Microsoft®
Desktop Optimization Pack
for Software Assurance

Microsoft SoftGrid 4.1 Trial Guide
Dynamically Delivering The Virtual Application Solution

Important Notice

Contents

Contents

Introduction to the Trial Guide

This *Trial Guide* is designed to help you quickly set up and evaluate a Microsoft® SoftGrid® environment. This guide outlines steps necessary to install the SoftGrid Virtual Application Server components, install the SoftGrid Client for Windows® Desktops and Terminal Servers, publish the shortcuts of sequenced applications, and then stream and run these virtual applications on the SoftGrid Clients. You will also be able to virtualize a select set of applications using the SoftGrid Sequencer. To help this process flow as smoothly as possible, it is recommended that you read through this guide before you install the SoftGrid Platform.

Audience for this Guide

This guide was written with the Microsoft® Windows® System Administrator in mind. As an IT professional, you should have sufficient knowledge and experience to accomplish the following tasks:

- Set up operating systems and computers.
- Add computers to domains.
- Set up and work comfortably with Active Directory® and Microsoft DNS.

  Hardware and Software requirements are documented in "Trial System Requirements" on page 4.

Overview of the SoftGrid Platform

The SoftGrid Platform lets you deploy, update, and support applications as services in real time, on an as-needed basis. When you use the SoftGrid Platform, you transform individual applications from locally-installed products into centrally-managed services. Applications become available everywhere they need to be, without pre-configuring a computer or changing operating system settings.

SoftGrid Virtual Application Server

The SoftGrid Virtual Application Server delivers SoftGrid-enabled applications on demand to the SoftGrid Clients. One or more SoftGrid Virtual Applications Servers can share a single SoftGrid SQL Data Store.

The SoftGrid Virtual Application Server authorizes and authenticates requests and provides the security, metering, monitoring, and data gathering that you need. The server uses Microsoft Active Directory and supporting tools to manage users and applications.

SoftGrid Management System

The SoftGrid Management System includes the SoftGrid Management Console and the SoftGrid Management Web Service. Administrators use the SoftGrid Management Console (a snap-in to the Microsoft

Management Console) to configure the SoftGrid Virtual Application Servers. Through the SoftGrid Management Console, administrators can add and remove applications, change file type associations, and assign access permissions and licenses to users and groups.

The SoftGrid Management Web Service is the communication conduit between the SoftGrid Management Console and the SoftGrid SQL Data Store.

SoftGrid Client

The SoftGrid Client automatically sets up and manages virtual environments for SoftGrid-enabled applications, publishes the applications to the user's desktop, and manages connections to the SoftGrid Virtual Applications Servers. The SoftGrid Client stores user-specific virtual application settings in each user's profile. Examples of settings saved include registry and file changes.

SoftGrid Sequencer

The SoftGrid Sequencer is a wizard-based tool that administrators use to create SoftGrid-enabled applications. The sequencer produces the application "package" that consists of several files. These files include a SoftGrid-enabled application (SFT) file, one or more Open Software Description (OSD) "link" files, one or more icon (ICO) files, and a SoftGrid project (SPRJ) file. The SFT, OSD, and ICO files are stored on the SoftGrid Virtual Application Servers; these files are the keys that SoftGrid Client uses to access and run SoftGrid-enabled applications.

Trial System Requirements

For this evaluation a single computer will run Internet Information Services (IIS), the SoftGrid Management Web Service, the SoftGrid Management Console, and the SoftGrid Virtual Application Server. A second computer will run the SoftGrid Client for Windows Desktops and another computer needs to be set up as a Windows Domain Controller with Windows DNS. Additionally, to test the SoftGrid Sequencer and the SoftGrid Client for Terminal Servers, you will need two more computers. All of the computers must be members of the common domain. Note that is possible to use virtual machines on a single physical computer that meets the system requirements of this trial.
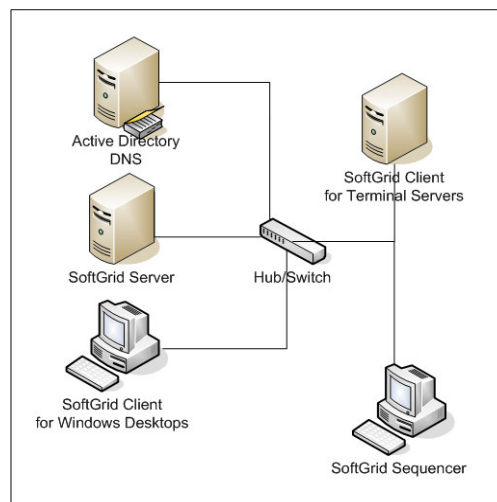
Figure 1. SoftGrid Trial in an ISOLATED Network

In this trial, we intend that you set up SoftGrid in a test lab, completely detached from your production network. The purpose of this evaluation is for you to get basic experience with the SoftGrid Platform. Later, you will address any questions surrounding integration into your production environment, such as security concerns and enterprise-level design. Also, only basic platform functionality will be covered in the interest of simplifying the proof of concept. The SoftGrid Platform is covered in entirety by the Microsoft Training courses.

The following sections list the basic software and hardware requirements for the evaluation.

SoftGrid Virtual Application Server

Hardware
- Intel PIII 1 GHz CPU or greater
- 512 MB of RAM or greater
- 10 GB available hard disk space or greater

Software

- Microsoft Windows® 2000 Server/Windows Advanced Server with Service Pack 4 or higher, or Windows Server® 2003 with Service Pack 1
- Microsoft Data Access Components (MDAC) 2.7 or greater
- Microsoft Internet Information Services (IIS) 5.0 or greater
- Microsoft .NET Framework 2.0

NOTE: In this guide, the hostname of SGSERVER is used for the SoftGrid Server. The computer hostname of this server may not start with a number.

SoftGrid Client for Window Desktops

Hardware

- Intel Pentium III 700 MHz or greater
- 128 MB RAM or greater
- 4 GB (includes space for cache) or greater

Software

- Microsoft Windows 2000 or Windows® XP Pro
- Internet Explorer 6 or higher installed on the operating system.

SoftGrid Sequencer

Hardware & Software

- The hardware and software requirements for the SoftGrid Sequencer are identical to those of the SoftGrid Client for Windows Desktops *except* that a real partition or drive called Q: needs to be available on the sequencer computer.

Windows Domain Controller

Hardware

- Recommended Microsoft hardware requirements or greater.

Software

- Microsoft Operating system providing a Windows 2000 or Windows Server 2003 domain with Microsoft DNS setup. While SoftGrid supports Windows NT® 4 domains, related install instructions are not included in the guide.

Installing the SoftGrid Virtual Application Server

The section guides you through the step-by-step process to install the SoftGrid Virtual Application Server.

Before You Begin
The following items must be present before installing the SoftGrid Virtual Application Server:

- Windows 2000 Server, Advanced Server with Service Pack 3 (or greater), or Windows Server 2003
- 5.0 or greater (must be installed prior to MDAC and .NET)
- MDAC 2.7 or greater
- Microsoft Management Console 3.0 (MMC 3.0)
- Microsoft .NET Framework 2.0 or greater
- Specified objects created with Active Directory

Microsoft Management Console (MMC) 3.0
SoftGrid requires Microsoft Management Console 3.0 be installed on the PC or Server where the SoftGrid Management Console will be execute. You can download the MMC 3.0 from www.microsoft.com/ downloads and search for MMC 3.0.

MDAC and .NET Framework
If using a Windows 2000 computer, install Microsoft Data Access Components (MDAC) 2.7 or later. Windows 2003 computers do not need an updated version of MDAC installed to work with SoftGrid at this time. Ensure that Microsoft Internet Information Services (IIS) 5.0 or greater is properly installed. *Afterwards*, install .NET Framework version 2.0 or greater on Windows 2000 Server computers. Windows 2003 Servers already have .NET Framework 1.1 installed, you will need to upgrade to .NET Framework 2.0.

You can download these latest versions of these components from www.microsoft.com.

After installing MDAC, and .NET Framework, restart the system before proceeding.

Do not "lockdown" this or any other component of this server or try to reuse your standard server image. The purpose of this limited trial is to evaluate SoftGrid in a test lab - not prove that SoftGrid will run in your production environment.

Active Directory
Before you install the SoftGrid Server, you must create the following objects in Active Directory:

Organization Unit (OU): An organization unit should be created in Active Directory to contain SoftGrid specific groups, and the necessary SoftGrid domain account. It is recommend that this OU be called "MicrosoftVirtualApps".

Domain Test User Account: This account will be the user test account for SoftGrid end user functionality.

SoftGrid Administrative Group: SoftGrid requires that you select an Active Directory group to use as a SoftGrid Administrative Group. You can use any existing group or you can create a SoftGrid Administrators Group to control administrative access to the SoftGrid Management Console. Add to this group every user who needs to access the SoftGrid Management Console. You can choose any name for this group or you can choose it from a list during installation, but you cannot create this group from the SoftGrid installer. We use the name "SoftGrid Administrators" as an example.

> *NOTE: For the purposes of this evaluation, only a single domain setup is supported in your test lab environment. If creating groups, create them as Global Groups. Multi-domain and multi-forest scenarios require a different setup and are covered in the Microsoft training courses.*

SoftGrid Active Directory Browser User: You must create a user *that is set not to expire* for the SoftGrid Platform to use to browse Active Directory. This user can be named anything but note "sgbrowser" is used in the illustrations. The account may not use the character "#" in the username or password; otherwise, the SoftGrid installer will fail.

SoftGrid Users Group: SoftGrid requires all user accounts accessing SoftGrid functionality are a member of a Provider Policy that is associated with a single group for general platform access. You may use an existing group or create a group called SoftGrid Users. For the purposes of this trial we will be using the Domain Users group.

Application Groups: SoftGrid also associates the right to use an individual application with a group. For this trial, we will also associate all test applications with the Domain Users group even though many other options do exist for production use.

NOW ADD YOUR (PRE-EXISTING) DOMAIN TEST USER ACCOUNT TO EACH OF THE ABOVE GROUPS. If you do not, then your test user account will not be presented the shortcuts on the SoftGrid Client for these applications.

Verify .NET registration with

Windows Server 2003

To ensure that .NET is properly registered with :

1. From **Administrator Tools** launch the **Internet Information Services (IIS) Manager.**

2. Expand **Internet Information Services > {server_name} > Web Service Extensions.**

3. Right-click **ASP.NET v.X.X.XXXX** and select **Allow**, if necessary.

If ASP.NET is not available, then Microsoft .NET is installed but ASP.NET has not been installed. Perform the following steps:

4. Go to the **Control Panel > Add or Remove Programs.**

5. Click **Add/Remove Windows Components.**

6. Highlight **Application Server** and select **Details...**

7. Select the **ASP.NET** check box, and then click **OK.**

8. Click **Next.**

Windows 2000 Server

To ensure that .NET is properly registered with Internet Information Server (IIS) :

9. Launch a Command Prompt.

10. Browse to **%SystemRoot%\Microsoft.NET\Framework\%VersionNumber% .**

11. Run **aspnet_reg /i .**

Server Installation

1. Verify that the name of the computer does not start with a number.

2. Run **setup.exe** in the SoftGrid Server folder.

3. At the Welcome Screen, click **Next** to continue.

4. Read and accept the license agreement, then click **Next** to continue.

5. Enter a Name and Organization in the corresponding fields, and then click **Next** to continue.

6. Choose the **Typical** install from the Setup Type dialog, then click **Next** to continue.

7. At the Required Web Service Extensions warning screen, click **Next**.

8. On the Database Server dialog box, leave the default **Install MSDE**, and click **Next** to continue.
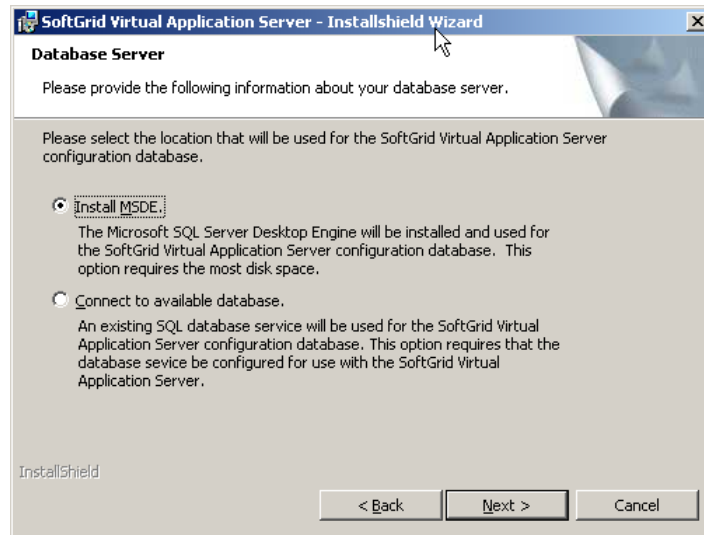
Figure 2. Database Server Selection Dialog

9. In the fields on the Database Password dialog box (see next Figure), enter and confirm an administrator password for the Microsoft SQL Server Desktop Engine (MSDE) database. This password is for the Database "SA" Administrator account. Enter and confirm a user password for the SoftGrid Virtual Application Server. This password is used by the SoftGrid Virtual Application Server to access the database for the created Microsoft account. You will need these passwords to update or modify the SoftGrid Platform. (Since you are installing SoftGrid on a completely isolated network, it is recommended that you pick default passwords of "sa" and "Microsoft" respectively, since they are easy to remember during this trial)

NOTE: Do not use a "#" character in either of the password or anywhere else is in the installation program. This will cause the SoftGrid installer to fail.

Figure 3. Database Password Dialog Box

10. In the Domain Name field on the Directory Server dialog box, the domain name should be automatically populated by the installer. Enter the username and password for the browser account that you created ("sgbrowser"), and then click **Next** to continue.

Figure 4. Directory Server Dialog Box

11. In the Administrator Group dialog box, enter the name of the "SoftGrid Administrators" group, and click **Next** to continue. You may also enter the first few letters and click **Next** to select from a list of groups (see next Figure). Highlight the group wanted from the list, and then choose **Next** to continue. (For simplicity of administration, you may also chose "Domain Users" for this trial.)
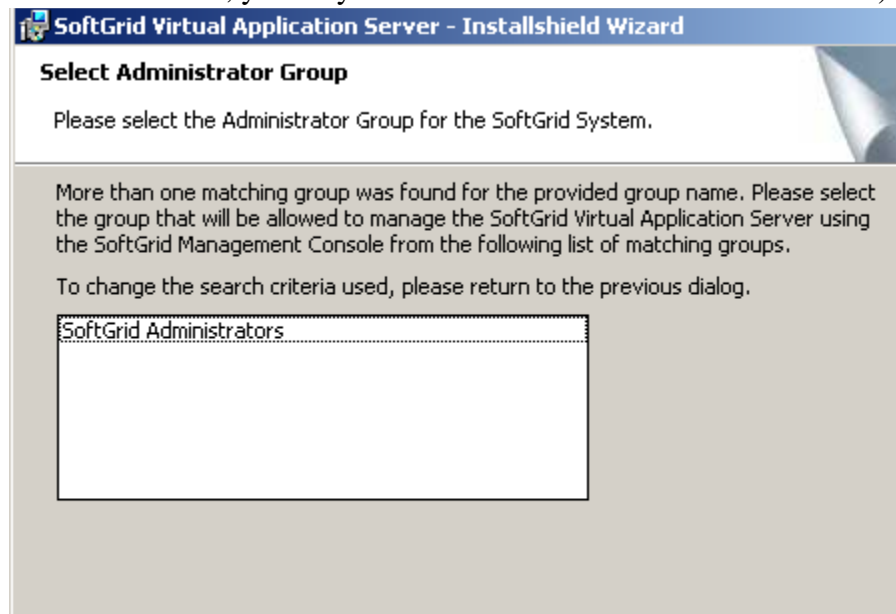
Figure 5.   Administrator Group Dialog Box with List of Groups

12. In the Default Provider Group dialog box, enter "**Domain Users**" and click **Next** to continue. This is the group to which all users must belong to let them access SoftGrid-enabled applications. You may also enter the first few letters of the group and click **Next** to display a list of groups. Highlight the group wanted from the list, and then click **Next** to continue.

13. In the Server Group Dialog box, leave the default and click **Next** to continue.

14. In the Content Path dialog, you specify the location of the SoftGrid "content" folder. Accept the default location and then click **Next** to continue.
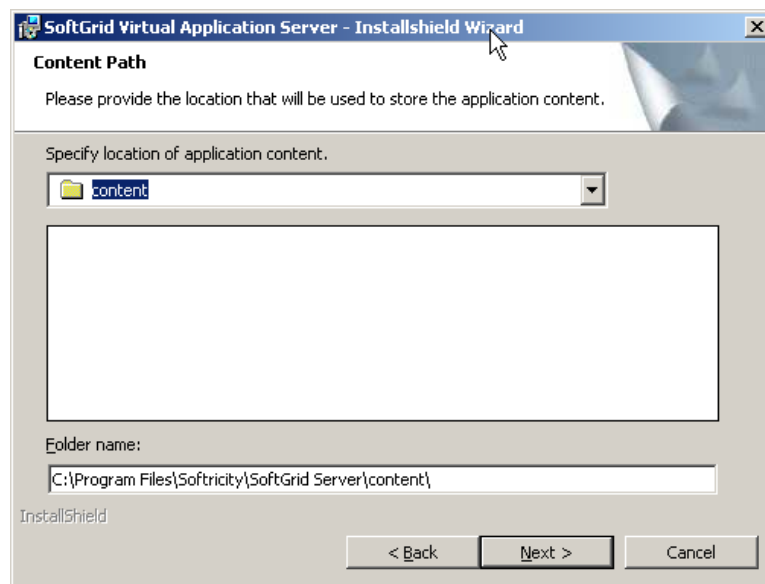
Figure 6. Content Path Dialog Box

15. Now the wizard has all the information it needs to perform the installation. Click **Install** to continue.

16. The wizard copies the necessary files, installs services, and creates database as specified in previous steps.

17. After the wizard finishes, the SoftGrid Management Console shortcut is placed in the Administrative Tools group.

18. *Now you must share the SoftGrid "content" folder.* In this guide we will share the folder using Windows file sharing; however, in a production environment you may chose a different option. Using Windows Explorer, browse to **C:\Program Files\Softricity\SoftGrid Server\content** and share this folder. Give everyone Read access to this folder.

You have now installed the SoftGrid Virtual Application Server. If you have encountered an error, please refer to the troubleshooting section of this Trial Guide.

Installing the SoftGrid Client for Windows Desktops

The section guides you through the step-by-step process to install the Windows Desktop version of the SoftGrid Client.

1. To install the SoftGrid Client for *Windows desktops*, run: **softgrid-wd-setup.msi**.

2. On the introduction dialog, click **Next**.

3. Read and accept the license agreement, and then click **Next** to continue.

4. In the Destination Folder dialog, install the SoftGrid Client into the default location, and then click **Next** to continue.

5. In the Cache Settings dialog box, leave the default data storage setting, and click **Next** to continue. Note that the SoftGrid Client can handle a persistent application cache size up to 65,535 MB (64 GB). Leave the "Skip advanced data storage settings and accept defaults" check box selected.

6. In the Desktop Configuration Server dialog box, select "Setup a Desktop Configuration Server now". For the display name and the hostname, enter the hostname of the SoftGrid Server, which is SGSERVER in this example, and then click **Next**.
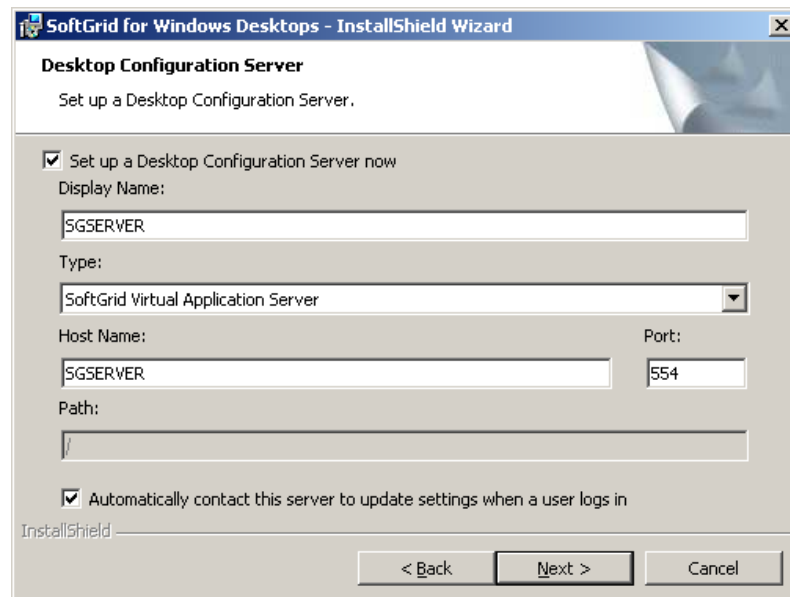
Figure 7. Desktop Configuration Server Dialog Box

7. Click **Install** to begin the installation of the SoftGrid Client.

8. Once the installation is complete, click **Finish**.

Testing the Default Application

You are now ready to test the basic functionality of the system by launching the Microsoft Default Application on a SoftGrid Client. The Default Application was automatically installed during the SoftGrid Platform installation.

1. The SoftGrid Management Console is installed on the SoftGrid Virtual Application Server by default. Note that in a production environment, you can install the SoftGrid Management Console on any system capable of running the Microsoft Management Console. To launch the SoftGrid Management Console, select **Start > Program Files > Administrative Tools > SoftGrid Management Console**.

2. On the SoftGrid Management Console, click the **Connect to SoftGrid System link** in the right pane. Enter the Web Server name (localhost) to connect to the Management Service and click **OK**.
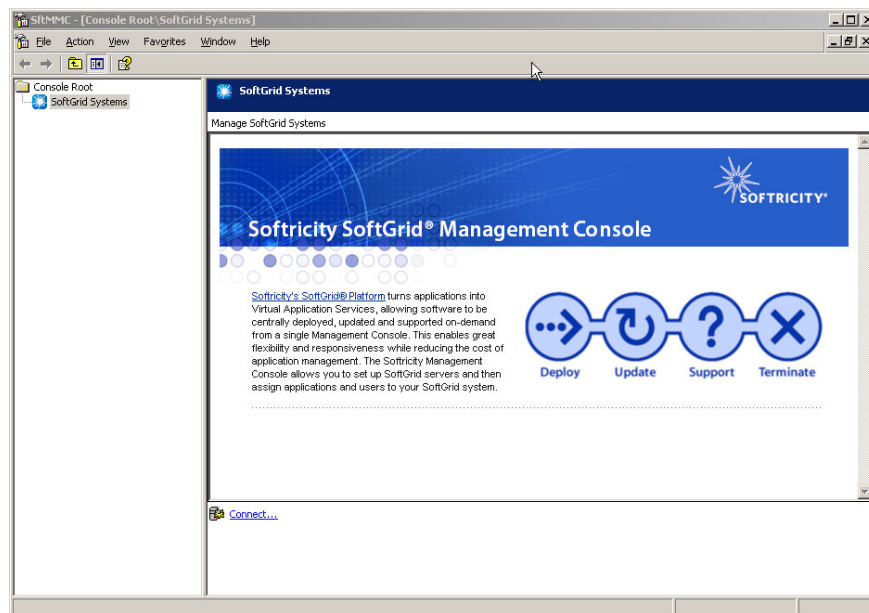
Figure 8. Management Console at Connect

NOTE: The account you are using to log onto the SoftGrid Server computer must be a member of the SoftGrid Administrators Group in Active Directory, unless you chose to allow Domain Users or some other group to administer SoftGrid during this evaluation. ALSO, advanced options on the connect dialog require additional setup and are beyond the scope of this guide.

3. In the left panel, double click on "SoftGrid System", then double click on localhost, then double click **Applications**.
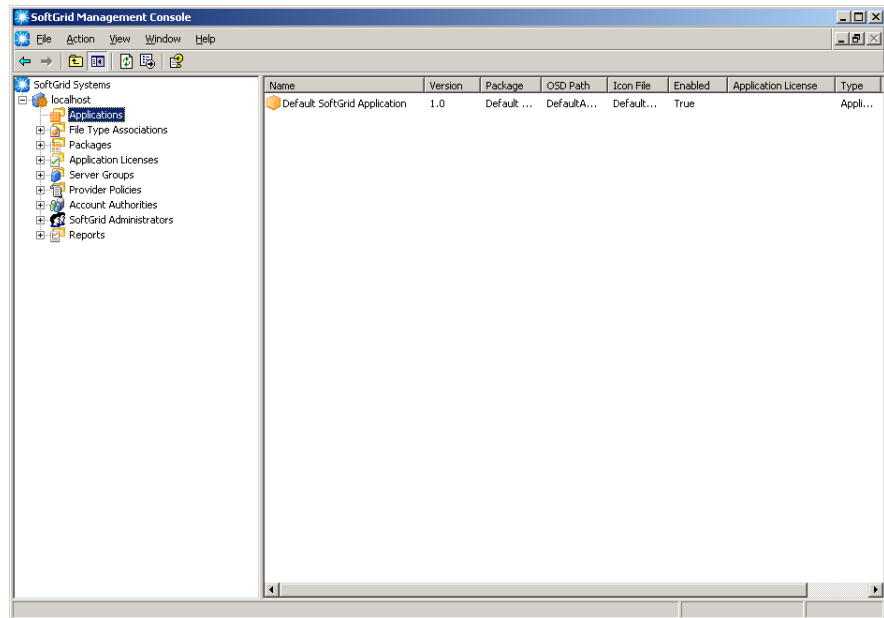
Figure 9. The SoftGrid Management Console

4. In the right panel, double-click the entry to open the Default SoftGrid Application Properties dialog box.

5. In the OSD Path field, add the path to the "content" directory immediately before the OSD filename, for example \\SGSERVER\CONTENT\defaultapp.osd. Do the same to the path

of the ICON file. Make sure you specify paths that are accessible to your SoftGrid Client.
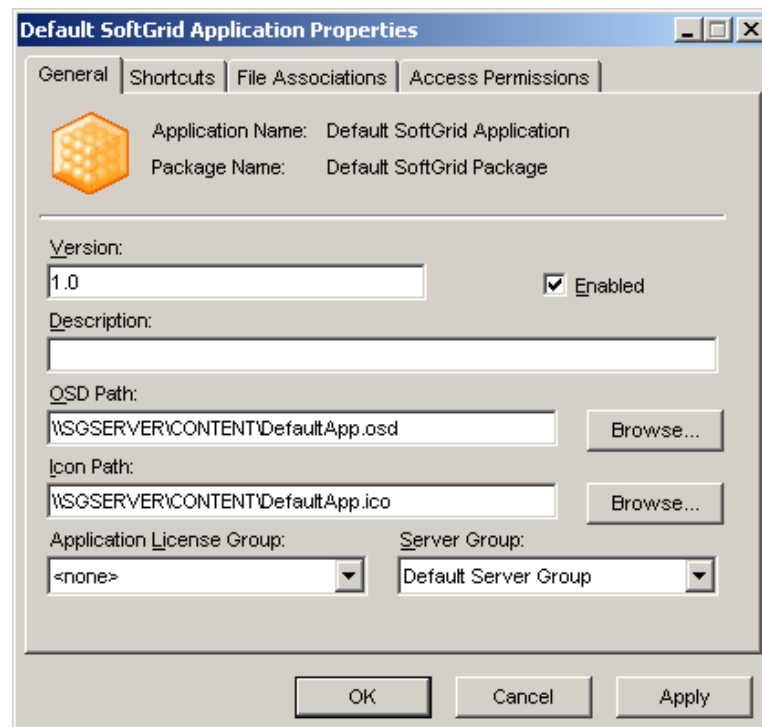
Figure 10. Default Application SoftGrid Properties

6. Click on the **Access Permissions** tab and add the Domain Users Group if it is not already added.

7. Click the **Shortcuts** tab and select **Publish to User's Desktop**, if not selected. Click **OK** to accept the changes for the default application.

8. On the SoftGrid client machine, launch the SoftGrid Client Management Console by clicking **Start > Settings > Control Panel > Administrative Tools > SoftGrid Client Management.**

9. On the left side of the screen click the **Desktop Configuration Servers** node.
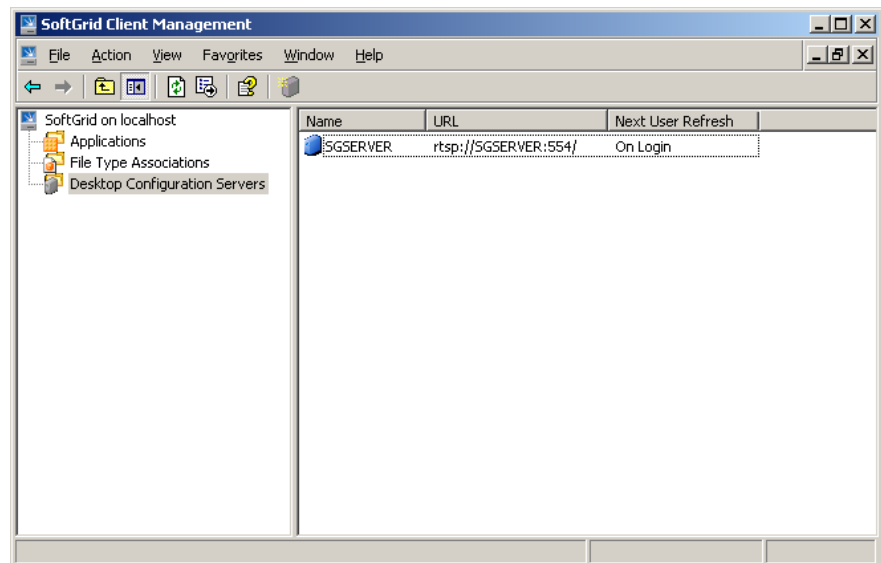
Figure 11. SoftGrid Client Management Console

10. On the right side of the screen **right-click** on **SGSERVER** and select **Refresh Server** from the pop-up menu.

11. On the desktop, double-click the shortcut for the **Default Application**. A status bar, displayed above the System Tray, reports the application is being launched. If a "Launch Failed" message displays, click the message to see more information about the error. After a successful launch, the title screen for the Microsoft Default Application displays.
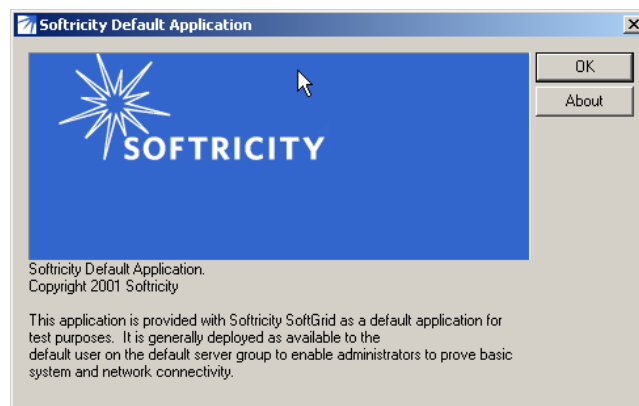
Figure 12. Microsoft Default Application

12. Click **OK** to close the dialog box The SoftGrid system is now running. If you have encountered an error, please refer to the troubleshooting section of this Trial Guide.

SoftGrid Client for Terminal Servers

The installation and operation of the SoftGrid Client for Terminal Servers is almost identical to that of the SoftGrid Client for Windows Desktops.

Installation

Install the SoftGrid Terminal Server Client (**softgrid-ts-setup.msi**) using the **Add/Remove Programs** wizard in Control Panel. Next, follow the rest of the setup instructions for the SoftGrid Client for Windows Desktops.

Testing Applications

You can log on to the Terminal Server multiple times using RDP and test the various applications simultaneously. For more information, follow the test instructions for the SoftGrid Client for Windows Desktops.

Installing the SoftGrid Sequencer

The SoftGrid Sequencer packages the SoftGrid-enabled applications that are streamed to SoftGrid Clients.

Before You Install the Sequencer

The sequencer computer must meet the same minimum requirements as the SoftGrid Clients for Windows Desktops, but a fast workstation-class computer will significantly speed up the sequencing process. The workstation should be set up with one or more hard disk drives with ample disk space.

There are two main methods in setting up the sequencer computer:

Option 1: Virtual Machine

Do a fresh install of Microsoft Windows 2000 Professional SP4 to a virtual machine (VM). DO NOT use your "standard desktop image" or install any other applications on this image, at this time. Then follow the correct product specific steps below:

Microsoft Virtual Server product - Add a second dynamically expanding virtual hard disk. Within the virtual machine, set the drive letter to "Q". Enable Undo disks and commit the existing configuration. After each time you sequence an application, you will "Turn off Virtual Machine and Discard Undo Disks" to this VM to get back to a "clean" operating system.

VMware product - Edit the virtual machine settings and add an independent persistent virtual disk. Within the virtual machine, set the drive letter to "Q". Create a snapshot of the VM. After each time you sequence an application, you will "revert" to this snapshot to get back to a "clean" operating system.

Option 2: Local Image

Create at least two partitions on the hard disk. Make the first partition at least 4GB in size for the operating system. The second partition should consume the remainder of the hard disk space, preferably more than 10GB in total size. Set the drive letter to "Q" for the second partition. Do a fresh install of Microsoft Windows 2000 Professional SP4 to the first partition. DO NOT use your "standard desktop image" or install any other applications on this image, at this time. Using a utility such as Symantec Ghost, store a disk image of the first partition on the second partition. This method lets you rapidly restore the sequencing computer to a "clean" installation of the desired operating system, after each time you sequence an application.

Why a Q: drive?

Why sequence to a Q: drive? The purpose is for the core application installation path to remain constant across all computers in the

enterprise, which may not have constant system drives, for example M: for terminal servers and C: for desktop computers. This is accomplished by using a real drive or partition at the Sequencer computer and a *virtual* drive at the SoftGrid Clients. The virtual drive at the SoftGrid Clients is created by the SystemGuard virtualization technology an NOT by a disk partitioning tool. Q:\ is the default drive letter and can be changed if needed in a production rollout. Microsoft has a method to handle applications that must be installed to a fixed drive letter like C:, which is explained in the training course.

Installing the SoftGrid Sequencer

1. "Revert" or "re-ghost" to a clean state of your operating system if you have previously sequenced an application.

2. Add the sequencer computer to the common domain if is not already a member.

3. Run **softgrid-sequencer-setup.msi.**

4. In the introduction dialog box, click **Next** .

5. Read and accept the licensing agreement, and then click **Next** to continue.

6. Accept the default installation path, and then click **Next** to continue.

7. Click **Install** to continue.

8. Once the installation is complete, click **Finish** to exit the installer. The SoftGrid Sequencer will launch.

Sequencer Files

To enable a Windows application for SoftGrid, the Sequencer produces the following files:

- **ICO** – The ICO (Icon) file specifies the icon that appears on the SoftGrid Client desktop. When you double-click on the icon, you are actually launching the shortcut to the corresponding OSD file, described below, that begins the data streaming and application launch process. From the user perspective, the experience of launching a SoftGrid-enabled application is identical to launching a locally stored application.

- **OSD** – The OSD (Open Software Description) provides the information necessary to locate the SFT file for the application and setup and launch the application. This information includes the application name, the name and path to the executable file, the name and path to the SFT file, the suite name, the supported operating systems, and general comments about the application.

- **SFT** – The SFT (SoftGrid) file contains the asset files that include one or more Windows applications. The Sequencer, without altering the source code, packages these asset files into chunks of data that can be streamed to the SoftGrid Client. The file is divided into two distinct blocks. The first block, called Feature Block 1 (FB1), consists of the application's most-used features. FB1 is streamed to the SoftGrid Client the first time the user launches the application. The remainder of the application is in Feature Block 2 (FB2). FB2 is streamed to the SoftGrid Client on demand. By default, the blocks are divided into 32 KB "chunks" of data.

- **SPRJ** – The SPRJ (Sequencer Project) file is generated when a project is saved. The SPRJ file contains a list of files, directories, and registry entries that are excluded by the Sequencer. Load this file in the Sequencer to add, change, delete, or upgrade any of the applications in the suite. A common example of when you might use the SPRJ files is when you add service packs to an application.

Sequencing Adobe Acrobat Reader

This section walks you through a simple sequencing. Adobe Acrobat Reader can be used as a test case that you can easily and quickly deploy using the SoftGrid Platform.

1. *If you have not already done so, revert the sequencer <u>computer</u> back to a clean ghost image or revert the state of the Virtual Machine. <u>If you are installing the SoftGrid Sequencer on a computer with the SoftGrid Server or SoftGrid Client, re-read the previous sentence.</u>*

2. Before you launch the SoftGrid Sequencer, make sure you have the executable *provided to* you copied to the Q:\ drive that you will need to install Adobe Acrobat Reader .

3. Create a directory on your desktop called AdobeAcrobatReader7. In this directory you will save the output of the sequencer.

4. Begin by opening the SoftGrid Sequencer. Select **Programs > Microsoft > SoftGrid Sequencer**, if it is not already open.
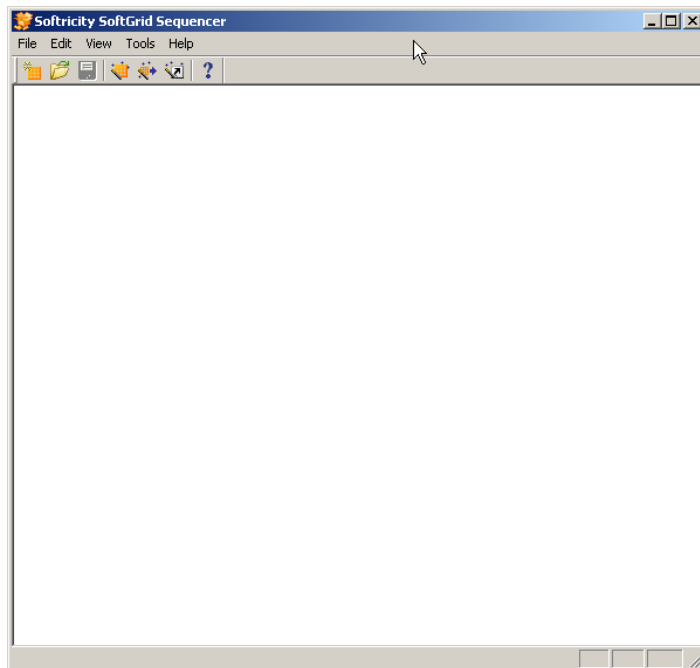

Figure 13. SoftGrid Sequencer

5. On the **File** menu, click **New Package...** to start the New Application Wizard.

6.   When asked if you would like assistance, click **Yes**.

7.   Click **Next** to pass the welcome screen. Provide the following information on the Package Information dialog box, and then click **Next** to continue.

*   **Suite Name:** The suite name is a common label for all the applications in the software suite, for example the suite Microsoft Office 2000 includes Microsoft Word, PowerPoint, etc. Type "Adobe Acrobat Reader 7".

*   **Title:** This is the name of the application you are sequencing. Type "Acrobat Reader".

*   **Comments:** Use this field to specify information such as the person who sequenced the application. You can also include the name and location of the installation document.

*   **Server URL**: The hostname defaults to an environment variable (%SFT_SOFTGRIDSERVER%). To use the variable, you must have previously set the variable on the SoftGrid Client to the hostname of the SoftGrid Server. For now, change the variable to the hostname of the SoftGrid Server(SGSERVER).

*   **Path:** For the Path field, enter "AdobeAcrobatReader7". In a production environment, one could further organize applications within additional subdirectories like EMEA and APAC.

Figure 14. Package Information Dialog

8. On the Operating Systems dialog box, select the operating systems on which you intend this package to run. Use the right arrow to move the selected items to the right pane, and then click **Finish**.
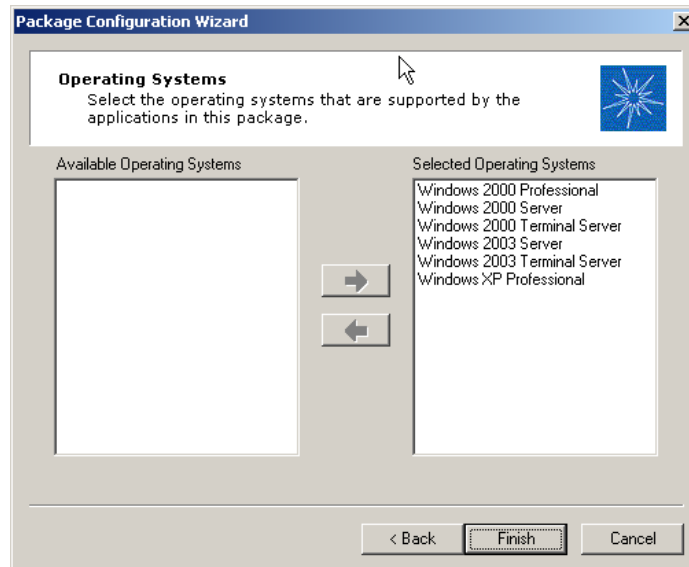

Figure 15. Operating Systems Dialog

9. In the Welcome to the Installation Wizard dialog box, click **Next**.

10. In the Sequencing Parameters dialog box, click **Next**.

11. In the Monitor Installation dialog box, press **Begin Monitoring...** . This action minimizes the sequencer so you can start the application installation process.
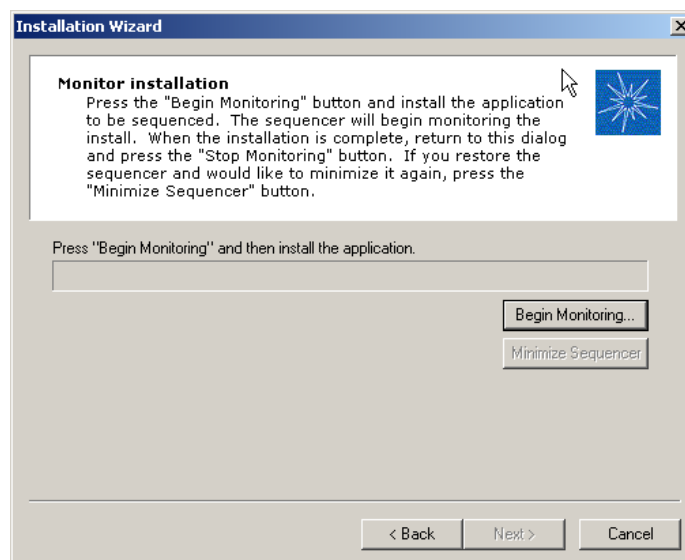
Figure 16. Monitor Installation Dialog Box

NOTE: Open instances of Windows Explorer (as well as command prompts) are not being monitored. Close all instances before executing the next step so you can install the application through Windows Explorer.

12. Open a new Windows Explorer window, create an empty folder called acrd7.001 on the Q:\ drive.

13. Install the application from Windows Explorer (or double-click the desktop icon). Begin the installation as normal and continue until you see the Destination Folder dialog box.
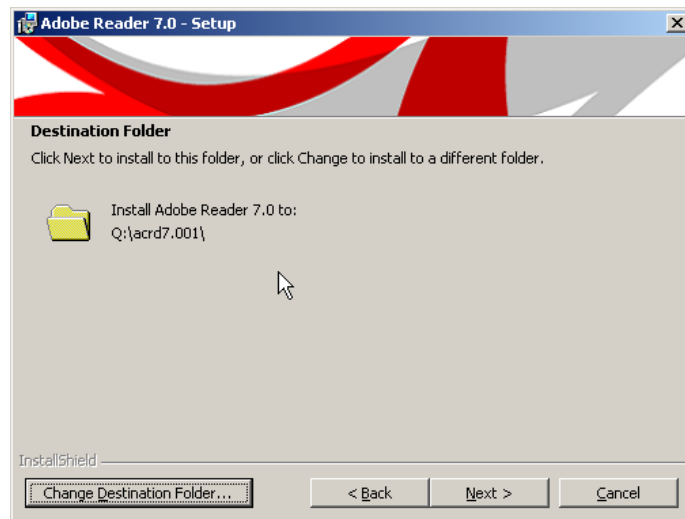
Figure 17. Adobe Reader Destination Folder Dialog

14. Change the destination folder to **Q:\acrd7.001**

15. Continue with the installation.

16. If the installation wizard prompts you for a restart, answer **Yes**. The sequencer will catch the restart request and prevent it.

17. Restore the minimized SoftGrid Sequencer.

18. Click **Stop Monitoring**.

19. A Browse for Folder dialog box displays. Select the installation folder you specified in the setup wizard **Q:\acrd7.001**, and then click **OK**.

20. The Sequencer scans the computer for changes. Click **Next** to continue.

21. For applications using the Microsoft Installer (MSI), include the current version of installer file libraries to eliminate version conflicts on the clients. On the Add Additional Files to Map to the VFS dialog box, click **Finish**.
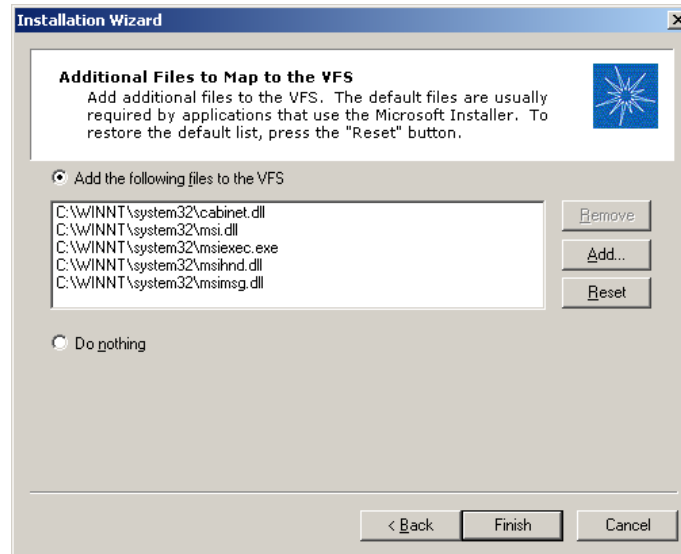
Figure 18. Additional Files to Map to the VFS Dialog

22. At the Welcome to the Application Wizard dialog box, click **Next**.

23. The Application Wizard detects and lists shortcuts created by the application installer. The Sequencer creates an OSD and ICO file for each shortcut. With the Configure Applications dialog box, you can edit, remove, or add shortcuts. First, click the **Applications**

node of the left panel, and then click **Adobe Reader Speed Launch** on the right side panel. Click **Remove,** and then click **OK**.
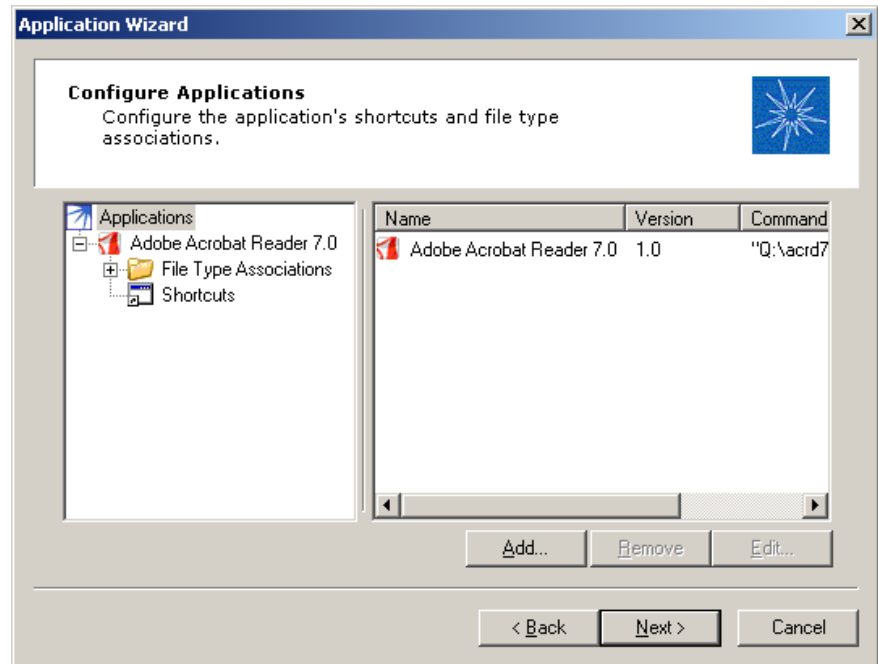
Figure 19. Configure Applications Dialog

24. Click the **Applications** node of the left panel, then click **Adobe Acrobat 7.0** on the right panel, and then click **Edit**. Set the following OSD File Properties, and then click **Save**.

* **Name:** Adobe Acrobat Reader 7.0
* **Version:** 1.0
* **OSD Filename:** Adobe_Acrobat_Reader_7_0.osd

Figure 20. Shortcut settings of Acrobat Reader 7.0

25. On the left panel, expand the **Acrobat Reader 7.0** node. First, click the **File Type Associations** (FTAs) node to view what FTAs the sequencer recorded. Next, click the **Shortcuts** node to view where the shortcuts for this application will be placed on the SoftGrid Client desktops. When you are done viewing this information, click **Next**.

26. The Launch Applications dialog box lets you launch the applications associated with the shortcuts created. This will determine Feature Block 1 (FB1), which contains the portion of the applic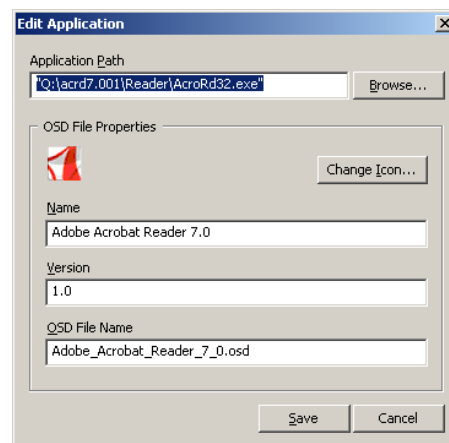ation required to launch the application on the SoftGrid Client. Launch Acrobat Reader. When the application launches, on the **Edit** menu, click **Preferences**. In the resulting dialog box, click the **Updates** category on the left. Clear the "Display notification dialog at startup" check box, and select "Do not automatically check for critical updates", then click **OK** and close the application. (You may need to click **Stop** and then click **Terminate** if the status bar does not change for more than 30 seconds.)

27. Click **Next**, and then click **Finish**.

28. You can now use the Sequencer to view the results. Click on each tab and review the following information:

   • **Properties** tab **–** Provides basic information, such as Creation Date, Max Block Size, Launch Size, Compression, and block size.

   • **Files** tab **–** Shows the files the application copied, modified, or created and where those files reside.

   • **Virtual Registry** tab **–** Displays every registry setting that was created or modified. You can view and change the settings and you can manually create and delete new keys and values.

   • **Virtual File System** tab – Displays the hierarchical directory for the files that comprise the package in common system folders.

   • **Virtual Services** tab – Displays information about any Windows NT Services that were detected and are included as part of the sequence.

   • **OSD** tab – Displays a hierarchical representation of the XML descriptor file contents. You can modify the values to suit the application. By selecting the CODEBASE key in the left pane, the right pane displays the connection details.

29. On the **File** menu, click **Save** and save your work as acrd7.sprj inside the AdobeAcrobatReader7 folder that you created on the desktop.

30. The files produced by the SoftGrid Sequencer (.ico, .osd, .sft, and .sprj) must be in the shared "content" directory on the SoftGrid Virtual Application Server (the default location is C:\Program Files\Microsoft\SoftGrid Server\content). Copy the AdobeAcrobatReader7 folder to the "content" directory now.

31. To prevent confusion, delete the published Adobe Acrobat application that already exists in the SoftGrid Server Management Console. Also, delete the published Adobe Acrobat package that already exists in the SoftGrid Server Management Console under the packages node. (To delete an object in the SoftGrid Management Console, right-click it and then select **Delete** in the pop-up menu.) Then, add the new application to the SoftGrid Management console, following the instructions provided with the pre-sequenced application.

32. On the SoftGrid Client, trigger a refresh of the virtual application and then launch the new sequence of Adobe Acrobat Reader 7. The instructions in the "Testing the Default Application" section can be used as a guide.

Sequencing Sun Plug-in for Internet Explorer

This section walks you through a creating a virtual environment for Internet Explorer. In this example you will include a Sun Java plug-in and set registry keys to restrict Internet Explorer functions within the virtual environment. These changes will not appear when a local copy of Internet Explorer is launched, only with the virtual copy. Note that Internet Explorer is part of the operating system, therefore we will point to the local Internet Explorer executable file on each SoftGrid Client, and apply the changes within the virtual environment on top of the local environment.

1. *If you have not already done so, revert the sequencer <u>computer</u> back to a clean ghost image or revert the state of the Virtual Machine. <u>If you are installing the SoftGrid Sequencer on a computer with the SoftGrid Server or SoftGrid Client, re-read the previous sentence.</u>*

2. Before you launch the sequencer, make sure that you have copied the *provided* Sun Java Runtime Installer and the registry file to a temporary directory on the sequencer computer.

3. Create a directory on your desktop called IEwithJava3. In this directory you will save the output of the sequencer.

4. Begin by opening the SoftGrid Sequencer. Select **Programs > Microsoft > SoftGrid Sequencer**, if it is not already open.

5. One the **File** menu, click **New Package...** to start the New Application Wizard.

6. When asked if you would like assistance, click **Yes** .

7. To pass the welcome screen, click **Next**. Provide the following information on the Package Information dialog box, and then click **Next** to continue.

   • **Suite Name:** The suite name is a common label for all the applications in the software suite, for example the suite Microsoft Office 2000 comprises MS Word, Power Point, etc. Type "IE with Java 3".

   • **Title:** This is the name of the application you are sequencing. Type "IE with Java".

- **Comments:** Use this field to specify information such as the person who sequenced the application.

- **Server URL**: The hostname defaults to an environment variable (%SFT_SOFTGRIDSERVER%). To use the variable, you must have previously set the variable on the SoftGrid Client to the hostname of the SoftGrid Server. For now, change the variable to the hostname of the SoftGrid Server (SGSERVER).

- **Path:** Type "IEwithJava1" as the path.

8. In the Operating Systems dialog box, select the operating systems on which you intend this package to run. Use the right arrow to move the selected items to the right pane, and then click **Finish**.

9. On the Welcome to the Installation Wizard dialog box, click **Next**.

10. On the Sequencing Parameters dialog box, click **Next**.

11. On the Monitor Installation dialog, press **Begin Monitoring...** . This action minimizes the sequencer so you can start the application installation process.

    NOTE: Open instances of Windows Explorer (as well as command prompts) are not being monitored. Close all instances before executing the next step so you can install the application through Windows Explorer.

12. Open a NEW Windows Explorer window, create an empty folder called IEjava.001 on the Q:\ drive.

13. Launch **jre-1_5_0_06-windows-i586-p.exe**

14. Chose **Custom** setup and *install ALL software components to the hard disk*. Change installation directory to **Q:\IEjava.001\Java\jre1.5.0_06**
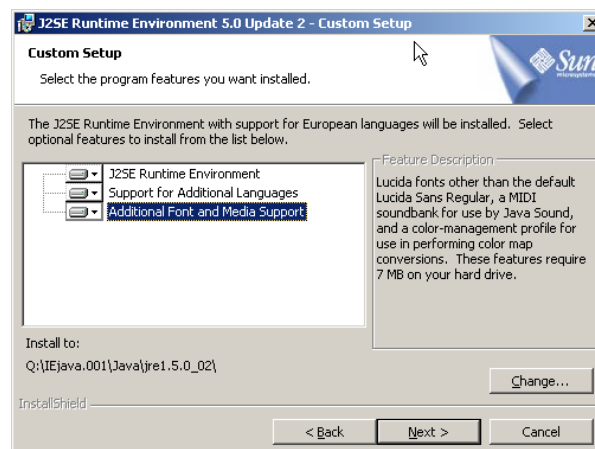
Figure 21. Sun Java Custom Installation

15. At the Browser Registration dialog box, make sure Internet Explorer remains selected.

16. When the Java installation is completed, double-click the provided registry file **Ie6MenuRestrictions.reg** and click **Yes** to import.

17. Restore the minimized SoftGrid Sequencer.

18. Click **Stop Monitoring**.

19. A Browse for Folder dialog box displays. Select the installation folder you specified in the setup wizard **Q:\IEjava.001** (*note shorter path*), and then click **OK**.

20. The Sequencer scans the computer for file and registry changes. Click **Next** to continue.

21. For applications using the Microsoft Installer (MSI), include the current version of installer file libraries to eliminate version conflicts on the clients. In the Add Additional Files to Map to the VFS dialog box, click **Finish**.

22. At the Welcome to the Application Wizard dialog box, click **Next**.

23. The Application Wizard detects and lists shortcuts created by the application installer. The Sequencer creates an OSD and ICO file for each shortcut. With the Select Shortcuts dialog box, you can edit, remove, or add shortcuts. Click the **Applications** node of the left panel, then click **Add**. Fill in the following information, and then click **Add**.
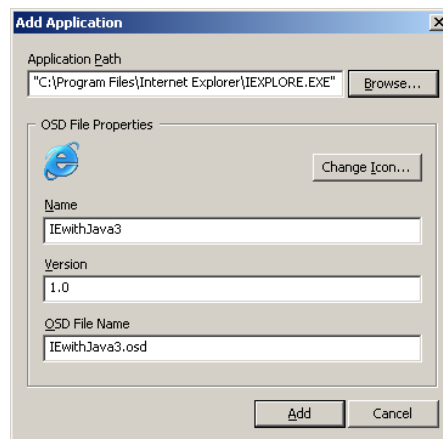
Figure 22. Shortcut settings for Internet Explorer

- **Target:** "C:\Program Files\Internet Explorer\IEXPLORE.EXE"
- **Name**: IE with Java
- **Version**: 1.0
- **OSD File Name**: IEwithJava.osd

24. Click **Add**.

25. Click the **Applications** node of the left panel, click the "Java(TM) 2 Platform Standard Edition binary" item on the right panel, click **Remove**, and then click **OK**.

26. Click the **Applications** node of the left panel, then click the "Java(TM) Web Start Launcher" item on the right panel, click **Remove**, and then click **OK**.

27. Click **Next**.

28. The Launch Shortcuts dialog box lets you launch the applications associated with the shortcuts created. This will determine Feature Block 1 (FB1), which contains the portion of the application required to launch the application on the SoftGrid Client. Launch Internet Explorer and on the **Tools** menu, select **Sun Java Console** so the Sequencer can properly populate FB1. Then, close Internet Explorer. (You may need to click **Stop** and then click **Terminate**.)

29. Click **Next**. When the Sequencer is finished, click **Finish**.

30. On the **File** menu, click **Save** and save your work as IEwthJava.sprj inside the IEwithJava folder you created on the desktop.

31. The files produced by the SoftGrid Sequencer (.ico, .osd, .sft, and .sprj) must be in the shared "content" directory on the SoftGrid Virtual Application Server (the default location is C:\Program Files\Microsoft\SoftGrid Server\content). Copy the IEwithJava3 folder to the "content" directory now.

32. Add the new application to the SoftGrid Management console, following instructions provided with the pre-sequenced application. Use "IEwithJava" as the Active Directory group.

33. On the SoftGrid Client, trigger a refresh of the virtual application and then launch the new sequence. The instructions in the "Testing the Default Application" section can be used as a guide.

Troubleshooting

This section outlines some of the most common pitfalls that you might encounter when you install, configure, and test the SoftGrid Platform. *If you need additional help, search the Microsoft Knowledge Base at* http://support.Microsoft.com

Common SoftGrid Management Console Errors

Common SoftGrid Management Console Errors include C800, 81C etc.

To resolve these errors, type the error code into the search dialog at http://support.Microsoft.com *and follow the directions.*

Common Errors on SoftGrid Client

This section lists the most common errors on the SoftGrid Client and the most common solutions to those errors.

1. When you attempt to refresh the server you get a SoftGrid Error that says, "The SoftGrid Client failed to download..." and, "The server could not authorize you to access the requested data..."

2. The application shortcut is not on the SoftGrid Client Desktop.

3. The application did not stream to the SoftGrid Client. If the application fails to stream you see the"Launch Failed" error message above the tool tray.

Possible causes:

- The User Account used to logon to the SoftGrid Client is not a member of the SoftGrid Users group or not a domain user account.
- The SFT, ICO and/or OSD files are not in the SoftGrid Server content folder. Copy these file to C:\Program Files \Microsoft\SoftGrid Server\content
- Mistyped OSD and ICO paths in the application record in the SoftGrid Management Console.
- SoftGrid Client can not access the Content directory on the SoftGrid Server. Possible causes include:
  - SoftGrid Client can not access/ping the SoftGrid Server. Check network settings and cabling.
  - Content folder on SoftGrid Server is not shared or not shared with everyone who has read access.
- The SoftGrid Client is not a member of the domain.
- The User lacks necessary permissions to access the application. Re-read and follow the procedure regarding importing OSD files, paying close attention to setting the access group.
- This operating system of the SoftGrid Client is not listed in the OSD file of the application.

If none of the above is the root cause of the problem, then you should check the SoftGrid Client log **sftlog.txt** in **C:\Program Files\Microsoft\ SoftGrid for Windows Desktop** for errors.

Accessing the Technical Support Knowledgebase

To access the knowledgebase and search for answers to the most frequently asked questions, please contact Technical Support at:

- Technical Support Knowledgebase: http://support.Microsoft.com

Contacting Microsoft Training

To register for training courses, to obtain course descriptions, or to get information about Microsoft certifications, please contact the Training group at:

- Training web site: http://www.softricity.com/training