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# **Solution Accelerator for Business Desktop Deployment, Standard Edition**

Core Applications Feature Team Guide

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## Using This Guide

This guide is part of the Microsoft® Solution Accelerator for Business Desktop Deployment (BDD). The focus of this document is to guide a specialist team through the deployment tasks and checkpoints for core applications, primarily Microsoft Office 2003 Editions. The core applications deployment is part of the larger desktop deployment project and must be managed as such. This means that decisions made during the core applications deployment must align with the overall project goals, and that the deliverables be well integrated into the total desktop deployment project.

**Note** In this document, *Windows* applies to both the Microsoft Windows® XP and Windows Vista™ operating systems unless otherwise noted.

## Setting Up the Team

The specialist team responsible for ensuring the success of the core applications deployment is the Core Applications feature team. A *feature team* is a cross-organizational team responsible for solving a defined problem. Within the Solution Accelerator for BDD project, the Core Applications feature team is one of several feature teams that work with a lead team on the project.

Feature teams are an important component of the Microsoft Solutions Framework (MSF) Team Model. The ability to split a large and complex project into smaller sets of related tasks allows work to be performed on many tasks in parallel, with the application of specialized expertise where needed. A great advantage of this approach is an enhanced ability to manage large projects with many simultaneous tasks.

However, for the approach to work, it is vitally important that the teams synchronize their efforts and maintain active communications among one another and with the Project Management team. This is particularly important in complex projects, in which there is a danger that a feature team may focus on its portion of the project to the exclusion of the role it plays in the overall project.

## Communication

The team's ability to communicate and cooperate both internally and with other feature or function teams and project stakeholders is key to a successful project. Within the team, each role is considered equally important, and decisions are made jointly.

Among teams, and between individual feature teams and the Project Management team (defined as the *lead team* in this document), the process is more formal, with well-defined pathways of communication. This formality does not prevent informal communication among the teams, which is encouraged, but it does ensure that important communications are well documented, occur at the appropriate level, and are directed to the appropriate team members.

An important consideration for feature teams is communicating with the project stakeholders, which typically include various entities within the customer organization. To avoid confusion, incomplete or conflicting messages, or misunderstood expectations, all communications with stakeholders should be routed through the Project Management team. This process ensures that management is always aware of the state of the customer relationship, and it helps enhance customer satisfaction in the deployment process.

## ***Additional Guidance on the MSF Team Model***

For additional guidance on the MSF Team Model, see the *MSF Team Model* white paper at <http://www.microsoft.com/technet/itsolutions/msf/default.aspx>.

## Introduction

Core applications are an integral part of computer deployments in many organizations today. Because Office 2003 Editions are often a corporate standard application suite and because of the size of the application suite, this Solution Accelerator for BDD solution treats Office 2003 Editions as a core application suite to be included in the base computer image used during the corporate deployment of Windows.

This guide shows you how to incorporate custom configurations of Office 2003 Editions to ensure that all deployed computers have an automated, consistent, and stable implementation of the Microsoft Office System. It includes creating installation points, customizing Office 2003 Editions, and adding Office 2003 Editions to a Solution Accelerator for BDD image. This guide also describes how to include other core applications in your deployment.

## Background

The work this document describes is typically started in the MSF Planning Phase, during which information is collected. It continues through the Developing and Stabilizing Phases, during which the core applications' installation is designed, built, tested, and piloted until it is approved for release to the Deploying Phase.

The primary consumer for this guide is the MSF Developer role cluster, because most of this guide focuses on the development work needed to create custom deployment packages.

## Prerequisites

To create a custom Office 2003 Editions installation, the core application suite on which this guide focuses, you will need the following items in the lab:

- *Microsoft Office 2003 Editions Resource Kit*
- A network share to store the Office 2003 Editions source files
- A computer to use to install, configure, and customize Office 2003 Editions
- Office 2003 Editions volume license media

Prerequisites for other applications will vary. In general, you will need the applications' source files and the tools necessary to customize the applications. Some applications are not packaged to allow installation without user interaction. For these applications, you will need repackaging tools with which you can create a Microsoft Windows Installer setup database.

It is assumed that the Office 2003 Editions developers have access to:

- A Microsoft TechNet subscription.
- The Microsoft Web site.
- A lab in which to work.

## ***Education and References***

The following sources of education and references are available for deploying Office 2003 Editions and other core applications:

- *Microsoft Office 2003 Editions Resource Kit* at <http://www.microsoft.com/office/ork>
- "Repackaging Applications to Support the Microsoft Windows Installer Service" at <http://www.microsoft.com/seminar/shared/asp/view.asp?url=/Seminar/en/20000919T/NQ201-02/manifest.xml>
- *Windows Server 2003 Deployment Guide* at <http://www.microsoft.com/technet/prodtechnol/windowsserver2003/library/DepKit/c283b699-6124-4c3a-87ef-865443d7ea4b.mspix>
- *Microsoft Windows Desktop Deployment Resource Kit* (Microsoft Press®, 2004)

Additional training and documentation on repackaging and Windows Installer topics include the following:

- Windows Installer Webcasts and presentations at <http://www.installsite.org/pages/en/msi/webcast.htm>
- Macrovision training courses at <http://www.macrovision.com/services/education/index.shtml>
- Wise Solutions training courses at <http://www.wise.com/training.asp>
- Windows Installer Training for Administrators at <http://www.desktopengineer.com>  
(This class provides independent class materials with labs available for use with either Macrovision's FLEXnet AdminStudio or Wise Package Studio.)

# Overview

Figure 1 is an overview of the core applications deployment process, particularly for Office 2003 Editions. The figure includes an Envisioning Phase, during which initial thinking and planning occur. That phase ends when the scope of the project is defined. This guide does not include information about the project Envisioning Phase, because this preliminary planning will have already taken place. The guide begins with the Planning Phase.

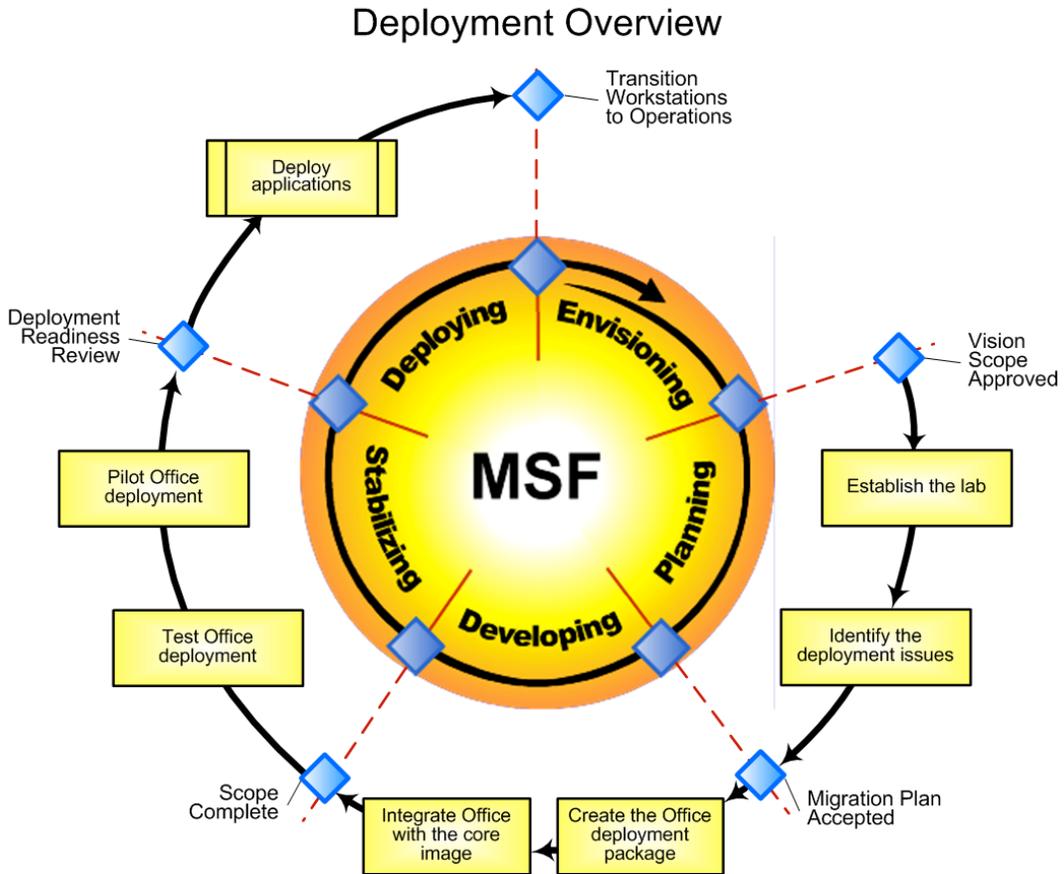


Figure 1. Process model overview of Office 2003 Editions deployment

## Planning

Figure 2 provides a detailed breakdown of the activities accomplished during the Planning Phase. These activities are divided into two categories: establishing the lab and identifying the deployment issues that the feature team must address over the course of the project.



**Figure 2. Planning Phase activities**

**Note** Sample planning templates are available on the *Microsoft Office 2003 Editions Resource Kit* Web site at <http://office.microsoft.com/en-us/FX011511471033.aspx>. These templates let you quickly plan your Office 2003 Editions configuration. These templates can be easily adapted to other core applications.

## Roles and Responsibilities

All six role clusters from the MSF Team Model will play a role in the Planning Phase of the initiative. The *Plan, Build, and Deploy Guide* lists those roles and defines the focus areas for each role cluster (see Table 1 below). For more information about MSF team role clusters, see the Microsoft Solutions Framework Web site at <http://www.microsoft.com/technet/itsolutions/msf/default.mspx>.

**Table 1. Roles and Responsibilities During the Planning Phase**

Role	Focus
Product Management	Input into conceptual design; business requirements analysis; communications plan
Program Management	Conceptual and logical design; functional specification; project plan and project schedule; budget
Development	Establishment of lab; key application issues identification
User Experience	Usage scenarios or cases; user requirements; localization and accessibility requirements; user documentation; training plans; schedules
Test	Testing requirements definition; test plan and schedule
Release Management	Design evaluation; operations requirements; pilot and deployment plan or schedule; network discovery; application and hardware inventory; interfacing with the Operations and Security teams

## ***Establishing the Lab***

During the Planning Phase, the lab environment, in which all the development work will be conducted, is established. The Core Applications feature team does not necessarily require a separate lab. Typically, its members can use the lab infrastructure established by the Computer Imaging System feature team, the Application Compatibility feature team, and the Supplemental Applications feature team. The Core Applications feature team, however, will need to ensure that it has the required licensed software media as defined previously in the prerequisites section of this document.

## ***Choosing the Right Package***

The Microsoft Office System is available in a variety of editions and stand-alone products. Rarely does a single edition meet all your requirements, though. For example, you might deploy Microsoft Office Standard Edition 2003 to most users in the organization but deploy Microsoft Office Professional Edition 2003 to those users who need Microsoft Office Access 2003 or Office InfoPath® 2003.

The What's in the Office 2003 Editions page at <http://www.microsoft.com/office/editions/howtobuy/compare.mspx> describes the Office 2003 Editions that are available through Microsoft Volume Licensing programs. You can also purchase stand-alone products through the Microsoft Volume Licensing program. For more information about these products, visit the How to Buy page at <http://www.microsoft.com/office/howtobuy/default.mspx>.

The product CD-ROM for each edition contains a Windows Installer database that installs the product. For example, the Office Professional Edition 2003 CD-ROM contains the package file Pro11.msi. You need to document not only the name of the editions that you must deploy but also the name of the package files that you must deploy.

## ***Defining the Office 2003 Editions Settings***

You can make extensive customizations before installing Office 2003 Editions on users' computers. You can also customize many aspects of the installation process. Begin by evaluating who your users are and how they use Office 2003 Editions. Some users may

work exclusively in English, for example, whereas others routinely may view or edit documents in multiple languages. Consider the following when planning your Office 2003 Editions customizations:

- *Do you want a uniform configuration throughout your organization?* If multiple users share one computer, or if users roam from one computer to another, establish a standard Office 2003 Editions configuration.
- *How many different configurations of the Microsoft Office System do you need and for which groups of users?* You can distribute different configurations of Office 2003 Editions from a single administrative installation point.
- *Are you staging your deployment of Office 2003 Editions applications?* Many organizations stagger their deployment of Office 2003 Editions applications. With the Custom Installation Wizard, you can specify settings for applications that will be installed later. You use the Custom Maintenance Wizard to add stand-alone Office 2003 Editions applications to an existing configuration. For example, you can schedule a Microsoft Office Outlook® 2003 installation to coincide with a mail server upgrade instead of the Office 2003 Editions installation.
- *What other products do you want to include in the Office 2003 Editions installation?* You can specify additional Windows Installer packages to install with Office 2003 Editions, such as the Microsoft Office 2003 Multilingual User Interface (MUI) Pack. Office 2003 Editions Setup coordinates these installations after the Office 2003 Editions installation is complete.
- *Do you want users to be able to change the default settings and customize Office 2003 Editions for themselves, or do you want to enforce your settings?* Settings that you distribute in a transform or Office 2003 Editions profile settings file (.ops file) appear as the default settings when users install Office 2003 Editions, but users can modify them. To enforce your settings, use policies.
- *Do some users need to keep previous versions of Office on their computers?* By default, when you run Office 2003 Editions Setup in quiet mode, all previous versions of the Microsoft Office System applications being installed are removed. However, you can specify previous versions to keep.
- *What is the best way to customize Outlook 2003 to work in your messaging environment?* In the Custom Installation Wizard, you can create or modify Outlook 2003 profiles, set up new e-mail accounts, or configure Outlook 2003 to work with a Microsoft Exchange Server machine.

When you are planning your customizations, the Custom Installation Wizard is your primary customization tool, so it is an obvious place to start. Think of the process as taking a dry run through the wizard. Download the *Microsoft Office 2003 Editions Resource Kit* at <http://office.microsoft.com/en-us/FX011511471033.aspx> and install it. Step through every screen, filling in the blanks and taking screen shots that you can later print. You can even include the screen shots in your planning document.

Although the initial settings will likely change, a dry run jump-starts the configuration by showing you the possibilities. Spend most of your time looking at the settings on the **Change Office User Settings** page to get an idea of what you can customize. Also, spend some time looking at the **Specify Security Settings** page and the **Outlook 2003 profile** pages.

Each transform file (.mst file) you create by using the Custom Installation Wizard roughly corresponds to a configuration for one group of users. While most organizations will use a small number of .mst files that include most or all of the features, it is important to document in your deployment plan any unique configurations and their corresponding transform files. For example, if you are deploying two Office 2003 Editions configurations—one for the majority of the organization and one for users who require Access 2003—document the transform files for each configuration. If you are also

creating a configuration that includes language support for multilingual users, document the name and contents of that transform file. Note that you can change most settings that you configured by using a transform file after deployment. For more information about using the Custom Maintenance Wizard to update settings after deployment, see “Updating Feature Installation States and Application Settings” at <http://office.microsoft.com/en-us/assistance/HA011402391033.aspx>.

**Note** Planning how to configure Office 2003 Editions security is a significant part of the configuration plan. For more information about Office 2003 Editions security settings, see “Security” in the *Microsoft Office 2003 Editions Resource Kit* at <http://office.microsoft.com/en-us/assistance/CH011466331033.aspx>.

## Identifying the Deployment Issues

Three primary issues need to be addressed when migrating from earlier Office editions to Office 2003 Editions. To a lesser extent, these issues affect other core applications that you are deploying with the Solution Accelerator for BDD. The primary issues are as follows:

- File conversion issues
- Custom Office-based solutions, such as macros and Microsoft Visual Basic® for Applications (VBA)
- File coexistence issues from multiple versions of Microsoft Office Editions

These issues do not directly affect the packaging of Office 2003 Editions but may have a significant affect on the user experience after Office 2003 Editions are installed.

**Note** Microsoft provides the *Microsoft Office 97 to Microsoft Office 2003 Migration Issues* white paper at <http://office.microsoft.com/en-us/assistance/HA011401651033.aspx> (also known as the 97-03delta white paper), which is part of the *Microsoft Office 2003 Editions Resource Kit*. This document shows the differences between Office 97 Editions and Office 2003 Editions at a detailed level. It describes differences users might see in the user interface (UI) and what they might experience as a possible bug, depending on their usage of the various Office 2003 Editions programs. The white paper does reference numerous Microsoft Knowledge Base articles confirming that the more serious bugs are being dealt with and were corrected in various service packs. Also, the white paper provides a summary of the most likely migration issues that an information technology (IT) professional might encounter during and after a migration of Office 97 Editions to Office 2003 Editions.

## File Conversion Issues

As the Microsoft Office System developed over the years and new features were added, it was necessary to periodically change the format of data file structures to support the new functionality. Earlier versions of Microsoft Office cannot always read files that use newer data file structures. It is important to understand the steps required to ensure that users can share documents across multiple versions of the Microsoft Office System. In some cases, such as with Access, specific manual intervention is required; in others, Microsoft Office System versions can automatically adapt to the file version.

When identifying file conversion issues, consider the following:

- Microsoft Office Word, Office Excel, and Office PowerPoint® in Office 97, Microsoft Office 2000, Office XP, and Office 2003 Editions share the same file format. Documents created with these versions of Microsoft Office do not require conversion to edit them with Office 2003 Editions.
- Office 2003 Editions can convert individual files created with earlier versions of the Microsoft Office System, and Office 2003 Editions include the Batch Conversion Wizard for converting multiple documents at a time.

- You can deploy the Microsoft Office Converter Pack to convert files in formats that Office 2003 Editions do not natively support. Download Office Converter Pack from the *Microsoft Office 2003 Editions Resource Kit* at <http://office.microsoft.com/en-us/assistance/HA011513581033.aspx>.

**Note** The Access 2003 Conversion Toolkit is a tool for analyzing Microsoft Office Access 97 databases for upgrade and conversion to Access 2003. The Access 2003 Conversion Toolkit identifies and scopes known compatibility issues that affect the conversion process, but it does not convert databases. You can download the Access 2003 Conversion Toolkit from <http://www.microsoft.com/downloads/details.aspx?FamilyId=2E861E76-5D89-450A-B977-980A9841111E&displaylang=en>. The package file that you download contains documentation for using the Access 2003 Conversion Toolkit, including best practices.

**Note** ConverterTechnology's OfficeConverter can convert legacy Microsoft Office System documents to Office 2003 Editions' file formats. It can upgrade your Access databases. OfficeConverter also provides technology for automating the conversion of documents in bulk. For more information about OfficeConverter, see ConverterTechnology's Web site at <http://www.officeconverter.com>.

## Custom Microsoft Office-Based Solutions

Many organizations have used the advanced features of the Microsoft Office System to develop custom solutions. These organizations apply macros and application programming constructs such as VBA to extend the base functionality of the Microsoft Office System. Like data file structures, these macros and programming structures have evolved with the Microsoft Office System and may require migration strategies to ensure that business requirements continue to be met after the migration to Office 2003 Editions.

When planning to deploy Office 2003 Editions, consider the following questions:

- Do you have an inventory of the non-Microsoft and internally built programs and customizations based on the Microsoft Office System?
- Have you tested each non-Microsoft and internally built Microsoft Office-based solution for compatibility with Office 2003 Editions?

**Note** For more information about the version differences that will require changes to custom solutions based on the Microsoft Office System, see the *Microsoft Office 97 to Microsoft Office 2003 Editions Migration Issues* white paper at <http://office.microsoft.com/en-us/assistance/HA011401651033.aspx>.

## Coexistence Issues

Although an organization may have the goal of migrating everyone to Office 2003 Editions, the complete migration of the organization is not likely to occur instantly. A plan must be devised and implemented that permits users of Office 2003 Editions to collaborate on documents with teammates who are using older versions of the Microsoft Office System. The Core Applications feature team must understand these issues and identify the effect of each of them on the organization. For example, a company that is migrating from Microsoft Office 4.3 Editions to Office 2003 Editions is likely to experience more issues than a company migrating from Microsoft Office XP Editions. Consider the following questions:

- Do you know which versions of the Microsoft Office System users are running?
- Do you know which groups of users share documents with which other groups of users? Do they share documents one way or two ways?

During an Office 2003 Editions deployment, a variety of solutions is available to enable users to share documents among various Microsoft Office System versions. If you are migrating from Microsoft Office 95 Editions to Office 2003 Editions, for example, these solutions ensure that users you have not yet migrated can still exchange information with users you have migrated. The white paper *Microsoft Office XP and File Sharing in a*

### *Heterogeneous Office Environment at*

<http://www.microsoft.com/technet/prodtechnol/office/officexp/maintain/fileshar.msp>) provides a full treatment of these solutions. (It applies equally well to Office 2003 Editions even though the white paper talks specifically about Office XP.)

The solutions you use will depend on whether users share documents with other groups. Your solutions also will depend on whether users share documents one way or two ways and on whether they need to change the documents they share. Groups of users who do not share documents with other departments can be migrated to Office 2003 Editions at any time without reducing their productivity.

If a group of users shares documents with other groups, however, you must decide whether document recipients need read-only access to those documents or whether they need to be able to edit and return those documents. If they need read-only access, then a larger variety of solutions is available, including file viewers, saving documents as Web pages, and so on. If users need to edit and return documents to the sending group, then you should consider restricting both groups to a common file format until both groups are fully migrated to Office 2003 Editions. Also, to ensure continuity, you could plan to migrate dependent groups at the same time.

## **Supporting Multilingual Environments**

A multilingual deployment of Office 2003 Editions by using the Office 2003 Editions multilingual resources—such as the MUI Pack—provides the following benefits:

- *One single rollout worldwide.* Companies can roll out worldwide the English version of Office 2003 Editions with MUI features without having to maintain different language versions. Local users can then select the UI language they require, or the administrator can set it through a Group Policy. Updates and service packs will also be available at the same time for a worldwide simultaneous rollout.
- *Easier support and administration.* Support can change the UI to any language to more easily provide help. After fixing a problem, support can restore the original language.
- *Shared computers.* The MUI Pack is controlled at the user level and thus allows for scenarios in which multiple part-time or roaming employees share a single computer. This also applies to a Microsoft Windows Server™ 2003 Terminal Services scenario in which users can get a different UI language depending on their preference.

If you are an Open License customer, see your reseller for information about purchasing the MUI Pack. If you are a Select or Enterprise customer, see the *Microsoft Volume Licensing Fulfillment Guide* at

<http://selectug.mslicense.com/L1033/shippingcontentlist.aspx>. Consumer versions of Windows XP and Office 2003 components that have been obtained as stand-alone applications do not support the MUI Pack. However, with Windows Vista, this has changed; Windows Vista is language-neutral, and localization data (for example, text, graphics, formatting) is stored in separate files that are bound just before or at deployment.

**Note** The *Microsoft Office 2003 Editions Resource Kit* provides guidance about planning a multilingual deployment of Office 2003 Editions. See "Preparing for an Office Multilingual Deployment" at <http://office.microsoft.com/en-us/assistance/CH011480711033.aspx> for more information about preparing a multilingual deployment.

## **Identifying Subject Matter Experts**

In those areas or departments in which the core applications developers have reason to believe that significant issues might arise with Office 2003 Editions, it is advisable to have

the department provide a subject matter expert (SME) to act as a liaison with the developers. For example, having an SME from the accounting department available to the developers is generally helpful to ensure that all Office 2003 Editions issues are identified and addressed, because accounting departments often use complex Excel workbooks.

## ***Identifying Other Core Applications***

In addition to Office 2003 Editions, you will need to identify the remaining core applications that you must include in the Solution Accelerator for BDD image. These applications are common to all desktops, such as antivirus software, compression programs, mail clients, and so on. A *core application* is any application that is common to all (or most) of the organization, an application that would not readily lend itself to distribution, or those applications that must be available as soon as the image becomes active. Document the command-line options required to install each application without user interaction. For more information about installing applications at a post-imaging phase of deployment, see the *Supplemental Applications Feature Team Guide*.

Many organizations will consider the following applications to be core applications:

- Adobe Acrobat and Reader
- Macromedia Flash Player
- Macromedia Shockwave
- Various antivirus packages
- Various Outlook plug-ins
- Various Microsoft Internet Explorer plug-ins
- Corporate screen savers
- Terminal emulation applications (such as TN3270)
- Database drivers and connectivity software
- Network and client management software (such as OpenManage clients)

For core applications that do not provide a silent installation, decide how you want to automate the installation. You can repackage many applications as Windows Installer setup databases, for example, or you can create a script to automate the installation. For more information about repackaging legacy applications, see the next section, "Developing."

## ***Milestone: Migration Plan Accepted***

At this milestone, the Core Applications feature team has created the test lab and written a migration plan. The migration plan has been accepted. Table 2 lists the deliverables associated with this milestone.

**Table 2. Deliverables for Migration Plan Acceptance Milestone**

<b>Deliverable ID</b>	<b>Description</b>
Test Lab	The lab environment is running for testing Office 2003 Editions.
Migration Plan	The migration plan includes input from the team; the primary deployment blockers for Office 2003 Editions have been identified and reviewed, and an estimate of their scope and affect has been defined.

# Developing

Figure 3 illustrates the primary tasks to be completed by the Core Applications feature team during the first part of the Developing Phase. These activities are directed at creating and testing the Office 2003 Editions deployment package in addition to other core applications, which will be integrated into the overall deployment package as a subsequent set of tasks.

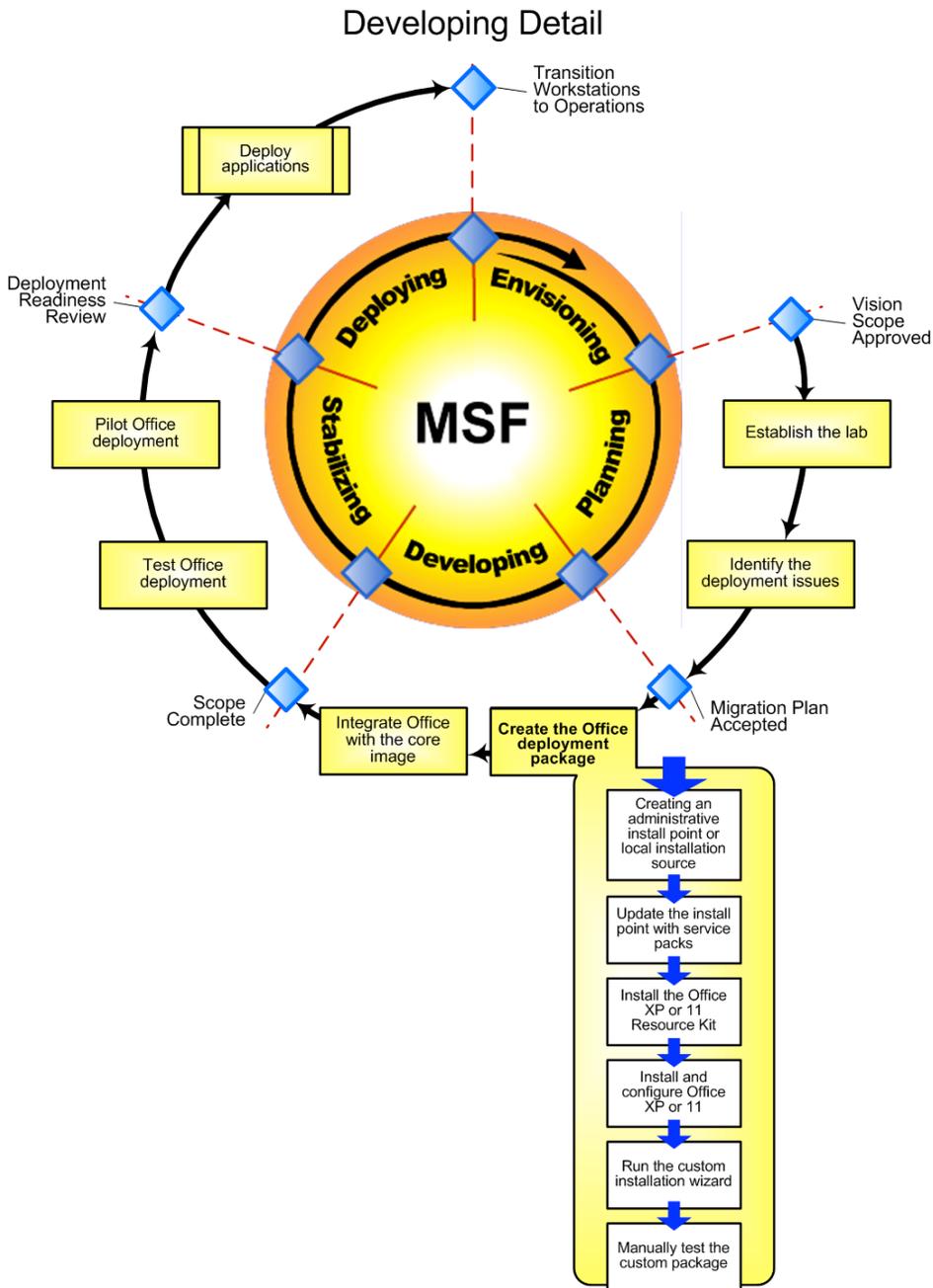


Figure 3. Detailed tasks for creating the Office 2003 Editions deployment package

## ***Roles and Responsibilities***

All six role clusters from the MSF Team Model will play a role in the Developing Phase. Table 3 lists those roles and defines the focus areas for each role cluster. For more information about MSF team role clusters, see the Microsoft Solutions Framework site at <http://www.microsoft.com/technet/itsolutions/msf/default.mspx>.

**Table 3. Roles and Responsibilities During the Developing Phase**

<b>Role</b>	<b>Focus</b>
Product Management	Input into conceptual design; business requirements analysis; communications plan
Program Management	Conceptual and logical design; functional specification; project plan and project schedule; budget
Development	Creation and testing of the Office 2003 Editions installation package
User Experience	Usage scenarios or cases; user requirements; localization and accessibility requirements; user documentation; training plans; schedules
Test	Testing requirements definition; test-plan and schedule
Release Management	Design evaluation; operations requirements; pilot and deployment plan or schedule; network discovery; application and hardware inventory; interfacing with the Operations and Security teams

## ***Office 2003 Editions Resource Kit***

The *Microsoft Office 2003 Editions Resource Kit* contains hundreds of pages of detailed information and utilities to customize the behavior of Office 2003 Editions. It addresses, among other things, areas such as the following:

- Deployment preparation and customization
- Outlook 2003 customization and deployment
- Worldwide multilingual deployment
- Maintenance and troubleshooting

You can download the *Microsoft Office 2003 Resource Kit* at <http://www.microsoft.com/office/orkarchive/2003ddl.htm>.

## ***Creating the Installation Point***

You can deploy Office 2003 Editions from an administrative installation, similar to Office 2000, Office XP, and Office 2003 Editions. You can also deploy the editions from a customized compressed CD-ROM image, which is an Office 2003 Editions capability that creates a local installation source (LIS). By deploying Office 2003 Editions from an administrative installation, you can:

- Manage one set of Office 2003 Editions files from a central location.
- Create a standard Office 2003 Editions configuration for a group of users.
- Take advantage of flexible installation options.
- Manage updates to Office 2003 Editions by updating one administrative image.

Only Office 2003 Editions acquired through a Volume Licensing agreement or other non-retail channel allow you to create an administrative installation point. You cannot run Setup.exe in administrative mode (*/a*) with a retail version of Office 2003 Editions.

Microsoft recommends LIS because it provides better support for portable computers by caching the source files locally. It also makes future updating of Office 2003 Editions easier, because a link between the client installation and the administrative installation on the server does not exist. (You can install client update files.) You must create Office 2003 Editions administrative installations if you want to decompress the source files so that you can use the Run From Network feature installation state. Another reason for using administrative installations is when the target computers do not have enough disk space for the local source files. Otherwise, deploy a LIS. Regardless of which method you choose, document your choice and the reason for your choice.

The following two sections describe each method. You must choose one or the other, as they are mutually exclusive. See “Taking Advantage of a Local Installation Source” at <http://office.microsoft.com/en-us/assistance/HA011402031033.aspx> for more information about LIS.

“Appendix A. Creating an Installation Point” describes the steps for the methods in the following two sections.

### **Administrative Installations**

Creating an administrative installation involves decompressing the contents of the product CD-ROM and embedding the organization name, product key, and acceptance of the End User License Agreement (EULA) into the distribution point.

### **Local Installation Sources**

When users install Office 2003 Editions from a compressed CD-ROM image on the network, Office 2003 Editions Setup uses a system service named Office Source Engine (Ose.exe) to copy required installation files to a hidden folder on the local computer. Windows Installer uses this LIS to install Office 2003 Editions, and the LIS remains available for repairing, reinstalling, or updating Office 2003 Editions later. Users can install features on demand or run Office 2003 Editions Setup in maintenance mode to add new features.

Office 2003 Editions Setup creates a LIS by default, but only when users install Office 2003 Editions from a compressed CD-ROM image. If sufficient hard disk space exists on the local computer, Office 2003 Editions Setup caches the entire installation source by default. Maintaining this local installation source after Office 2003 Editions is installed offers a number of benefits to users in organizations. The most important benefit

is to mobile users. LIS allows them to add or repair features without requiring access to the network source files.

Office 2003 Editions source files are compressed in cabinet (.cab) files to fit on the Office 2003 Editions product CD-ROM. To create a distribution point as a compressed CD-ROM image, you simply copy the compressed .cab files to a network share before customizing the CD-ROM image. You do not run Office 2003 Editions Setup to create an administrative installation point, as the previous section described; instead, you just copy the compressed files directly to the network share. Unlike the process of running Office 2003 Editions Setup with the */a* option, which expands the compressed files on the administrative installation point, the files in the CD-ROM image remain compressed.

**Note** A new version of the Office 2003 Editions Setup program is available in the *Microsoft Office 2003 Editions Resource Kit* Toolbox. Version 11.0.6176.0 helps ensure that every desktop in the organization gets and keeps a complete LIS. The new Office 2003 Editions Setup also allows administrators to deploy the LIS first, and then launch the installation of Office 2003 Editions. Microsoft recommends that you update the version of Office 2003 Editions Setup in your current distribution points with the latest version.

## ***Integrating Service Releases***

Office 2003 Editions service releases are interim upgrades that address performance, reliability, and security issues. It is recommended that the latest service releases be included in your distribution of Office 2003 Editions, so it will be necessary to integrate these releases into the Office 2003 Editions source files.

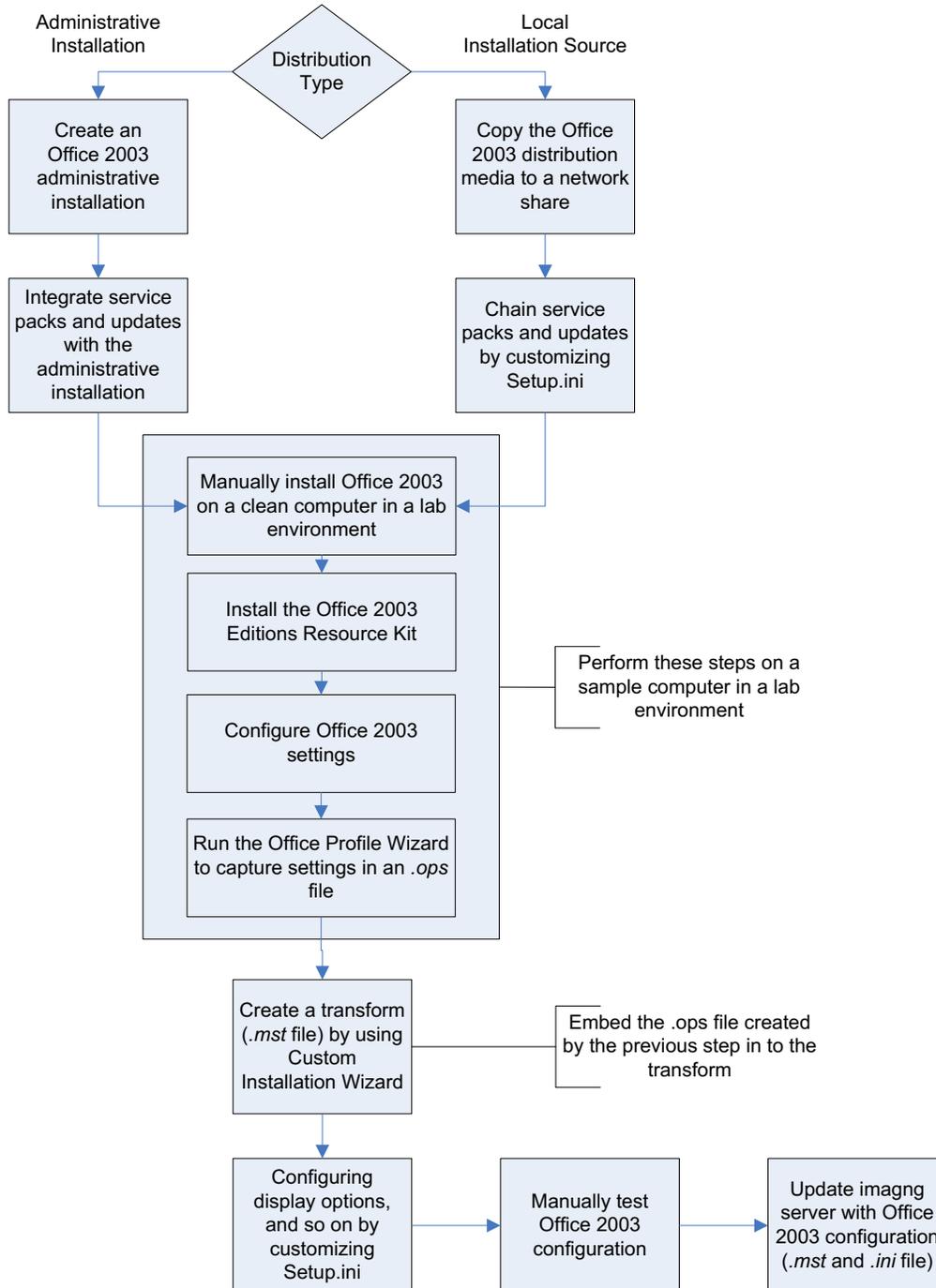
Microsoft issues two versions of each service release. You can download both from <http://www.microsoft.com/office/ork>. One is for updating administrative installations, and the other is for updating client computers (also called *binary updates*). Both are update files with the .msp extension. The administrative update is a full-file replacement that contains all the service release's changes. You use different techniques to deploy updates based on the type of distribution point you created:

- *Administrative installations.* You must use the administrative update to integrate the service release into your Office 2003 Editions distribution point if you created it as an administrative installation.
- *Local installation sources.* The client update updates required files instead of replacing them. You must use the client update method to apply the updates to client computers if you created the distribution point as a compressed CD-ROM image. You add client updates to the compressed CD-ROM image by chaining them in the Setup.ini file.

The *Microsoft Office 2003 Editions Resource Kit* provides full guidance for integrating service releases into administrative installations and chaining client updates to a local installation source. See "Distributing Office 2003 Product Updates" in the resource kit at <http://office.microsoft.com/en-us/assistance/HA011402381033.aspx>. "Appendix A. Creating an Installation Point" provides explicit details about the integration of service releases for both installation point methods.

## Customizing Office 2003 Editions

Figure 4 describes at a high level the development process for customizing Office 2003 Editions.



**Figure 4. Process for packaging Office 2003 Editions by using administrative installations**

Creating a customized Office 2003 Editions installation is a multi-step process. After it has been created and tested, this package can be inserted into the Solution Accelerator for BDD imaging process so that the customized Office 2003 Editions configuration can be included automatically in all computer images. This section describes the steps necessary to create the custom Office 2003 Editions installation:

1. *Create an office profile settings (.ops) file.* Install and configure Office 2003 Editions on a model computer. Also install the *Microsoft Office 2003 Editions Resource Kit*. Then, capture Office 2003 Editions settings in an Office Profile Wizard (.ops) file for distribution with Office 2003 Editions. An .ops file contains the portion of the user profile that pertains to Office 2003 Editions. When Office 2003 Editions Setup applies the file during installation, it writes these settings to the user's profile.
2. *Create a transform (.mst) file.* A transform contains settings for customizing the installation of Office 2003 Editions. Transforms for Office 2003 Editions are similar to answer files for unattended Windows XP installations. You use the Custom Installation Wizard to create a transform, which has the .mst file extension.
3. *Customize the Setup.ini file.* The Setup.ini file controls how Setup.exe runs. Primarily, you will customize this file if you are using LIS to deploy Office 2003 Editions.
4. *Manually test the configuration.* Before adding the Office 2003 Editions configuration to your Solution Accelerator for BDD image, you must manually test it in a lab environment to ensure that it is correct.

**Note** For more information about customizing Office 2003 Editions by using the tools described in this section, see "Customizing User-Defined Settings" in the *Microsoft Office 2003 Editions Resource Kit* at <http://office.microsoft.com/en-us/assistance/HA011401971033.aspx>.

## Create an Office Profile Settings File

Create a model computer that is running a clean installation of Windows with no other applications installed. After installing the *Microsoft Office 2003 Editions Resource Kit*, use the steps outlined in "Appendix B. Customizing Office 2003 Editions" to create an Office Profile Settings (.ops) file.

## Create a Transform File

To create the transform (.mst) file that customizes the Office 2003 Editions installation, run the Custom Installation Wizard. You can run the wizard by using any computer on which you have installed the *Microsoft Office 2003 Editions Resource Kit*. Because you have already installed the resource kit on the model computer, you might simply run the Custom Installation Wizard on that computer.

Do not use a non-Microsoft tool to create a transform file for Office 2003 Editions. The Custom Installation Wizard accounts for several application-specific options that may not be accounted for in third-party tools for generating .mst files (such as those available with FLEXnet AdminStudio or Wise Package Studio).

When you run the wizard, make sure you at least configure the following options, and then save the transform as the file Office11.mst on the lab server from which you installed Office 2003 Editions:

- *Configure Local Installation Source.* If you are using LIS, you must configure the local installation source by using a transform. If so, select the Configure local installation source option; then, type your product key in the space provided and accept the EULA.
- *Customize Default Application Settings.* Select the Get values from an existing settings profile option, and then select the .ops file that you created in the previous section. You saved this file on the lab server.

- *Identify Additional Servers.* Add to this screen the list of shares on your application servers where this Office 2003 Editions distribution point will be copied. This allows Office 2003 Editions to find their source media on the network when repairs are needed or new components installed. This step is essential only when using administrative installations.

One key item that may be specified in the Custom Installation Wizard (or in any Windows Installer transform file) is the default installation state for any available features. Possible options for each feature state include the following:

- *Run from My Computer.* This feature state copies files, writes registry entries, and creates shortcuts associated with the feature to the computer so that it may be run locally.
- *Run all from My Computer.* This feature state is the same as Run from My Computer, except that all child features belonging to the feature are also set to this state. It is generally considered best practice to make use of this feature state in most or all cases.
- *Run from Network.* This feature state leaves the components on the administrative installation point and runs the feature from there.  
**Note** This option is not available when you install from a compressed CD-ROM image and reference a local installation source.
- *Run all from Network.* Again, this is the same as Run from Network, except that all child features belonging to the feature are also set to this state.
- *Installed on First Use.* This feature state leaves the components for the feature and all its child features on the administrative installation point or in the local installation source until the user first attempts to use the feature. When first used, the components are automatically installed.
- *Not Available.* This feature state will cause Setup not to install the components for the feature or any child features belonging to the feature.
- *Not Available, Hidden, Locked.* Choose this feature state for features you do not want to make available. This will cause the components for the feature to not be installed, and they will not be displayed in the feature tree during Setup. When this feature state is selected, users may not install the feature by changing the state of the parent feature or by calling Windows Installer directly from the command line.

See “Appendix B. Customizing Office 2003 Editions” for instructions.

**Note** Some child features do not support Run from Network or Installed on First Use. When this is the case, the feature is installed to run on the local computer.

**Note** See “Custom Installation Wizard” in the *Microsoft Office 2003 Editions Resource Kit* at <http://office.microsoft.com/en-us/assistance/HA011525761033.aspx> for a complete list of the settings that are available in transforms.

**Note** The Custom Installation Wizard derives the settings you see on the Change Office User Settings screen from .opa files. These files are similar to the administrative templates (.adm files) used for Office 2003 Editions policies. An Excel 2003 workbook is available that contains the Explain Text for both the .opa and .adm files, which is useful for understanding the settings available. Download this workbook at <http://www.microsoft.com/downloads/details.aspx?FamilyID=ba8bc720-edc2-479b-b115-5abb70b3f490&DisplayLang=en>.

## Customize the Setup.ini File

Before applying the values specified on the command line, Setup reads the properties specified in the Setup.ini file (or the Setuppro.ini file if the Setup program on your distribution media is called Setuppro.exe), in which you can set all the properties that you can on the command line. This format is much easier to read than a long batch file with

several command-line arguments. For detailed information about the settings in this file, see “Appendix B. Customizing Office 2003 Editions,” or see “Setup Settings File” the *Microsoft Office 2003 Editions Resource Kit* at <http://office.microsoft.com/en-us/assistance/HA011513671033.aspx>.

If you are installing Office 2003 Editions from an LIS and you want to customize the way Setup creates the local installation source on users’ computers, you set properties in the [Cache] section of Setup.ini. Because Setup creates the local installation source before a transform is applied, you cannot set most local installation source options in a transform. By default, the cache is flexible, allowing the installation of partial source files if disk space is limited. To ensure a complete installation of the Office 2003 Editions source files in the cache, edit the [Cache] section of the existing Setup.ini file (the file is in Files\Setup of the Office 2003 Editions distribution point) so that it looks like the following:

```
[Cache]
ENFORCECACHE=1
```

## Manually Test the Configuration

To manually test the custom Office 2003 Editions package, start with a clean Windows XP computer that has been recently built, preferably with no other applications installed. This will give you a clean starting point from which to test the Office 2003 Editions package. You will need to have local administrator privileges on the computer to proceed.

Install the Office 2003 Editions package with a command line similar to the following (the command should all be on one line):

```
\\servername\Packages\Office11\Setup.exe
TRANSFORMS=\\servername\Packages\Office11\Office11.MST /QB
```

Where:

- `\\servername\packages` is the server name and share name of the administrative installation of your packages, and Office11 is the subfolder containing the Office 2003 Editions installation package.
- `\\servername\Packages\Office11\Office11.MST` is the path and name of the transform file you created using the Custom Installation Wizard.

You can iterate through creating and testing the transforms until they meet your organization’s requirements. After these requirements have been met with manual installation, you can proceed to integrate the package into the Solution Accelerator for BDD imaging and deployment processes.

## Automating Other Applications

To achieve a fully unattended and automated installation, the applications you add to the Solution Accelerator for BDD must support unattended installation. Many Setup programs support the */s* or */q* command-line options for such a thing; others do not.

Often, you can find out whether the package supports unattended installation by typing **setup /?** at the command prompt, where *setup* is the file name of the Setup program. If the Setup program does not provide clues, you need to know which vendor’s product was used to create the package. You can usually tell by running the Setup program and looking for logos or branding of the installation wizard pages, or by looking at the file properties.

Where support for automating a silent installation may be provided, the level of customization possible varies from vendor to vendor. The inherent support options provided in the following section are a good starting point. Keep in mind that where the support described below may seem insufficient for your needs, the developer may have provided specialized support for the silent installation of its application. If any such support is provided by the vendor, it should be documented in the release notes, quick start guide, or support Web site of the application.

## Windows Installer Installations

The number of applications packaged as Windows Installer databases is multiplying rapidly. And what often looks like a self-contained, self-extracting Setup program with a file name such as Setup.exe is often a file that decompresses to a Windows Installer database. You can usually extract the database by using a tool such as WinZip (from WinZip Computing at <http://www.winzip.com>) or by running the Setup program and looking in the %TEMP% folder for the Setup files. Windows Installer databases have the .msi file extension.

To install Windows Installer databases unattended by using Msiexec.exe, use the **/qb** command-line option for a basic UI (progress bar only) or the **/qn** command-line option for no UI.

## Windows Installer InstallShield Installations

Some Windows Installer setup files that Macromedia's InstallShield creates may require execution by using a provided Setup.exe file. Attempts to run the .msi file directly result in a message stating that Setup.exe must be used to initiate the installation. This is the case when the author of the installation uses InstallShield Script. When InstallShield Script is used, this requirement is enforced to ensure that the needed version of the InstallShield Script Engine (ISScript.msi) is installed on the computer before proceeding. If it is not detected, the required version of InstallShield Script Engine is installed automatically before calling the Windows Installer Setup. You can deal with such a setup in a couple of ways.

The first is to make use of InstallShield's command-line support that Setup.exe offers. Not only does Setup.exe provide command-line option support, but you may also pass options to the contained Windows Installer Setup by using the **/v** argument. Following **/v**, you may specify any switches to be passed to the Windows Installer Setup within double quotes. For example, the below command instructs Setup.exe to run silent and to also pass the **/qn** option to the Windows Installer Setup:

```
setup.exe /s /v"/qn"
```

The next method available is to deploy the InstallShield Script Engine separately as part of your core applications before any setup files that require it. You may then safely bypass the restrictive functionality of the provided Setup.exe by running the .msi file directly and including the `ISSETUPDRIVEN` public property. You may obtain the embedded Windows Installer Setup by looking to the %TEMP% folder after the welcome message for the installation wizard is displayed. The .msi file may then be placed on the lab server and silently executed directly by using the following command:

```
msiexec.exe /i setup.msi ISSETUPDRIVEN=1 /qn
```

## Legacy InstallShield Installations

Legacy Setup files that InstallShield creates usually have the file name Setup.exe. To create an unattended installation for an InstallShield package, you need to create an InstallShield answer file, which has the .iss file extension. This method works with most, but not all, InstallShield packages.

For instructions, see the *Supplemental Applications Feature Team Guide*.

## PackagefortheWeb Installations

PackagefortheWeb is an InstallShield-packaged application in a self-contained, self-extracting file. Create a Setup.iss file. Using it is almost the same as described in the previous section. The difference is that you must use the */a* command-line option to pass the command-line options to the Setup program after the file extracts its contents. For example, a Setup file called Prog.exe will expand its contents into the temporary folder and then run Setup.exe when finished. To pass command-line options to Setup.exe, you must use the */a* command-line option.

## Wise Installations

Most packages created using Wise Installation System or Wise InstallMaster (now Wise Installation System) recognize the */s* command-line option for unattended installation. While this generally succeeds as a method of silent installation, no ability to dictate installation options is provided without express support from the application vendor.

## Ghost Installer Installations

Ethalone Solutions' Ghost Installer Setup files may provide silent installation when you use the *-s* command-line option. The success of this method depends on choices the developer makes when creating the installation. While this automates the installation, no capability to customize the silent installation is provided without explicit efforts by the developer of the installation.

## ***Addressing Application Security Requirements***

Some applications will not run properly as a restricted user. While in rare circumstances this may be because certain rights are not held by the restricted user, it is most commonly the result of applications that attempt to update files and registry entries not permissible by restricted users. This section discusses methods for identifying and adjusting these application security requirements.

## Identifying Application Security Requirements

When installed, most applications should restrict the need to update information to the following locations:

- The user profile application data directory, typically:
  - Windows XP: **C:\Documents and Settings\*<User Name>*\Application Data\*<Vendor Name>*\<Product Name>**
  - Windows Vista: **C:\Users\*<User Name>*\AppData\Roaming\*<Vendor Name>*\<Product Name>**

- The application user registry hive, typically **HKEY\_CURRENT\_USER\Software\<Vendor Name>\<Product Name>**

However, if running an application as a restricted user fails or results in unexpected behavior, you should look at some common places in which the application may be trying to update:

- The application directory, typically **C:\Program Files\<Vendor Name>\<Product Name>**

Look for file extensions such as .dat, .xml, and .ini. These files may contain settings or other information updated by the application, which if located outside the user profile directory structure, will fail to succeed for restricted users.

- The application machine registry hive, typically **HKEY\_LOCAL\_MACHINE\Software\<Vendor Name>\<Product Name>**

**Note** The default path for application installation and for the user profile differ between versions of Windows. When writing scripts or programmatic references to these locations, use environment variables. For application data, %APPDATA% will point to the application data root folder. For the current default application installation directory, %PROGRAMFILES% will point to the application installation root folder.

Two tools are available to help you identify what areas of the system are being written to RegMon.exe and FileMon.exe from SysInternals.com. These tools may be used to monitor changes to the registry and file systems, respectively, and will report any successes or failures. You will find that the registry receives a large number of reads and writes to the registry and file system on a regular basis; however, these tools provide filters that help you to isolate those items that are of concern to you.

## Addressing Application Security Requirements

After security requirements have been identified and approved for implementation, you can enforce them in several ways:

- *Group Policy objects (GPOs)*. Using GPOs, you may enforce security changes to the registry and file system to desired organizational units (OUs) in the Microsoft Active Directory® directory service structure. For details, see the Microsoft TechNet article, “Apply or modify permission entries for objects using Group Policy,” at <http://www.microsoft.com/technet/prodtechnol/windowsserver2003/library/ServerHelp/1687ef1d-b382-49c7-b184-a4cc888be525.mspx>.
- *SecEdit.exe*. Using the SecEdit command-line tool, you may apply a file security for the local system by using its **Configure** option. For more details, see the Microsoft TechNet article, “Secedit,” at <http://www.microsoft.com/technet/prodtechnol/windowsserver2003/library/ServerHelp/b1007de8-a11a-4d88-9370-25e244560587.mspx>.
- *Windows Installer LockPermissions Table*. Windows Installer provides its own native support for updating security for those components it installs. This is an integrated feature in the file and registry properties sheets of many Windows Installer repackaging and authoring tools. For more details about the LockPermission table, see “LockPermissions Table” at [http://msdn.microsoft.com/library/en-us/msi/setup/lockpermissions\\_table.asp?frame=true](http://msdn.microsoft.com/library/en-us/msi/setup/lockpermissions_table.asp?frame=true). You may also choose to use tools such as SecEdit, CACLS, and XCACLS by using custom actions run by your Windows Installer package. For more on CACLS, see <http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/cacls.mspx>. For more on XCACLS, see <http://support.microsoft.com/?kbid=318754>.

## **Repackaging Core Applications**

Some legacy installers do not support silent installations, and some that do support silent installations do not provide a way to specify settings. No legacy installers provide the management capabilities that Windows Installer provides.

For legacy installers, you can consider repackaging an application that uses a legacy installer. The topic is too large to cover in this guide, so this guide refers you to some good sources of information about the topic:

- *Administrator's Introduction to Application Repackaging and Software Deployment using Windows Installer (InstallShield Press, 2002)*. This book, which is available through most booksellers, is a valuable resource for serious repackaging work.
- *Wise for Windows Installer* at <http://www.wise.com>. This is a popular Windows Installer database development environment.

## **Chaining Installations by Using Office 2003**

The Office 2003 Setup program allows you to deploy Office 2003 and related applications in one seamless process by chaining additional packages or Setup programs. In this scenario, the Setup program first completes the core Office 2003 installation, and then immediately installs the additional programs in the order that you specify in the [ChainedInstall\_n] section of the Setup.ini file. You can chain packages to the core installation whether you deploy from an administrative installation point or from a compressed CD-ROM image. You customize chained installations by setting properties in Setup.ini.

Chaining is an efficient way to deploy Microsoft Office and related products that are not included in the core Office 2003 package, such as Microsoft Office FrontPage®, Office OneNote®, or Office Project. You can use the MUI Pack with Microsoft Office by chaining individual Mui.msi files. Chaining can also serve as an important part of an efficient updating strategy. If you keep your installation source up-to-date with the latest updates and service releases, then you can chain updates to the core installation for new client installations.

“Appendix A. Creating an Installation Point” covers the use of Setup.ini to chaining installations. You may also find guidance in “Deploying Office and Other Products Together” in the *Microsoft Office 2003 Editions Resource Kit* at <http://www.microsoft.com/office/ork/2003/two/ch5/DepD02.htm>. For more information about chaining updates, see “Distributing Office 2003 Product Updates” at <http://www.microsoft.com/office/ork/2003/five/ch18/MntA01.htm>. For more information about chaining the Office 2003 MUI Pack and other language resources, see <http://www.microsoft.com/office/ork/2003/four/default.htm>.

## **Integrating Core Applications with the Solution Accelerator for BDD**

TBD

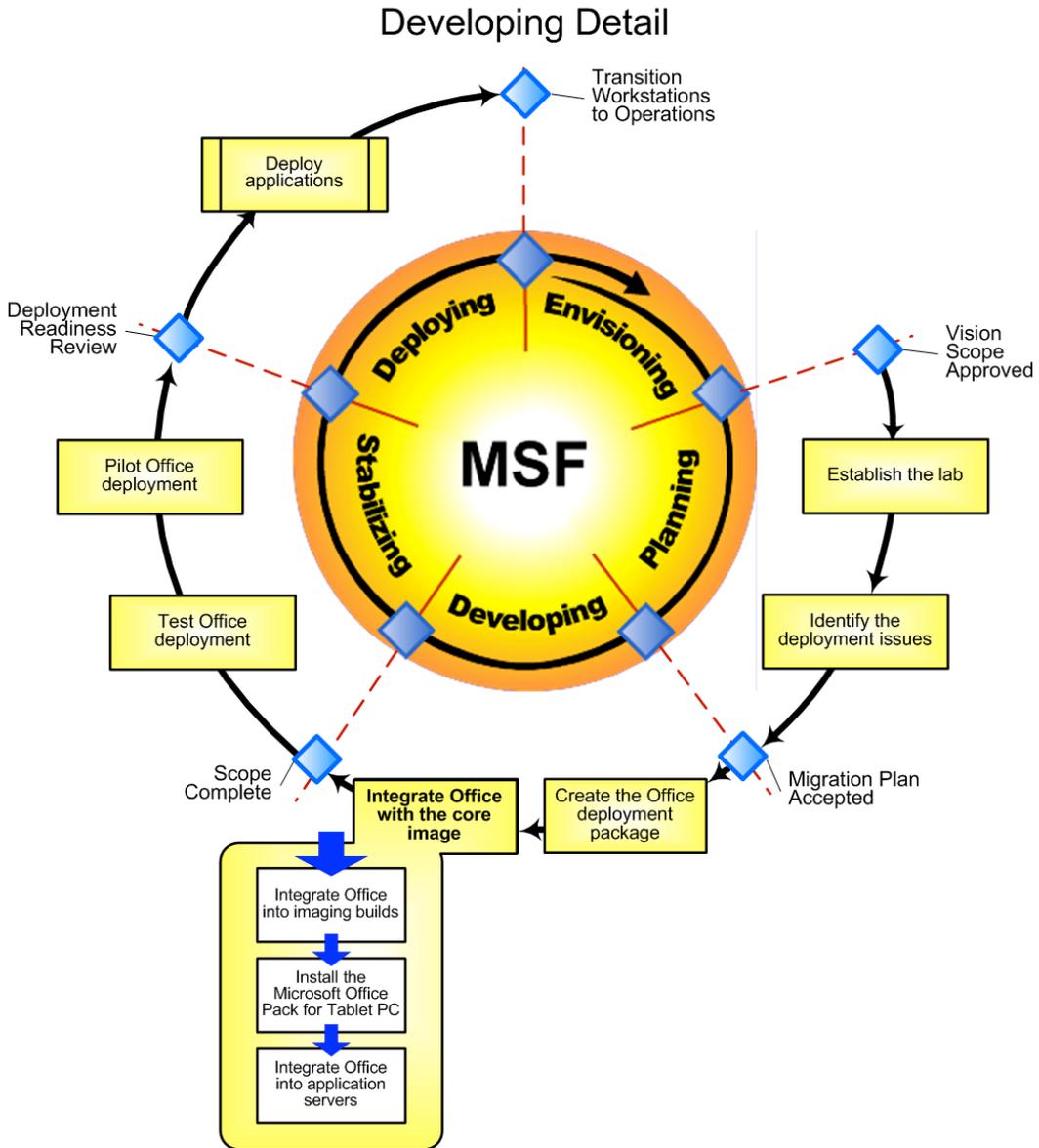


Figure 5. Detailed tasks for integrating core applications with the Solution Accelerator for BDD image

## Integrate Core Applications into Imaging Builds

TBD

## Integrate Core Applications into Application Servers

TBD

### ***Milestone: Scope Complete***

At this milestone, you have customized the configuration of Office 2003 Editions and have integrated it in to the Solution Accelerator for BDD imaging process. Table lists the deliverables associated with this milestone.

**Table 4. Deliverables for Scope Completion Milestone**

<b>Deliverable ID</b>	<b>Description</b>
Core Applications Feature Sets Defined	The core applications features and settings to be included in the package have been defined.
Core Applications Packaging Created	The custom core applications have been created and manually tested.
Core Applications Integrated into the Solution Accelerator for BDD	The custom core applications have been integrated into the Solution Accelerator for BDD imaging process and the Solution Accelerator for BDD application servers.



## ***Milestone: Deployment Readiness Reviewed***

This milestone represents the successful review of the deployment environment and test results and has the following deliverables (see Table 5), which are the same as the previous milestone.

**Table 5. Deliverables for Deployment Readiness Review Milestone**

<b>Deliverable ID</b>	<b>Description</b>
Deployment Environment	Deployment, data, and application servers are available on the production network and ready for deployments.
Test Report	Results of the testing process are documented.

## Appendix A. Creating an Installation Point

Creating an administrative installation involves decompressing the contents of the product CD-ROM and embedding the organization name, product key, and acceptance of the EULA into the distribution point.

Create a folder for the administrative installation on a server in the lab. You can use a descriptive folder name such as E:\Packages\Office11. If you plan to configure features to run from the network (Run from Network or Run All from Network), you must create the administrative installation in a subfolder of the distribution point. Share E:\Packages on the network as \\Server\Packages. This share will provide a connection point from which the computer can install Office 2003 Editions.

### To create an administrative installation point

1. Create a share for the administrative installation point.

At least 550 megabytes (MB) of available hard disk space must be available for this operation.

2. On the lab server, with the Office CD-ROM in the CD-ROM drive, open a Command Prompt window.
3. From this window, launch the Office 2003 Editions Setup by using the **/a** command-line option:

```
D:\Setup.exe /a
```

Note that if you are using the Office 2003 Select CD-ROM, type the name of the Setup program for the package you are installing, which may slightly differ. For example, if the setup executable is named SetupPro.exe, the command would be `d:\SetupPro.exe /a`.

4. Type the organization name that you want to define for all users who install Microsoft Office from this administrative installation point.
5. Type the server and share you created as the installation location.
6. Type the 25-character Volume License Key, and then click **Next**.

You must type a valid Volume License Key when you create the administrative installation point; users who install Office 2003 from this administrative image do not need to enter the product key when they install Office 2003 or start an Office 2003 application for the first time.

7. Accept the EULA, and then click **Install**.

By accepting the agreement here, you are accepting on behalf of all users who install Microsoft Office from this administrative installation point.

### To integrate service releases into an administrative installation

1. Download the Office update distributable.

See the Updates for Office 2003 Web site at <http://office.microsoft.com/en-us/officeupdate/CD010798601033.aspx> for a list of updates available for download.

2. If the update has an .exe file extension, use the **/T:<path>** and **/C** options to extract the .msp file. For example:

```
Office2003SP2-KB887616-Client-ENU.exe /C /T:C:\Temp
```

3. Connect to the administrative installation point, and ensure that you have write access to this location before proceeding.
4. Run the following command to apply the update to the administrative installation point:

```
msiexec /a //servername/Packages/Office11/filename.msi /p  
c:\temp\ SHORTFILENAME=TRUE /qb /L* c:\temp\msp.log
```

The above command will apply the specified update to the specified administrative installation on the network share. It will use MS-DOS compatible file names, will run silently with only a progress bar, and will create a log file of its actions in at the specified location. For more details, see the Word 2000 Update Web site at <http://office.microsoft.com/en-us/assistance/HA011524971033.aspx>.

5. Having created the updated administrative installation point, you can perform a solitary installation of Office 2003 Editions without the need to apply these updates separately. As the target is a fresh installation of Windows, you do not need to take any further steps. However, if you were to update a system with these updates that already had Office 2003 Editions applied, it would be necessary to have the client computer re-cache Office 2003 Editions on the client systems, which is possible with the following command:

```
msiexec /i //servername/Packages/Office11/filename.msi  
REINSTALL=All REINSTALLMODE=vomus /qb
```

The above command will re-cache and reinstall the specified Windows Installer Setup on the computer on which the command is executed. All features will be reinstalled (a comma-separated list of features may also be specified here), and Windows Installer will do so silently with only a progress bar displayed.

## ***Creating a Compressed CD-ROM Image Distribution Point***

Creating a compressed CD-ROM image as a distribution point involves simply copying the installation files from the CD-ROM to a network share. When you use this method, Setup automatically creates a cache of installation files on the local computer. The local cache provides improved resiliency for users to repair, reinstall, or update Office after the initial deployment. However, updates must be deployed to the local systems directly, as opposed to updating the installation point as with an administrative installation.

### **To create a distribution point as a compressed CD-ROM image**

1. In Windows Explorer, display hidden files so that you see the entire contents of the Office 2003 Editions CD-ROM. To do so, in Control Panel, open Folder Options, click the **View** tab, and then click **Show hidden files and folders**.
2. Select all the folders on the CD-ROM, and then copy the CD-ROM contents to a network share. The complete CD-ROM image for Office Professional Edition 2003 requires approximately 250 MB of space.

Copying the CD-ROM to a distribution point does not embed the product key or accept the EULA automatically on behalf of all users who install Office 2003 Editions from this network share. You must configure the product key, organization name, and acceptance of the EULA when you customize Office 2003 Editions by using the Custom Installation Wizard.

### To integrate service releases into a compressed CD-ROM image distribution

1. Connect to your lab server share, which will store your .msp files (for example, \\labserver\MSP). The Domain Computers group requires Read and Execute access to this share.
2. Download Offinst.exe, the OHotFix installation, from <http://www.microsoft.com/office/orkarchive/XPddl.htm>.
3. Run Offinst.exe. When it asks you for a folder, point it to your MSP share. All three files (Ohotfix.exe, Ohotfixr.dll, and Ohotfix.ini) will be installed to this single folder.

Updates are available as .exe files. You can access the update libraries for Office 2003 Editions from the Office Admin Update Center at <http://www.microsoft.com/office/orkarchive/2k3updt.htm>.

Run updates from a command prompt with the parameters `/c /t:<target folder>`. To extract the MSP file to your labs MSP share, use the syntax:

```
Office2003SP2-KB887616-Client-ENU.exe /c /t:\\labserver\MSP
```

4. After extracting the .msp files from all the Office updates you need to install the Ohotfix.ini file, open it, and review the many options available for customizing its behavior. Each of the options provided is documented within the comments of the file and can be easily edited in a simple text editor such as Notepad.
5. Execute OHotFix on the computer on which you are creating the drive image. The program will install from the shared folder only the .msp files that are applicable to that computer.

For more information about OHotFix, see "Installing Client Update Files with OHotFix" at <http://office.microsoft.com/en-us/assistance/HA011364081033.aspx>.

**Note** Many new updates provided include an OHotFix distribution. Take care not to overwrite your Ohotfix.ini file if you have changed any of the default settings.

**Note** The OHotFix utility (Offinst.exe) is packaged in a self-extracting executable file and is available on the Office Resource Kit Web site. You can find this downloadable file on the Office 2003 Resource Kit Downloads page at <http://office.microsoft.com/search/redir.aspx?AssetID=XT011513161033&CTT=5&Origin=1033>.

## Appendix B. Customizing Office 2003 Editions

You have a few options to develop a custom deployment package for Office 2003 Editions.

### **Create an Office Profile Settings File**

The Office Profile Wizard creates an .ops file that can be integrated with the Custom Installation Wizard's .mst file to create a stable Office 2003 Editions installation that behaves consistently on installed systems.

To begin, create a model computer that is running a clean installation of Windows with no other applications installed. You can then create an .ops file after installing the *Microsoft Office 2003 Editions Resource Kit*.

#### **To create an .ops file**

1. On the model computer, install Office 2003 Editions from the network share previously created. For example, you can run  
`\\servername\Packages\Office11\Setup.exe.`
2. Customize settings for Office, such as standard locations for files and templates. You can set most options by using the **Options** command on the **Tools** menu. To customize toolbars and menus, use the **Customize** command on the **Tools** menu.
3. From the Start menu on the model computer, run the Profile Wizard.
4. On the **Save Or Restore Settings** page, click **Save The Settings From This Machine**, and then type the name and path for the .ops file that you want to create. Save this file to the lab server from which you installed Office 2003 Editions.

Select the check boxes next to the Office 2003 Editions applications you want to include in your .ops file, and then click **Finish**. The Profile Wizard saves the Office 2003 Editions application settings on your computer to the .ops file.

**Note** The *Microsoft Office 2003 Editions Resource Kit* contains an OPS File Viewer (OPSVIEW.exe). The OPS File Viewer enables you to view changes that an .ops file makes to a user's computer. This viewer also provides a list of all possible changes that the Office Profile Wizard can make to a user's computer through an .ops file.

### **Create a Transform File**

The Office Custom Installation Wizard creates an .mst file that you can use to specify defaults or changes to the behavior of the Office 2003 Editions installation. To create an .mst file, launch the Custom Installation Wizard from the installed Office 2003 Editions resource kit tools. The following steps in the wizard appear based on your selections:

1. The welcome screen provides an overview of what you can do with the Custom Installation Wizard. Click **Next**.
2. If not populated automatically, type the name and path of the Office 2003 Editions .msi file (for example, \\server\share\Office2003\PRO11.MSI). Click **Next**.
3. You can create a new .mst file or open an existing .mst file. Click **Next**.
4. If you are creating a new .mst file, you are required to enter the desired path and name of the .mst file you want to create (the same directory as the .msi file is recommended). Click **Next**.

5. Specify the default installation path (INSTALLLOCATION property) and organization name (COMPANYNAME property) here. Click **Next**.
6. This step of the wizard provides you with the option to remove previous versions of Office. Default behavior (during interactive setup) is to prompt users with which applications they want to remove. However, you may use this step of the wizard to specify versions of Office that are to be automatically removed without prompting for confirmation. Click **Next**.

**Note** Outlook 2003 cannot coexist with previous versions of Outlook.
7. For each Office feature listed (for example, Access, Excel, Outlook, PowerPoint), you can select the default installation state as discussed earlier in this document in the section “Customizing Office 2003 Editions.” Click **Next**.
8. You can optionally configure a local installation source. By doing so, you may pre-populate the Product Key (PIDKEY property) and accept the license agreement for users who will be locally caching the installation source. Click **Next**.
9. Customize default application settings by specifying an .ops file created by using the steps provided earlier in this appendix. Optionally, you may choose to use Microsoft default values and migrate any user settings that may already exist on the target system. Click **Next**.
10. The next step in the wizard allows for changes to many of the Office user settings that (when specified) are applied to all users on the computer and overwrite any existing settings. Click **Next**.
11. The wizard provides an Add/Remove Files interface so that you may add to or take away from those files that the Office 2003 Editions Setup installs. Click **Next**.
12. As with the previous step in the wizard, the next step pertains to registry entries. Here, you can add or remove any registry entries that the Office 2003 Editions Setup makes. You may also import the contents of a .reg file (which is the format used to export desired registry subkeys by using the Windows Registry Editor—regedit.exe). Click **Next**.
13. You may add, modify, or remove any shortcuts that the Office 2003 Editions Setup creates, including the ability to specify alternate locations for shortcuts. Click **Next**.
14. The next step in the wizard provides you the ability to specify alternate administrative installations for Office 2003 Editions in the event that the default location is unavailable. You may add to a list of available paths, including one Universal Naming Convention (UNC) path, and may re-order the list by using the Move arrows as desired. Click **Next**.
15. Specify Office security settings, including the setting of default security levels, the adding of digital certificates, and the desired behavior for the handling of unsafe Microsoft ActiveX® initialization attempts. Click **Next**.
16. Add installations and run programs by adding to an optional list of commands. You may also specify when the command is to be run. Note that because only one Windows Installer installation can be performed at a time, if you are adding additional Windows Installer packages to the Office installation, you should use the Setup settings file (Setup.ini) to chain the installations (see the section “Customize the Setup.ini File”) rather than calling the programs from this page of the wizard. Click **Next**.
17. Customize the default Outlook profile. The *Outlook profile* is the set of values in the Windows registry that defines user-specific information. An Outlook profile can contain multiple e-mail accounts. Users can have multiple Outlook profiles, but you can configure only one profile in the transform. Click **Next**.
18. If you choose to customize the default Outlook profile in the previous step, this step is provided to allow the configuration of Exchange Server settings. Click **Next**.

19. Again, if you are customizing the default Outlook profile, this step is provided to allow for the adding of accounts and account information. Click **Next**.
20. If you are customizing the default Outlook profiles, this page offers the ability to automatically remove accounts and export settings. Click **Next**.
21. This next step in the wizard is also for the customization of Outlook default settings. Options include the ability to automatically convert a Personal Address Book (.pab file) to an Outlook Address Book and to customize default editor or format for Outlook e-mail. Click **Next**.
22. For organizations implementing Exchange Mail, this step provides several options for the configuration of Send/Receive settings in Outlook. Click **Next**.
23. Here you will see a list of public properties that may be modified, added, or removed. Properties you set on this page may overwrite duplicate settings on previous pages of the wizard. Most of the properties here may also be configured in Setup.ini or at a command prompt. Properties set in Setup.ini or on the command window overwrite any properties set in the transform. Click **Next**.
24. Finally, this last step in the Custom Installation Wizard saves your changes to the .mst file (specified in Step 3). Click **Finish** to create your .mst file.

## ***Customize the Setup.ini File***

When using Setup.exe, you can implement the following changes to customize its behavior. The setup executable reads this settings file and writes tasks to the registry based on the information provided. This allows for control of many aspects of the Office 2003 Editions installation process. You can find a sample copy of this file on the Office 2003 Editions CD-ROM in the \Files\Setup folder.

Open Setup.ini in a simple text editor such as Notepad and modify the following sections as desired:

- *MSI section*. Update this to identify the Windows Installer file to be used.
- *Product section*. Contains the product code, name, and version information and is used to determine whether the product is installed (this section should not be modified).
- *MST section*. Update this to specify the full name and path of any optional transform files.
- *Options section*. Change any desired setup property values in this section.
- *Display section*. You may instruct Setup to run in quiet mode in this section.
- *Logging section*. Set logging options for controlling the Setup log files in this section.
- *MinOSRequirement section*. Used for defining the minimal operating system requirement for Setup to run (this section is usually not modified).
- *Cache section*. Provides settings to control the way Office installation files (.cab files) are cached on the local computer during Setup, caching the installation source locally (this section is usually not modified).
- *OfficeWebComponents section*. Specifies the .msi file for Office Web Components (this section is usually not modified).

- *ChainedInstall\_n* section. You may use this section to install an additional package (.msi file) or other executable file (such as an .exe file or a .bat file) as part of the Office installation. Add a [ChainedInstall\_n] section to Setup.ini for each chained installation; replace the placeholder *n* with a consecutive number. Chained packages are installed in order after the core Office package is successfully installed.

**Note** For details about these sections and the available options and values, see the *Office 2003 Resource Kit* Web site at <http://office.microsoft.com/en-us/assistance/HA011513671033.aspx>.

## **Appendix C. Integrating Applications into Imaging Builds**

TBD