the **I accept the license terms and conditions** check box, and then click **Next**.
7. On the **Registering Information** page, under **Name**, type **Admin**. Under **Organization**, type **Contoso**, and then click **Next**.
8. On the **Setup Type** page, select **Typical**, and then click **Next**.
9. On the **Database Server Location** page, verify the **Server** field displays **(local)**.

10. On the **Database Server Location** page, click **Next**.
11. On the **Configuration Database** page, select **Create a new database**, and then click **Next**.
12. On the **SoftGrid Secure Communication Mode** page, click **Next**.
13. On the **SoftGrid Port Settings** page, click **Next**.
14. On the **Administrator Group** page, type **A**, and then click **Next**.
15. On the **Select the Administrator Group** page, select **AppVirt Administrators**, and then click **Next**.
16. On the **Default Provider Group** page, type **A**, and then click **Next**.
17. On the **Select Default Provider Group** page, select **AppVirt Users**, and then click **Next**.
18. On the **Content Path** page, click **Next**.
19. On the **Ready to Install the Program** page, click **Install**.
20. Read the **InstallShield Wizard Completed** page, and then click **Finish**.
21. Close the Windows Explorer window.

### Exercise 3: Preparing the Content Directory for Application Streaming

The main tasks for this exercise are as follows:

1. Configure the Default Application for HTTP download.
2. Configure IIS for Application Sharing.
3. Create the Content Virtual Directory.
4. Start the SEA-CL2 virtual machine and log on.
5. Test Application Virtualization.
6. Close all virtual machines, and discard undo disks.

#### ► Task 1: Configure the Default Application for HTTP download

1. On SEA-SVR1, click **Start**, point to **Administrator Tools**, and then click **SoftGrid Management Console**.
2. In the **Action** menu, click **Connect to SoftGrid System**.
3. In the **Connect to SoftGrid System** dialog box, in the **Web Service Host Name** field, type **SEA-SVR1.Contoso.Com**, and then click **OK**.
4. Expand **SEA-SVR1.Contoso.com**, and then click the **Applications** node.
5. Double-click the **Default SoftGrid Application**.
6. Modify the **OSD Path:** field to read **Http://SEA-SVR1.Contoso.Com/Content/DefaultApp.osd**.
7. Modify the **ICO path:** field to read **Http://SEA-SVR1.Contoso.Com/Content/DefaultApp.ico**.

**Question:** How would the .osd path and .ico path be modified if the Content folder was going to be shared as a regular file share instead of a Web share?

**Answer:** Instead of using a URL, the paths would be modified with the correct UNC name such as \\SEA-SVR1\Content.

8. Click the **Shortcuts** tab.
9. Select the **Publish to User's Desktop** check box.
10. In the **Default SoftGrid Application Properties** dialog box, click **OK**.
11. Close the SoftGrid Management Console.

► **Task 2: Configure IIS for Application sharing**

1. On SEA-SVR1, click **Start**, point to **Administrator Tools**, and then click **Internet Information Services (IIS) Manager**.
2. Expand **SEA-SVR1 (Local Computer)**, expand **Web Sites**.
3. Right-click the **Default Web Site**, and then select **Properties**.
4. Click the **HTTP Headers** tab.
5. Click the **MIME Types...** command button.
6. In the **MIME Types** pane, click **New...**
7. In the **MIME Type** dialog box, type the following:  
Extension: **OSD**  
MIME Type: **application/softgrid-osi**
8. In the **MIME Type** dialog box, click **OK**.
9. In the **MIME Types** dialog box, click **OK**.
10. In the **Default Web Site Properties** box, click **OK**.

► **Task 3: Create the Content Virtual Directory**

1. Right-click the **Default Web Site**, point to **New**, and then select **Virtual Directory...**
2. On the **Welcome to the Virtual Directory Creation Wizard** page, click **Next**.
3. On the **Virtual Directory Alias** page, type **Content**, and then click **Next**.
4. On the **Web Site Content Directory** page, click **Browse...**
5. In the Browse For Folder window, click **Local Disk (C:)**, click **Program Files**, click **Microsoft SoftGrid**, click **Microsoft System Center Virtual Application Server**, click **SoftGrid Server**, select **Content**, and then click **OK**.
6. On the **Web Site Content Directory** page, click **Next**.
7. On the **Virtual Directory Access Permissions** page, click **Next**.
8. On the **You have successfully completed the Virtual Directory Creation Wizard** page, click **Finish**.
9. Close the Internet Information Services (IIS) Manager.
10. Log off of SEA-SVR1.

► **Task 4: Start the SEA-CL2 virtual machine and log on**

1. In the Lab Launcher, next to 7197A-SEA-CL2, click **Launch**.
2. Log on as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
3. Minimize the Lab Launcher window.

► **Task 5: Test the Application Virtualization Client**

1. On SEA-CL2, click **Start**, point to **All Programs**, point to **Administrative Tools**, and then click **Application Virtualization Client**.
2. Click the **Desktop Configuration Servers** node.
3. Right-click the **Desktop Configuration Servers** node, and then click **New Server**.
4. In the **New Desktop Configuration Server - Step 1** page, under **Display Name**, type **SEA-SVR1**.
5. Under **Type**, select **SoftGrid Virtual Application Server**, and then click **Next**.
6. On the **New Desktop Configuration Server - Step 2** page, under **Host Name**, type **SEA-SVR1**. Ensure that the Port is configured for **554**, and then click **Finish**.
7. Right-click **SEA-DC1**, click **Delete**, and then click **Yes**.
8. Close the Application Virtualization Client.
9. In the notification area, right-click the **Application Virtualization Client**, and then select **Refresh Applications**.
10. Double-click the **Default SoftGrid Application** shortcut on the desktop.

**Question:** Did the Application download and start?

**Answer:** Yes.

**Question:** What protocol was used to download the application files?

**Answer:** HTTP.

**Question:** What other methods are there for accessing the Content folder?

**Answer:** HTTPS, though IIS, or SMB when sharing the folder as a regular file share.

11. On the Softricity Default Application, click **OK**.

► **Task 6: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the Close window, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

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# Module 9

## Planning and Installing the Application Virtualization Client

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab A: Deploying the Application Virtualization Client in Standalone Mode

### Answer Key

Exercise 1: Installing and Configuring the Application Virtualization Client

Exercise 2: Installing a Standalone Application Virtualization Package

Logon Information:

- Virtual Machine: **7197A-SEA-CL3**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 20 minutes

---

### Exercise 1: Installing and Configuring the Application Virtualization Client

The main tasks for this exercise are as follows:

1. Start the virtual machine and log on.
2. Install the Application Virtualization Client.
3. Configure Standalone mode.

#### ► Task 1: Start the virtual machine, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-CL3, click **Launch**.
3. Log on as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
4. Minimize the Lab Launcher window.

#### ► Task 2: Install the Application Virtualization Client

1. Open Windows® Explorer, and browse to **D:\LabFiles\MSAppVirt\MSAppVirt\_wd\_setup\_4.5.0.606**.
2. Double-click **softgrid-wd-setup.exe**.
3. On the **InstallShield Wizard** page, click **Install**.
4. On the **Welcome to the InstallShield Wizard for Microsoft SoftGrid Application Virtualization for Desktops** page, click **Next**.
5. On the **License Agreement** page, select the radio button for **I accept the terms in the license agreement**, and then click **Next**.
6. On the **Microsoft Update Opt-In** page, click **Next**.
7. On the **Destination Folder** page, click **Next**.
8. On the **Cache Settings** page, clear the check box for **Skip advanced settings and accept defaults**, and then click **Next**.
9. On the **SoftGrid Data Location** page, click **Next**.

10. On the **Runtime Package Policy Configuration** page, clear the check box for **Require User authorization even when cached**, select the check box for **Allow streaming from file**, clear the check box for **On Launch**, clear the check box for **On Logon**, and then click **Next**.
11. On the **Desktop Configuration Server** page, click **Next**.
12. On the **SoftGrid Streaming Connection Security** page, select the radio button for **Allow any connection**, and then click **Next**.
13. On the **Ready to Install the Program** page, click **Install**.
14. On the **InstallShield Wizard Completed** page, click **Finish**.
15. Close the Windows Explorer window.

► **Task 3: Configure Standalone mode**

1. Click **Start**, and in the **Start Search** drop-down combo box, type **Regedit.exe**, and then press ENTER.
2. Expand **HKEY\_LOCAL\_MACHINE**, expand **SOFTWARE**, expand **Microsoft**, expand **SoftGrid**, expand **4.5**, and then expand **Client**.
3. Right-click **Network**, and then point to **New, DWORD (32-bit) Value**. Type the name **Offline**, and then press ENTER.
4. In the details pane, double-click **Offline**.
5. In the **Value data** field, ensure the setting is **0**, and then click **OK**.
6. Under **Client**, click **Permissions**.
7. In the details pane, double-click **ToggleOfflineMode**.
8. In the **Value data** field, type **0**, and then click **OK**.
9. Close the Registry Editor.

## Exercise 2: Installing a Standalone Application Virtualization Package

The main tasks for this exercise are as follows:

1. Install a Standalone package.
2. Examine the package properties.
3. Close all virtual machines, and discard undo disks.

► **Task 1: Install a Standalone package**

1. Open **Windows Explorer**, and browse to **D:\LabFiles\Microsoft\_Word\_Viewer\_MNT**.

**Question:** What files make up the package?

**Answer:** WordViewer2003.osd, setup\_Microsoft\_Word\_Viewer\_MNT.exe, Microsoft\_Word\_Viewer\_MNT.exe, WordViewer2003.sft, WordViewer2003.sprj, and WordViewer2003\_manifest.xml.

2. Double-click **Microsoft\_Word\_Viewer\_MNT.msi**.
3. On the **Welcome to the Microsoft\_Word\_Viewer\_MNT Setup Wizard**, click **Next**.
4. On the **Installation Complete** page, click **Close**.

5. Close Windows Explorer.
6. Click **Start**, click **All Programs**, and then click **Microsoft Word Viewer**.
7. In the **Open** dialog box, click **Cancel**.

► **Task 2: Examine the package properties**

1. Click **Start**, click **All Programs**, click **Administrative Tools**, and then click **Application Virtualization Client**.
2. Click **Applications**.

**Question:** What is the status of Microsoft Word Viewer 2003?

**Answer:** In Use (100%).

3. Right-click **Microsoft Word Viewer 2003**, and then click **Properties**.
4. On the **Microsoft Word Viewer 2003 Properties** page, click the **Package** tab.

**Question:** What is the Package URL?

**Answer:** RTSP://SEADC1: 554/Microsoft\_Word\_Viewer\_MNT/WordViewer2003.sft

**Question:** What is the Package URL Source?

**Answer:** .osd file

5. On the **Microsoft Word Viewer 2003 Properties** page, click **OK**.
6. Close the Application Virtualization Client.
7. Close the Microsoft Word Viewer.

► **Task 3: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** the dialog box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

## **Lab B: Deploying the Application Virtualization Client**

### **Answer Key**

Exercise 1: Installing and Configuring the Application Virtualization Client

Exercise 2: Testing the Client Install

Exercise 3: Configuring Root Node Options

Logon Information:

- Virtual Machines: **SEA-DC1, SEA-CL3**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 20 minutes

## Exercise 1: Installing and Configuring the Application Virtualization Client

The main tasks for this exercise are as follows:

1. Start the virtual machines and log on.
2. Install the Application Virtualization Client.

### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-CL3, click **Launch**.
4. Log on to both computers as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
5. Minimize the Lab Launcher window.

### ► Task 2: Install the Application Virtualization Client

1. On SEA-CL3, open **Windows Explorer**, and browse to **D:\LabFiles\MSAppVirt\MSAppVirt\_wd\_setup\_4.5.0.606**.
2. Double-click **softgrid-wd-setup.exe**.
3. On the **InstallShield Wizard** page, click **Install**.
4. On the **Welcome to the InstallShield Wizard for Microsoft SoftGrid Application Virtualization for Desktops** page, click **Next**.
5. On the **License Agreement** page, select the radio button for **I accept the terms in the license agreement**, and then click **Next**.
6. On the **Microsoft Update Opt-In** page, click **Next**.
7. On the **Destination Folder** page, click **Next**.
8. On the **Cache Settings** page, click **Next**.
9. On the **Desktop Configuration Server** page, select the check box for **Set up a Desktop Configuration Server now**, and fill in the following information:
  - Display Name: **SEA-DC1**
  - Type: **SoftGrid Virtual Application Server**
  - Host Name: **SEA-DC1.Contoso.com**
  - Port: **554**
10. On the **Desktop Configuration Server** page, click **Next**.
11. On the **SoftGrid Streaming Connection Security** page, select the radio button for **Allow any connection**, and then click **Next**.
12. On the **Ready to Install the Program** page, click **Install**.
13. On the **InstallShield Wizard Completed** page, click **Finish**.
14. Close the Windows Explorer window.

## Exercise 2: Testing the Client Install

The main task for this exercise is as follows:

- Load the default application.

### ► Task: Load the default application

1. On SEA-CL3, click **Start**, click **All Programs**, click **Administrative Tools**, and then click **Application Virtualization Client**.
2. Click **Applications**.

**Question:** What applications are listed?

Answer: None

3. Click **Desktop Configuration Servers**.
4. Right-click **SEA-DC1**, and then select **Refresh Server**.

**Question:** Did the default application icon appear on the desktop?

Answer: No

5. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
6. Click the **Applications** node, and then in the details pane, double-click **Default SoftGrid Application**.
7. On the **Shortcuts** tab, select the check box next to **Publish to User's Desktop**, and then click **OK**.
8. On SEA-CL3, in the Application Virtualization Client, right-click **SEA-DC1**, and then click **Refresh Server**. The Default Application icon now appears on the desktop.
9. On the desktop, double-click the **Default Application** icon.
10. In the **Default Application** dialog box, click **OK**.

## Exercise 3: Configuring Root Node Options

The main task for this exercise is as follows:

- Configure root node options to meet scenario requirements.

### ► Task: Configure Root node options to meet scenario requirements

1. In the Application Virtualization Client, right-click **Application Virtualization (Local)**, and then select **Properties...**
2. On the **General** tab, set the **System Log Level to Error**.
3. Click the **Interface** tab, and then select the Always show the **SoftGrid Client in the system tray** radio button.
4. Click the **File System** tab.
5. Set the Cache Maximum size (MB) to **3096**.
6. Click the **Connectivity** tab, and then set the Limit disconnected operation to (days) to **120**.

7. Click the **Permissions** tab, and then select the **Manage desktop configuration refresh settings** check box.
8. Select the **Publish shortcuts** check box.
9. In the **Application Virtualization (Local) Properties** dialog box, click **OK**.

**Question:** Did the Application Virtualization Client icon appear in the notification area?

Answer: No

10. Log off and log back on.

**Question:** Did the Application Virtualization Client icon appear in the notification area?

Answer: Yes

## Lab C: Managing Client Configuration Features

### Answer Key

Exercise 1: Modifying Desktop Configuration Server Options

Exercise 2: Configuring Applications Using the Desktop Client

Exercise 3: Configuring Offline Mode for Disconnected Operation

Logon Information:

- Virtual Machines: **SEA-DC1, SEA-CL3**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 40 minutes

### Exercise 1: Modifying Desktop Configuration Server Options

The main task for this exercise is as follows:

1. Configure the Desktop Configuration Server.

#### ► Task: Configure the Desktop Configuration Server

1. On SEA-CL3, click **Start**, click **All Programs**, click **Administrative Tools**, and then click **Application Virtualization Client**.
2. Click **Applications**.

**Question:** What applications are listed?

**Answer:** Default SoftGrid Application, MS Word Viewer\_Pilot 2003, and Word Viewer 2007.

**Question:** Which of the Applications are on the desktop?

**Answer:** Default SoftGrid Application

**Question:** How did the MS Word Viewer\_Pilot 2003 and Word Viewer 2007 applications get listed?

**Answer:** The default refresh interval is On Logon.

3. Select **Desktop Configuration Servers**.
4. Right-click **SEA-DC1**, and then select **Properties**.
5. Click the **Refresh** tab.
6. Select the **Refresh configuration every:** check box.
7. Specify **6 hours** for the refresh interval.
8. In the **SEA-DC1 Properties** dialog box, click **OK**.

## Exercise 2: Configuring Applications Using the Desktop Client

The main tasks for this exercise are as follows:

1. Configure the Microsoft Word Viewer\_Pilot 2003 Application.
2. Configure the Word Viewer 2007 Application.

### ► Task 1: Configure the MS Word Viewer\_Pilot 2003 Application

1. Click the **Applications** node.
2. Right-click **MS Word Viewer\_Pilot 2003**, and then select **New Shortcut**.
3. On the **New Shortcut-Step 1** page, specify the **Shortcut title** as **MS Word Viewer\_Pilot 2003**, and then click **Next**.
4. On the **New Shortcut-Step 2** page, select **The Desktop** check box, select the **Programs in the Start Menu** check box, and then click **Next**.
5. On the **New Shortcut-Step 3** page, click **Finish**.

**Question:** Did the Microsoft Office Word Viewer 2003 shortcut appear on the desktop?

**Answer:** Yes.

### ► Task 2: Configure the Word Viewer 2007 Application

1. Right-click **Word Viewer 2007**, and then select **New Shortcut**.
2. On the **New Shortcut-Step 1** page, specify the **Shortcut title** as **Word Viewer 2007**, and then click **Next**.
3. On the **New Shortcut-Step 2** page, select the **Programs in the Start Menu** check box, and then click **Next**.
4. On the **New Shortcut-Step 3** page, click **Finish**.

**Question:** Did the **Word Viewer 2007** shortcut appear on the desktop?

**Answer:** No.

## Exercise 3: Configuring Offline Mode for Disconnected Operation

The main tasks for this exercise are as follows:

1. Load the Word Viewer 2003 application in the cache.
2. Ensure that Offline mode is configured and functional.

3. Close all virtual machines, and discard undo disks.

► **Task 1: Load the Word Viewer 2003 application in the cache**

**Question:** What is the MS Word Viewer\_Pilot 2003 Package status?

**Answer:** Idle (0%)

1. Right-click **MS Word Viewer\_Pilot 2003**, and then click **Load**.
2. Wait 2 minutes, right-click **Applications**, and then select **Refresh**.

**Question:** What is the MS Word Viewer\_Pilot 2003 Package status?

**Answer:** Idle (100%)

► **Task 2: Ensure that Offline mode is configured and functional**

1. In the Notification area, right-click the **Application Virtualization Desktop Client**, and then click **Work Offline**.
2. Double-click the **MS Word Viewer\_Pilot 2003** shortcut on the desktop.

**Question:** Did the application start?

**Answer:** Yes.

3. In the **Open** dialog box, click **Cancel**.
4. Close **Microsoft Word Viewer**.
5. Click the **Start** menu, click **All Programs**, and then click **Word Viewer 2007**.

**Question:** Did the Application launch?

**Answer:** No.

**Question:** Was there a message in the notification area?

**Answer:** Yes, Launch Failed.

**Question:** Why did the application launch fail?

**Answer:** The Application Virtualization Client is offline, and the Word Viewer 2007 application was not preloaded.

► **Task 3: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

# Module 10

## **Administering the Application Virtualization Management Server**

### **Contents:**

Lab Answer Keys	2
-----------------	---

# Lab Answer Keys

## Lab A: Publishing Applications into the Application Virtualization Environment

### Answer Key

Exercise 1: Configuring System Options

Exercise 2: Publishing an Application

Exercise 3: Verifying Application Virtualization Functionality

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL2**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 45 minutes

---

### Exercise 1: Configuring System Options

The main tasks for this exercise are:

1. Start the virtual machines, and log on.
2. Verify the default content path.
3. Configure database size and usage history.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-CL2, click **Launch**.
4. Log on to SEA-DC1 as **Contoso\Administrator** using the password **Pa\$\$w0rd**. Do not log on to SEA-CL2 at this time.
5. Minimize the Lab Launcher window.

#### ► Task 2: Verify the default content path

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
2. In the left-hand pane, right-click **SEA-DC1**, and then click **System Options**.
3. In the **System Options** dialog box, on the **General** tab, verify that the Default Content Path is **\\SEA-DC1\Content**.

#### ► Task 3: Configure Database Size and Usage History

1. In the **System Options** dialog box, click the **Database** tab.
2. Under **Database Size**, verify that the **Maximum Database Size** is **1024 MB**.

3. Under **Usage History**, next to **Keep Usage for (Months)**, replace the default value with **12**.
4. Click **OK** to close the **System Options** box.
5. Click **Start**, point to **Administrative Tools**, and then click **Services**.
6. In the **Services** console, scroll down to **SQL Server Agent**.
7. Configure the SQL Server Agent as follows, and then click **OK**:
  - Startup type: **Automatic**
  - Service status: **Start**



**Note:** The SQL Server Agent has to be started for database size management to function.

## Exercise 2: Publishing an Application

The main tasks for this exercise are as follows:

1. Copy the sequenced application package to the Content folder.
2. Publish Excel Viewer 2003.

### ► Task 1: Copy the Sequenced Application Package to the Content Folder

1. Open a Windows® Explorer window, and browse to D:\Labfiles\SequencedApps.
2. Copy the Microsoft\_Excel\_Viewer\_MNT folder to D:\Content.
3. Open the D:\Content\Microsoft\_Excel\_Viewer\_MNT folder, and examine the contents.

**Question:** What types of files are listed in this folder?

**Answer:** The four main package files: .osd, .sft, .sprj, and Manifest.xml file. There is also an .msi and an .exe file.

4. Close the Windows Explorer window.

### ► Task 2: Publishing Excel Viewer 2003

1. On SEA-DC1, in the SoftGrid Management Console, expand **SEA-DC1** and then click the **Applications** node.
2. Right-click **Applications**, and then click **Import Applications**.
3. In the **Open** box, browse to **D:\Content\Microsoft\_Excel\_Viewer\_MNT**.
4. Select **Excel\_Viewer\_2003.sprj**, and then click **Open**. The New Application Wizard starts.
5. On the **General Information** page, ensure that the .osd and .ico paths are pointing to **\\SEA-dc1\Content\Microsoft\_Excel\_Viewer\_MNT\<.osd or icons folder>**, and then click **Next**.
6. On the **Published Shortcuts** page, select **Publish to User's Desktop**.
7. In the drop-down menu, type **\Microsoft Viewers**, and then click **Next**.
8. On the **File Associations** page, click **Next**.
9. On the **Access Permissions** page, click **Add**.

10. In the **Add/Edit User Group dialog** box, double-click **Applications**.
11. In the **Applications** folder, click **ExcelViewer 2003**, and then click **OK**.
12. On the **Access Permissions** page, click **Next**.
13. On the **Summary** page, read the **Next Steps**, and then click **Finish**.

### Exercise 3: Verifying Application Virtualization Functionality

The main task for this exercise is:

- Launch a virtualized application.

#### ► Task: Launch a virtualized application

1. Switch to **SEA-CL2**, and then log on as **Administrator** using the password **Pa\$\$w0rd**. Microsoft Excel Viewer should appear on the desktop.
2. Click **Start**, and then point to **All Programs**. The Microsoft Viewers group appears on the **All Programs** menu.
3. Close the **Start** Menu.
4. On the desktop, double-click **Microsoft Excel Viewer**. Microsoft Excel Viewer starts.
5. Close the **Open** box by clicking **Cancel**.
6. Click the **Help** menu, and then click **About Microsoft Excel Viewer**.



**Note:** that the version number is **11.6412.6412**. This information will be required for Lab B.

7. Click **OK** to close the About Microsoft Excel Viewer window.
8. Close Microsoft Excel Viewer.

## Lab B: Configuring Active Upgrades for Published Applications

### Answer Key

Exercise 1: Configuring Package Versions

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL2**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**



**Note:** Be sure to complete Lab A before attempting the exercises in this lab.

Estimated time: 30 minutes

### Exercise 1: Configuring Package Versions

The main tasks for this exercise are as follows:

1. Copy the updated package to the Content folder.

2. Publish the upgraded package.
3. Verify that the application has been upgraded.
4. Close all virtual machines, and discard undo disks.

► **Task 1: Copy the updated package to the Content folder**

1. On SEA-DC1, open a Windows Explorer window, and then browse to D:\Labfiles\SequencedApps\Excel Viewer Update.
2. Copy the Excel\_Viewer\_2.sft file to D:\Content\Microsoft\_Excel\_Viewer\_MNT.

► **Task 2: Publish the upgraded package**

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
2. In the console tree, expand **Packages**.
3. Right-click **Excel\_Viewer\_Package**, and then click **Add Version...**
4. In the **Add Package Version** box, click **Browse**, and then click **Excel\_Viewer\_2.sft**.
5. Click **Open**, and then click **Next**.
6. In the **Relative Path** field, leave the default value and click **Next**.
7. Click **Finish**.

► **Task 3: Verify that the application has been upgraded**

1. On SEA-CL2, verify that all applications are closed.
2. Double-click **Microsoft Excel Viewer**.
3. In the **Open** dialog box, click **Cancel**.
4. Click **Help**, and then click **About Microsoft Excel Viewer**.



**Note:** Notice that the version number is now 11.8033.6412 (The previous version was 11.6412.6412.)

5. Click **OK** to close the About Microsoft Excel Viewer box.
6. Close Microsoft Excel Viewer, and then log off.

► **Task 4: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

# Module 11

## Advanced Application Virtualization Administration Tasks

### Contents:

Lab Answer Keys

2

# Lab Answer Keys

## Lab: Implementing License Enforcement

### Answer Key

Exercise 1: Publishing an Application to be Licensed

Exercise 2: Creating a Licensing Group

Exercise 3: Creating a New Provider Policy

Exercise 4: Testing License Enforcement

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL2**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 45 minutes

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### Exercise 1: Publishing an Application to be Licensed

The main tasks for this exercise are as follows:

1. Start the virtual machines, and log on.
2. Copy the sequenced application package to the Content folder.
3. Publish Excel® Viewer 2003.

#### ► Task 1: Start the virtual machines, and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-CL2, click **Launch**.
4. Log on to SEA-DC1 as **Contoso\Administrator** using the password **Pa\$\$w0rd**. Do not log on to SEA-CL2 at this time.
5. Minimize the Lab Launcher window.

#### ► Task 2: Copy the sequenced application package to the Content folder

1. Open a **Windows® Explorer** window, and then browse to **D:\Labfiles\SequencedApps**.
2. Copy the **Microsoft\_Excel\_Viewer\_MNT** folder to **D:\Content**.
3. Close the Windows Explorer window.

#### ► Task 3: Publish Excel Viewer 2003

1. On SEA-DC1, in the SoftGrid Management Console, expand **SEA-DC1**, and then click the **Applications** node.
2. Right-click **Applications**, and then click **Import Applications**.

3. In the **Open** box, browse to **D:\Content\Microsoft\_Excel\_Viewer\_MNT**.
4. Select **Excel\_Viewer\_2003.sprj**, and then click **Open**. The New Application Wizard starts.
5. On the **General Information** page, ensure that the .osd and .ico paths are pointed to **\\SEA-dc1\Content\Microsoft\_Excel\_Viewer\_MNT\<.osd or icons folder>**, and then click **Next**.
6. On the **Published Shortcuts** page, select **Publish to User's Desktop**.
7. In the drop-down menu, type **\Microsoft Viewers**, and then click **Next**.
8. On the **File Associations** page, click **Next**.
9. On the **Access Permissions** page, click **Add**.
10. In the **Add/Edit User Group** dialog box, double-click **Applications**.
11. In the **Applications** folder, click **ExcelViewer 2003**, and then click **OK**.
12. On the **Access Permissions** page, click **Next**.
13. On the **Summary** page, read the **Next Steps**, and then click **Finish**.

## Exercise 2: Creating a Licensing Group

The main tasks for this exercise are as follows:

1. Create a new named license.
2. Assign the License Group to an application.

### ► Task 1: Create a new named license

1. In the SoftGrid Management Console, right-click **Application Licenses**, and then click **New Named License**. The New Named License Wizard starts.
2. On the **Application License Group** page, under **Application License Group Name**, type **Microsoft Excel Licenses**, and then click **Next**.
3. On the **Named License** page, under **License Description**, type **Microsoft Excel Named Licenses**.
4. Make sure that **Enabled** is selected, and then click **Next**.
5. On the **Named License User** page, click **Add**.
6. In the **Add/Edit License User** dialog box, double-click the **IT** container, click **Don Hall**, and then click **OK**.
7. On the **Named License User** page, click **Finish**.

### ► Task 2: Assign the License Group to an application

1. In the left-hand pane, select **Applications**.
2. In the details pane, right-click **Microsoft Excel Viewer**, and then click **Properties**.
3. On the **General** tab, under Application License Group, select **Microsoft Excel Licenses**, and then click **OK**.

## Exercise 3: Creating a New Provider Policy

The main tasks for this exercise are as follows:

1. Create a new Provider policy.

2. Modify the .osd file to use the new Provider policy.

► **Task 1: Create a new Provider Policy**

1. In the left-hand pane, click **Provider Policies**.
2. Right-click **Provider Policies**, and then click **New Provider Policy**. The New Provider Policy Wizard starts.
3. On the **Provider Policy Properties** page, under **Policy Name**, type **Licensed**.
4. Click the drop-down menu to set the minimum log message level to **Errors**.
5. Ensure that **Manage client desktop using the Management Console** is selected. Also ensure that the following is configured, and then click **Next**:
  - Refresh desktop configuration when a user logs in: **Enabled**
  - Refresh configuration every: **8 hours**
6. On the **Group Assignment** page, click **Add**.
7. In the **Add/Edit User Group** dialog box, double-click the **Resources** container, click **MAV Users**, and then click **OK**.
8. On the **Group Assignment** page, click **Next**.
9. On the **Provider Pipeline** page, ensure that the following is configured and **enabled**:
  - Authentication: **Windows Authentication**
  - Enforce Access Permission Settings
  - Log Usage Information
  - Licensing: **Enforce License Policies**
10. On the **Provider Pipeline** page, click **Finish**.
11. In the SoftGrid Management Console message, click **OK**.
12. Click **Start**, point to **Administrative Tools**, and then click **Services**.
13. In the Services console, scroll down, and then select **SoftGrid Virtual Application Server**.
14. On the **Action** menu, click **Restart**. This will restart the SoftGrid Virtual Application Server service.
15. Close the Services console.

► **Task 2: Modify the .osd file to use the new Provider Policy**

1. On SEA-DC1, open **Windows Explorer**, and then browse to **D:\Content\Microsoft\_Excel\_Viewer\_MNT**.
2. Right-click **ExcelViewer2003.osd**, and then click **Open**.
3. In the Windows prompt, select the **Select the program from a list** option, and then click **OK**.
4. In the **Open With** box, select **Notepad**, clear the **Always use the selected program to open this kind of file** check box, and then click **OK**.
5. Locate and modify the HREF line as follows: **HREF= "RTSP://SEA-DC1:554/Microsoft\_Excel\_Viewer\_MNT/Excel\_Viewer.sft?Customer=Licensed"**.
6. Save and exit ExcelViewer2003.osd.

7. Close Windows Explorer.

## Exercise 4: Testing License Enforcement

The main tasks for this exercise are as follows:

1. Launch a virtualized application.
2. Close all virtual machines, and discard undo disks.

### ► Task 1: Launch a virtualized application

1. Switch to **SEA-CL2**, and log on as **Administrator** using the password **Pa\$\$w0rd**. Microsoft® Excel® Viewer should appear on the desktop.
2. On the desktop, double-click **Microsoft Excel Viewer**.
3. In the notification area, click **Launch Failed**. Notice that you are not authorized to access this resource.
4. Log off of SEA-CL2.
5. Log on as **Don** using the password **Pa\$\$w0rd**. Microsoft Excel Viewer should now appear on the desktop.
6. On the desktop, double-click **Microsoft Excel Viewer**. Microsoft Excel Viewer starts.
7. Close Microsoft Excel Viewer.

### ► Task 2: Close all virtual machines, and discard undo disks

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

# Module 12

## Planning and Deploying the Application Virtualization Sequencer

### Contents:

Lab Answer Keys	2
-----------------	---

# Lab Answer Keys

## Lab A: Installing the Application Virtualization Sequencer

Exercise 1: Configuring a Partition to Be the Q Drive

Exercise 2: Installing the Microsoft® Application Virtualization Sequencer

Logon Information:

- Virtual Machine: **7197A-SEA-CL3**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 10 minutes

---

### Exercise 1: Configuring a Partition to be the Q Drive

In this exercise, the main tasks are:

1. Start the virtual machine and log on.
2. Configure the Q drive.

#### ► Task 1: Start the virtual machine and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to **7197A-SEA-CL3**, click **Launch**.
3. Log on to SEA-CL3 as **Contoso\Administrator** using the password **Pa\$\$w0rd**.
4. Minimize the Lab Launcher window.

#### ► Task 2: Configure the Q drive.

1. Click **Start**, right-click **Computer**, and then click **Manage**.
2. In the **Computer Management** console, click the **Disk Management** node.
3. Right-click the **Unallocated space** in **Disk 1**, and then select **New Simple Volume**.
4. In the New Simple Volume Wizard, click **Next**.
5. In the **Specify Volume Size** dialog box, leave the default options and click **Next**.
6. In the **Assign Drive Letter or Path** dialog box, assign the drive letter **Q**, and then click **Next**.
7. In the **Format Partition** dialog box, enter in the volume label **VirtualDrive**, select **Perform a quick format**, and then click **Next**.
8. Review the summary of the tasks the wizard will perform, and then click **Finish**.
9. Close the Computer Management console.
10. Close the virtDrive (Q) window.

### Exercise 2: Installing the Microsoft® Application Virtualization Sequencer

The main tasks for this exercise are:

1. Install the Application Virtualization Sequencer.
2. Close SEA-CL3, and discard the undo disks.

► **Task 1: Install the Application Virtualization Sequencer**

1. Click **Start**, and then click **Computer**.
2. Double-click **Drive D**, double-click **Labfiles**, and then open the **MSAppVirt\MSAppVirt\_sequencer\_setup\_4.5.0.606** folder.
3. Double-click **softgrid-sequencer-setup.exe**.
4. In the InstallShield Wizard, click **Install**.
5. In the Microsoft System Center Virtual Application Sequencer Wizard, click **Next**.
6. In the **License Agreement** dialog box, read through and accept the license agreement, and then click **Next**.
7. In the **Destination Folder** dialog box, accept the default option, and then click **Next**.
8. In the **Ready to Install the Program** dialog box, click **Install**.
9. In the **InstallShield Wizard Complete** dialog box, clear the **Launch Microsoft System Center** check box, and then click **Finish**.
10. Close the Windows Explorer window.
11. Click **Start**, point to **All Programs**, point to **Microsoft SoftGrid** and then click **Microsoft System Center Virtual Application Sequencer**.
12. Close the Microsoft SoftGrid Sequencer window.



**Note:** For the remaining lab exercises, you will use the already pre-configured sequencer installed on SEA-CL1.

► **Task 2: Close SEA-CL3, and discard undo disks**

1. For SEA-CL3, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.

## Lab B: Sequencing Applications for Virtualization

Exercise: Sequencing an Application

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL1, 7197A-SEA-CL2**
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 50 minutes

### Exercise: Sequencing an Application

In this exercise, the main tasks are:

1. Start the virtual machines.
2. Create a folder on the Q drive.

3. Run the Configuration Wizard.
4. Run the Installation Wizard.
5. Run the Application Wizard.
6. Save the sequenced application.
7. Configure the sequenced application.
8. Test the sequenced application on the client.
9. Close all virtual machines, and discard undo disks.

► **Task 1: Start the virtual machines**

1. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
2. In the Lab Launcher, next to 7197A-SEA-CL1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-CL2, click **Launch**.
4. Minimize the Lab Launcher window.

► **Task 2: Create a folder on the Q drive**

1. Log on to SEA-CL1 as **Contoso\Administrator** using the password of **Pa\$\$w0rd**.
2. On SEA-CL1, click **Start**, and then click **My Computer**.
3. Double-click VirtualDrv (**Q**).
4. Create a folder named **Project2k7.v1**.
5. Close the Explorer window.

► **Task 3: Run the Configuration Wizard**

1. On SEA-CL1, click **Start**, click **All Programs**, and then click **Microsoft SoftGrid**.
2. Click **Microsoft System Center Virtual Application Sequencer**.
3. Click **File**, and then click **New Package**.
4. In the **Welcome to the Package Configuration Wizard** dialog box, click **Next**.
5. Enter the following information, and then click **Next**:
  - a. Package Name: **Microsoft\_Project\_2007\_MNT**
  - b. Protocol: **RTSP**
  - c. Hostname: **SEA-DC1**
  - d. Path: **Microsoft\_Project\_2007\_MNT**
  - e. Title: **Microsoft Project 2007**
  - f. Comments: **Sequenced using 4.5**
  - g. Generate MSI on Save: **enabled**
6. Move all entries in the **Available Operating Systems** column to the **Selected Operating Systems** column.
7. Click **Finish**.

#### ► Task 4: Run the Installation Wizard

1. In the Installation Wizard Welcome dialog box, click **Next**.
2. In the Sequencing Parameters dialog box, leave the default values and click **Next**.
3. In the Monitor Installation dialog box, click **Begin Monitoring**.
4. In the **Browse For Folder** dialog box, open and expand the **Q** drive, select **Project2k7.v1**, and then click **OK**. At the Microsoft SoftGrid Sequencer prompt, click **Yes**.
5. Open a **Windows Explorer** window, browse to **d:\LabFiles\ProjectProfessional2007**, and then double-click **Setup.exe** to begin the Microsoft Project 2007 installation.
6. In the **Enter your Product Key** dialog box, click **Continue**, and then click **No**.
7. In the **Read the Microsoft Software License Terms** dialog box, select the **I accept the terms of this agreement** check box, and then click **Continue**.
8. In the **Choose the installation you want** dialog box, click **Customize**.
9. In the **Customize how Microsoft Office programs Run** dialog box, set each option to **Run All from My Computer**.
10. Click the **File Location** tab.
11. In the (...) field, type in the path **Q:\Project2k7.v1**, and then click **Install Now**.
12. When the installation is complete, in the setup confirmation box, click **Close**.
13. In the Windows Explorer window, go to **Q:\ Project2k7.v1\Office12\**.
14. Double-click **WinProj.exe** to start Microsoft Project.



**Note:** Some applications will not launch from the installed shortcuts, and must be launched directly from the main executable file.

15. On the **Enter your Product Key** page, click **Continue**, and then click **No**.
16. On the **Privacy options** page, remove all selected options, and then click **OK**.
17. Close Microsoft Project.
18. Launch and close **Microsoft Project** two more times, and then restore the Sequencer window.
19. Click **Stop Monitoring**, and then click **Next**.
20. In the **Additional Files to Map to the VFS** dialog box, leave the default values, and then click **Finish**.

#### ► Task 5: Run the Application Wizard

1. In the **Welcome to the Application Wizard** dialog box, click **Next**.
2. In the Configure Applications dialog box, remove all applications except for Microsoft Office Project 2007, by performing the following steps:
  - a. In the details pane, use **CTRL+click** to select all applications except **Microsoft Office Project 2007**.
  - b. Click **Remove**, and then click **OK** to confirm.



**Note:** Make sure that the only application listed in the Configure Applications pane is Microsoft Office Project 2007, or the following steps will fail.

3. In the details pane, click **Microsoft Office Project 2007**, and then click **Edit**.
4. In the **Edit Application** dialog box, type the following information in the relevant boxes:
  - a. Application Path: **Q:\Project2k7.v1\Office12\WINPROJ.EXE**
  - b. Name: **Microsoft Project**
  - c. Version: **2007**
  - d. OSD File Name: **Project\_2007.osd**
5. Click **Save**, and then click **Next**.
6. In the **Launch Applications** dialog box, click **Microsoft Project**, and then click **Launch**.



**Note:** Once Microsoft Project launches, the user would normally perform the most common functions to create Feature Block 1.

7. In the Enter your Product Key window, click **Continue**, and then click **No**.
8. Close **Microsoft Project**. Once the status bar completes, click **Next**.
9. In the **Sequence Package** dialog box, click **Finish**.

#### ► Task 6: Save the sequenced application

1. In the **Microsoft Application Sequencer**, view the **Summary** dialog boxes.
2. Click **File**, and then click **Save**.
3. Browse to the desktop, and create a new folder named **Microsoft\_Project\_2007\_MNT**.
4. Next to **File name**, type **Microsoft\_Project\_2007\_MNT**, and save it to the new directory.
5. Close the Sequencer.
6. Click **Start**, click **Run**, in the **Open** box, type **\\SEA-DC1\content**, and then press ENTER.
7. Copy the **Microsoft\_Project\_2007\_MNT** folder and its contents from the desktop to **\\SEA-DC1\content**.

#### ► Task 7: Configure the sequenced application

1. Log on to SEA-DC1 as **Administrator** using the password **Pa\$\$w0rd**.
2. Click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
3. In the console tree, right-click **Applications**, and then click **Import Applications**.
4. In the **File name** box, type **\\SEA-DC1\content**, and then press ENTER.
5. Double-click the **Micosoft\_Project\_2007\_MNT** folder, click **Microsoft\_Project\_2007\_MNT.sprj**, and then click **Open**.
6. Verify that the .osd file path and .ico file paths are correct, and are in UNC format. For example: **\\SEA-DC1\content\Microsoft\_Project\_2007\_MNT\Project\_2007.osd**.
7. Confirm that the **Enabled** check box is selected, and then click **Next**.

8. In the **Publish Shortcuts** dialog box, leave the default values, and then click **Next**.
9. In the **File Associations** dialog box, leave the default values, and then click **Next**.
10. In the **Access Permissions** dialog box, click **Add**.
11. In the **Contoso.com** domain, double-click the **Resources** organizational unit (OU).
12. Click the group **MAV Users**, click **OK**, and then click **Next**.
13. In the **Summary** dialog box, click **Finish**.
14. In the details pane, note that Microsoft Project is listed as an application.

► **Task 8: Test the sequenced application on the client**

1. Log on to SEA-CL2 as **Administrator** using the password **Pa\$\$w0rd**.
2. Click **Start**, click **All Programs**, click **Microsoft Office**, and then click **Microsoft Project**. The application begins to launch as indicated in the notification area.
3. Close Microsoft Project.

► **Task 9: Close all virtual machines, and discard undo disks**

1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
3. Close the 7197A Lab Launcher.

### Challenge Exercise: (If time permits.)

► **Task: Sequence Microsoft Office Visio 2007**

- Use your knowledge to sequence Microsoft Office® Visio® 2007:
  - Use SEA-CL1 as the sequencer.
  - The Application is found at **D:\Labfiles\Visio2007\X12-30372.exe**.
  - Use the SoftGrid Management Console on SEA-DC1 to publish the application to the MAV User group.
  - Test the application on SEA-CL2.

# Module 13

## Advanced Sequencing

### Contents:

Lab Answer Keys	2
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# Lab Answer Keys

## Lab: Advanced Sequencing

### Answer Key

Exercise 1: Performing a Package Upgrade

Exercise 2: Sequencing a Hard-Coded Application

Logon Information:

- Virtual Machines: **7197A-SEA-DC1, 7197A-SEA-CL2, 7197A-SEA-CL3** (Note: do not log on to SEA-CL2)
- User Name: **Administrator**
- Password: **Pa\$\$w0rd**

Estimated time: 60 minutes

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### Exercise 1: Performing a Package Upgrade

The main tasks for this exercise are as follows:

1. Start the virtual machines and log on.
2. Sequence Microsoft® Word Viewer 2003.
3. Publish the Microsoft Word Viewer package.
4. Verify that the client can access the Microsoft Word Viewer package.
5. Sequence a Microsoft Word Viewer package upgrade.
6. Publish and then test the upgraded package.

#### ► Task 1: Start the virtual machines and log on

1. On your host machine, click **Start**, point to **All Programs**, point to **Microsoft Learning**, and then click **7197A**. The Lab Launcher starts.
2. In the Lab Launcher, next to 7197A-SEA-DC1, click **Launch**.
3. In the Lab Launcher, next to 7197A-SEA-CL1, click **Launch**.
4. In the Lab Launcher, next to 7197A-SEA-CL2, click **Launch**.
5. Log on to SEA-DC1 and SEA-CL1 as **Contoso\Administrator** using the password **Pa\$\$w0rd**. Do not log on to SEA-CL2 at this time.
6. Minimize the Lab Launcher window.

#### ► Task 2: Sequence Microsoft Word Viewer 2003

1. On SEA-CL1, open a **Windows® Explorer** window, browse to drive **Q**, create a folder called **wdview.001**, and then close the Windows Explorer window.
2. On the **SEA-CL1** desktop, create a folder called **WordViewer2003**. You will save the sequencer output to this directory.

3. Click **Start**, point to **All Programs**, point to **Microsoft SoftGrid**, and then click **Microsoft System Center Virtual Application Sequencer**.
4. On the **File** menu, click **New Package**. The Package Configuration Wizard displays.
5. On the **Welcome** page, click **Next**.
6. On the **Package Information** page, provide the following information, and then click **Next**:
  - Package Name: **Word Viewer 2003**
  - Server URL:
    - Protocol: **RTSP**
    - Hostname: **SEA-DC1**
    - Port: Leave the default value of **554**
    - Path: **WordViewer2003**
  - Title: **Word Viewer 2003**
  - Comments: **Sequenced using Version 4.5**
  - Select the **Generate MSI on Save** check box. Note that this option will allow you to deploy standalone sequenced packages.
7. On the **Operating Systems** page, under **Available Operating Systems**, select all entries, click the arrow to move them to the **Selected Operating Systems** column, and then click **Finish**.
8. On the **Installation Wizard Welcome** page, click **Next**.
9. On the **Sequencing Parameters** page, leave the default settings and click **Next**.
10. On the **Monitor installation** page, click **Begin Monitoring**.
11. In the **Browse for Folder** dialog box, browse to **Q:\wdview.001**, and then click **OK**.
12. Open a **Windows Explorer** window, and then browse to **D:\LabFiles\WordViewer2003**.
13. Double-click **wdviewer.exe**.
14. In the **Open File-Security Warning** box, click **Run**.
15. Accept the terms of the license agreement, and then click **Next**.
16. Click **Browse**, go to **Q:\wdview.001**, click **OK**, and then click **Install**.
17. In the **Success** dialog box, click **OK**, and then close the Windows Explorer window.
18. Switch to the **Installation Wizard**, and then click **Stop Monitoring**.
19. The Microsoft Application Virtualization Sequencer will scan the computer for changes. When monitoring is complete, click **Next**.
20. On the **Additional Files to Map to the VFS** page, click **Finish**.
21. On the **Application Wizard Welcome** page, click **Next**.
22. On the **Configure Applications** page, click **Applications**.
23. In the details pane, click the **Microsoft Office 2003 component**, click **Remove**, and then click **OK**.
24. In the details pane, click **Microsoft Office Word Viewer 2003**, and then click **Edit**.

25. In the **Edit Application** dialog box, modify the following .osd file properties, and then click **Save**.
  - Name: **Word Viewer**
  - Version: **2003**
  - OSD Filename: **WordViewer2003.osd**
26. Under **Applications**, expand **Word Viewer**.
27. **Click File Type Associations** to view the extensions that the sequencer has recorded.
28. Click **Shortcuts** to view where the shortcuts for this application will be located on the Microsoft Application Virtualization client desktop.
29. When you are done viewing this information, click **Next**.
30. On the **Launch Applications** page, click **Word Viewer**, and then click **Launch**. In the **Word Viewer Open** dialog box, click **Cancel**.
31. In Word Viewer, click **File**, and then click **Exit**. The status bar will show the procedure as complete. (If the status bar does not change for more than 30 seconds, you might need to click **Stop**, and then click **Terminate**.)
32. Click **Next**.
33. On the **Sequence Package** page, when the sequencing is complete, click **Finish**.
34. Click **File**, click **Save**, browse to the **WordViewer2003** folder that you created on the desktop, and then save the file as **WordViewer2003.sprj**.
35. Close Microsoft SoftGrid Sequencer.
36. Click **Start**, click **Run**, type **\\SEA-DC1\content**, and then click **OK**.
37. Copy the **WordViewer2003** folder from the desktop to the content share on the server.
38. Close the Content window.

► **Task 3: Publish the Microsoft Word Viewer package**

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
2. In the left-hand pane, expand **SEA-DC1**, and then click the **Applications** node.
3. Right-click **Applications**, and then click **Import Applications**.
4. In the **Open** box, browse to **D:\Content\WordViewer2003**.
5. Select **WordViewer2003.sprj**, and then click **Open**. The New Application Wizard starts.
6. On the **General Information** page, click **Next**.
7. On the **Published Shortcuts** page, ensure that both **Publish to User's Desktop** and **Publish to User's Start Menu** check boxes are selected, and then click **Next**.
8. On the **File Associations** page, click **Next**.
9. On the **Access Permissions** page, click **Add**.
10. In the **Add/Edit User Group** dialog box, double-click **Applications**.
11. In the **Applications** folder, click **Word Viewer 2003**, and then click **OK**.

12. On the **Access Permissions** page, click **Next**.
13. On the **Summary** page, click **Finish**.



**Note:** Wait until you see the Word Viewer listed in the details pane before moving on to the next step.

► **Task 4: Verify that the client can access the Microsoft Word package**

1. Log on to SEA-CL2 as **Administrator** using the password **Pa\$\$w0rd**.
2. Double-click **Word Viewer**.
3. In the **Open** dialog box, click **Cancel**.
4. Click **Help**, and then click **About Microsoft Office Word Viewer**.



**Note:** Notice that the version number is 11.6506.6505.

5. Click **OK** to close the **About Microsoft Office Word Viewer** dialog box.
6. Close Microsoft Word Viewer.

► **Task 5: Sequence a Word Viewer package upgrade**

1. On SEA-CL1, click **Start**, point to **All Programs**, point to **Microsoft SoftGrid**, and then click **Microsoft System Center Virtual Application Sequencer**.
2. On the **File** menu, click **Open for Package Upgrade...**
3. Browse to the desktop and open the **WordViewer2003** folder.
4. Click **WordViewer2003.sprj**, and then click **Open**.
5. In the **Browse For Folder** dialog box, browse to and click **Q:\**, and then click **OK**. If you are prompted to overwrite the decode destination, click **Yes**.
6. Click **Tools**, point to **Sequencing Wizards**, and then click **Installation...**
7. On the **Welcome to the Installation Wizard** page, click **Next**.
8. On the **Sequencing Parameters** page, leave the default values and click **Next**.
9. On the **Monitor Installation** page, click **Begin Monitoring**. The sequencer will minimize to the taskbar.
10. Open a Windows Explorer window, and then browse to **D:\Lab Files\Word Viewer 2003**.
11. Double-click **WordViewerUpdate.exe**. When the Open File box appears, click **Run**.
12. In the **Security Update** dialog box, click **Yes**.
13. In the **License Agreement** dialog box, click **Yes**.
14. In the **Update Confirmation** dialog box, click **OK**.
15. Close the Windows Explorer window, and then restore the Installation Wizard.
16. Click **Stop Monitoring**, and then click **Next**.
17. On the **Additional Files to Map to the VFS** page, click **Finish**.
18. Click the **File** menu, and then click **Save**.

19. Close the Microsoft SoftGrid Sequencer application.
20. From the desktop, open the **WordViewer2003** folder. Notice the WordViewer2003\_2.sft file. This is the updated version.
21. Click **Start**, click **Run**, type `\\SEA-DC1\content\WordViewer2003`, and then click **OK**.
22. Copy the entire contents of the **WordViewer2003** folder from the desktop to the **content\WordViewer2003** share on the server. Overwrite all destination files.
23. Close all open windows on SEA-CL1.

► **Task 6: Publish and then test the upgraded package**

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
2. In the console tree, expand **Packages**.
3. Right-click **WordViewer2003\_Package**, and then click **Add Version...**
4. In the **Add Package Version** box, click **Browse**, and then click **WordViewer2003\_2.sft**. (This file is located at `\\SEA-DC1\content\WordViewer2003\`.)
5. Click **Open**, and then click **Next**.
6. In the **Relative Path** field, leave the default value, click **Next**, and then click **Finish**.
7. On SEA-CL2, verify that all applications are closed.
8. Double-click **Word Viewer**.
9. In the **Open** dialog box, click **Cancel**.
10. Click **Help**, and then **click About Microsoft Office Word Viewer**.



**Note:** Notice that the version number is now 11.8026.6505 (The previous version was 11.6506.6505.)

11. Click **OK** to close the **About Microsoft Office Word Viewer** box.
12. Close Microsoft Word Viewer, and then log off.

## Exercise 2: Sequencing a Hard-Coded Application

The main tasks for this exercise are as follows:

1. Sequence PowerPoint Viewer 2003.
2. Publish PowerPoint Viewer 2003.
3. Verify that the client can access the PowerPoint Viewer package.
4. Close all virtual machines, and discard undo disks.

► **Task 1: Sequence PowerPoint Viewer 2003**

1. If necessary, log on to **SEA-CL1** as **Administrator** using the password **Pa\$\$w0rd**.
2. Click **Start**, and then click **My Computer**.
3. Double-click drive **Q**.
4. Create a folder named **PPView.001**.

5. On the desktop, create a folder named **PowerPointViewer2003**. You will save the output of the sequencer to this directory.
6. Click **Start**, point to **All Programs**, point to **Microsoft SoftGrid**, and then click **Microsoft System Center Virtual Application Sequencer**.
7. On the **File** menu, click **New Package**. The Package Configuration Wizard displays.
8. On the **Welcome** page, click **Next**.
9. On the **Package Information** page, provide the following information and then click **Next**:
  - Package Name: **PowerPoint Viewer 2003**.
  - Server URL:
    - Protocol: **RTSP**
    - Hostname: **SEA-DC1**
    - Port: Leave the default value of **554**
    - Path: **PowerPointViewer2003**
  - Title: **PowerPoint Viewer 2003**
  - Comments: **Sequenced using Version 4.5**
10. On the **Operating Systems** page, under **Available Operating Systems**, select all entries click the arrow to move them to the **Selected Operating Systems** column, and then click **Finish**.
11. On the **Installation Wizard Welcome** page, click **Next**.
12. On the **Sequencing Parameters** page, leave the default settings and click **Next**.
13. On the **Monitor installation** page, click **Begin Monitoring**.
14. In the **Browse for Folder** dialog box, browse to **Q:\PPview.001**, and then click **OK**.
15. Open a **Windows Explorer** window, browse to **D:\Lab Files\PowerPoint Viewer 2003**, and then double-click **ppviewer.exe** to begin the installation.
16. On the **PowerPoint viewer** prompt, click **Yes**.
17. In the **setup completed successfully** dialog box, click **OK**.
18. Open a **Windows Explorer** window, and then browse to **C:\Program Files \Microsoft Office\PowerPoint Viewer**.
19. Double-click **PPTVIEW.exe**. Some applications will not launch from the installed shortcuts; instead, you must launch directly from the main executable file.
20. On the **license agreement** page, click **Accept**.
21. Click **Cancel** to exit PowerPoint Viewer.
22. Double-click **PPTVIEW.exe** again. (It is recommended that you launch the program multiple times to ensure the applications installation completes.)
23. Click **Cancel** to exit PowerPoint Viewer.
24. Close the Windows Explorer window.
25. Restore the **Sequencer**, click **Stop Monitoring**, and then click **Next**.

26. On the **Additional Files to Map to the VFS** page, leave the default values, and then click **Finish**.
27. On the **Welcome to the Application Wizard** page, click **Next**.
28. On the **Configure Applications** page, remove any applications other than Microsoft Office PowerPoint Viewer 2003. There may not be any other applications listed.
29. In the details pane, click **Microsoft Office PowerPoint Viewer 2003**, and then click **Edit**.
30. On the **Edit Application** page, type the following information in the relevant boxes, and then click **Save**:
  - Application **Path**: **Q:\PPview.001\VFS\CSIDL\_PROGRAM\_FILES\Microsoft Office\PowerPoint Viewer\PPTVIEW.EXE**
  - Name: **PowerPoint Viewer**
  - Version: **2003**
  - OSD File Name: **PowerPointViewer2003.osd**
31. Click **Next**.
32. On the **Launch Applications** page, click **PowerPoint Viewer**, and then click **Next**.
33. In the **Application Wizard** dialog box, click **Yes**.
34. On the **Sequence Package** page, click **Finish**.
35. Click **File**, and then click **Save**.
36. Browse to the desktop, and then select the folder called **PowerPointViewer2003**.
37. Change the file name to **PowerPoint2003**, and then click **Save**.
38. Close Microsoft SoftGrid Sequencer.
39. Click **Start**, click **Run**, type **\\SEA-DC1\content**, and then click **OK**.
40. Copy the **PowerPointViewer2003** folder from the desktop to the Content window.
41. Close the Content window.

► **Task 2: Publish PowerPoint Viewer 2003**

1. On SEA-DC1, click **Start**, point to **Administrative Tools**, and then click **SoftGrid Management Console**.
2. In the left-hand pane, expand **SEA-DC1**, and then click the **Applications** node.
3. Right-click **Applications**, and then click **Import Applications**.
4. In the **Open** box, browse to **D:\Content\PowerPointViewer2003**.
5. Select **PowerPoint2003.sprj**, and then click **Open**. The New Application Wizard starts.
6. On the **General Information** page, click **Next**.
7. On the **Published Shortcuts** page, select **Publish to User's Desktop**, and then click **Next**.
8. On the **File Associations** page, click **Next**.
9. On the **Access Permissions** page, click **Add**.
10. In the **Add/Edit User Group** dialog box, double-click **Applications**.

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11. In the **Applications** folder, click **PowerPoint Viewer 2003**, and then click **OK**.
  12. On the **Access Permissions** page, click **Next**.
  13. On the **Summary** page, click **Finish**.
- ▶ **Task 3: Verify that the client can access the PowerPoint Viewer package**
1. Log on to **SEA-CL2** as **Administrator** using the password **Pa\$\$w0rd**.
  2. Double-click **PowerPoint Viewer**.
  3. To close PowerPoint viewer, click **Cancel**.
- ▶ **Task 4: Close all virtual machines, and discard undo disks**
1. For each virtual machine that is running, close the Virtual Machine Remote Control window.
  2. In the **Close** box, select **Turn off machine and discard changes**, and then click **OK**.
  3. Close the 7197A Lab Launcher.

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