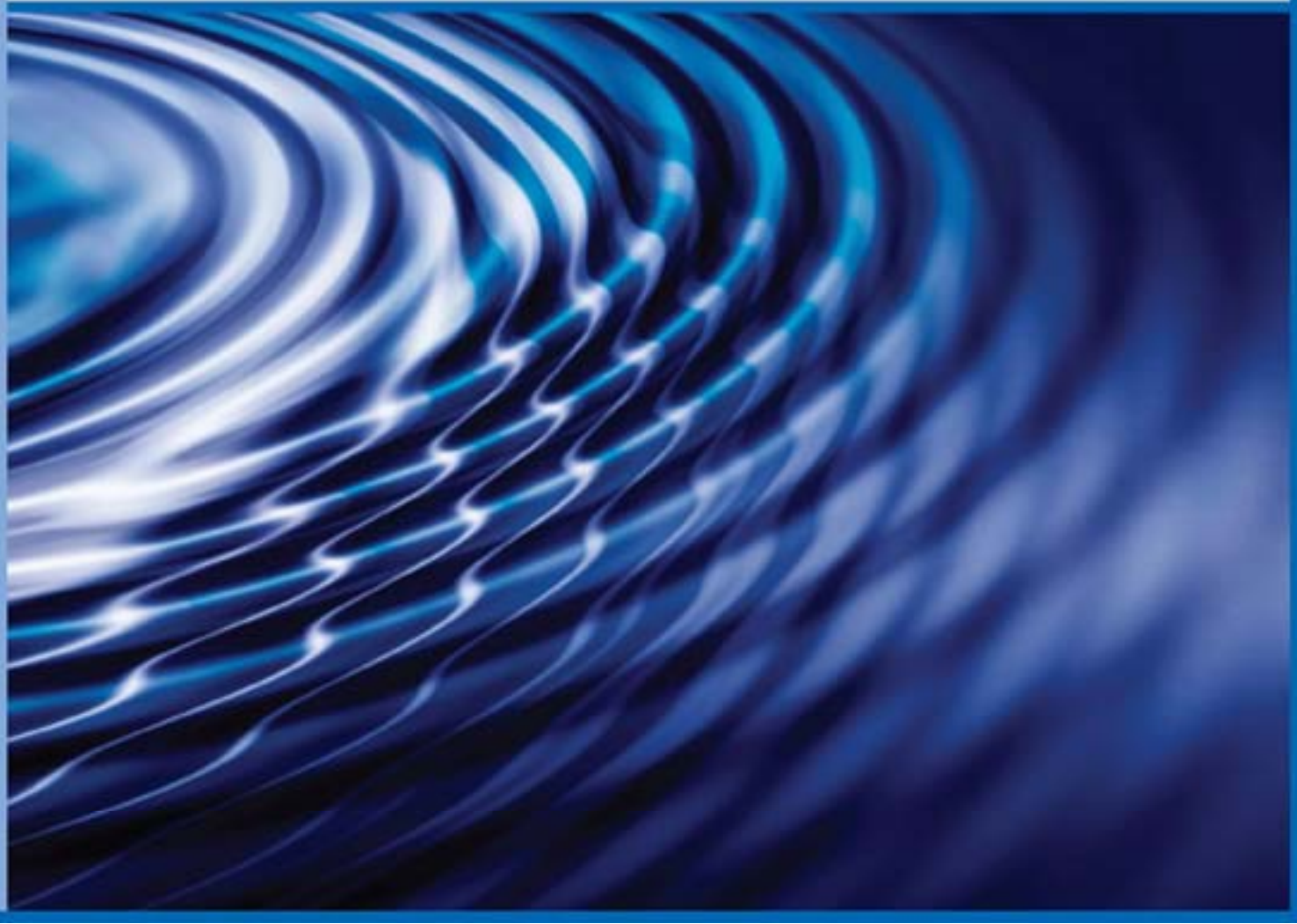
Deployment Guide

Reflection X 2011
Reflection Suite for X 2011

Attachmate®
Reflection®
2011



RSX 2011R3

Reflection X 2011 and Suite for X 2011

Deployment Guide

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CHAPTER 1

Introduction

Reflection X 2011 and Reflection Suite for X 2011 provide a suite of products to help you work with your host applications. This guide is designed to help administrators plan installations and deploy software to user workstations.

This deployment guide provides a high-level view of the deployment options available to you. The icon shown here is used to indicate pointers to more detailed information available in other user guides or Help topics.

Product and Feature Overview

The list below summarizes the applications and services that are available when you install Reflection X 2011 or Reflection Suite for X 2011 on Windows systems. Items marked **Default** are installed by default. In some cases, features that are installed by default include sub-features that are not installed by default. You can use the Attachmate Installation Program **Feature** tab to view feature installation details that are not shown here.

Reflection X Advantage	**Default** - Attachmate's next generation X server. You can choose to run in standalone mode and/or domain mode.
X Manager	**Default** - Standalone session manager for Reflection X Advantage. Use X Manager to connect to X clients. No other applications or services need to be installed.
X Manager for Domains	Domain mode session manager. Use X Manager for Domains to connect to X clients when you have installed and configured a Reflection X Advantage domain.
X Administrative Console	Reflection X domain administration. This is only required for domain administrators. It can be installed on one or more administrative workstations.
Asian Fonts	Installs Japanese, Korean, and Chinese fonts.
Domain Services	Installs the Reflection X service. Computers with this service installed can be configured to act as nodes in the Reflection X domain. Install the Domain Controller sub-feature only on the Reflection X domain controller.
Reflection X (Legacy)	Attachmate's legacy X server. Note: This feature is not available with the 64-bit installer.

Reflection Workspace	**Default** - Terminal emulation and productivity features.
Emulation	**Default** - Emulation features for the Reflection Workspace.
3270/5250	**Default** - Terminal session and printing support for IBM 3270/5250. **Note:** These features are not included in Reflection X 2011.
UNIX and OpenVMS	**Default** - Terminal session support for UNIX and OpenVMS.
Productivity	**Default** - Productivity features for the Reflection Workspace.
Application Programmer Interface	.NET assemblies and help documentation for .NET API development.
Visual Basic for Applications	**Default** - Macro support for the Reflection Workspace emulators.
Web Browser	**Default** - Support for web pages in the Reflection Workspace.
Reflection Quick Launch	Loads portions of Reflection 2011 into memory upon operating system boot to reduce program startup time.
Reflection FTP Client	**Default** - Secure file transfer using the FTP and SSH protocols.
Utilities	**Default** - Kerberos Manager and Reflection Key Agent. Note: These utilities are not used by Reflection X Advantage.
Languages	The default language is determined by your operating system settings. Additional languages are not included by default.

Separate UNIX and Mac installers are also available for Reflection X Advantage only. For information about installing on these systems, see Install on UNIX and Install on a Mac in the Reflection X Advantage Planning and Installation Guide. (http://docs.attachmate.com/reflection/rxa/4.2/en/rxa_plan_install_guide_en.pdf)

Planning Your Deployment

Reflection supports a variety of options to help you get users up and running quickly and effectively. You can choose from several different approaches for installing and deploying Reflection, ranging from “out-of-the-box” installations to highly customized deployments. Use these lists to help you plan your deployment.

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CHAPTER 2

Deploying Software using Microsoft Installer Technology

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This chapter describes how to use Microsoft Installer Technology to install software and files on user workstations.

Features

- Install any or all components (standalone, domain mode, emulators, and FTP client).
- Create a customized installation with the correct options for your users.
- Create companion installers to add files to your installation.
- Configure shortcuts.
- Chain installations and/or run additional programs automatically with your customized installation.

Requirements and limitations

- Deploys only to Windows systems.
- Software is not updated automatically after the install; an additional install must be made available to users.

Create an Administrative Installation Point

To prepare your environment for deployment, start by installing an administrative installation image on a network share. An administrative installation image is a source image of the application, similar to an image on a DVD. It includes all the files required to run an installation, as well as the administrative tools used for customization.

To create an administrative installation point

1 Start the Attachmate Installation Program (`setup.exe`).

2 From the **Advanced** tab, click **Create an Administrative install image on a server**.

3 Click **Continue**, and then browse to the network share you want to use for the administrative install image.

4 Click **Install Now**.

Deploy an "Out-of-the-Box" Version using Factory Defaults

The Attachmate Installation Program (`setup.exe`) is Attachmate's recommended tool for installing and deploying Reflection. This tool is configured to install using the default language and also supports features provided by the Attachmate Customization Tool. You can also deploy using the Microsoft Installer file (*.msi) provided in the Administrative Install.

Note: To review the features included in a default installation, see Product Overview (page 3).

To deploy Reflection with the Attachmate Installation Program (setup.exe)

1 Create an administrative install point.

2 Run setup using either of the following approaches.

- Direct users to launch the installer by running `setup.exe` from the installation point. With this option, users can modify the feature set.

  -or-

- Configure a shortcut or script to run `setup.exe` from the installation point. The command line options shown here install using the default feature set:

To do this	Use this command line
Display a progress bar and a **Cancel** button.	`setup.exe /install`
Display a progress bar with no **Cancel** button.	`setup.exe /install /passive`
Perform silent install with no display.	`setup.exe /install /quiet`

You can also run the installation using the Microsoft `msiexec` command. The basic syntax is:

`msiexec –i path_to_administrative_installation_point\msi_filename.msi`

Use the following command to view help about additional `msiexec` options:

`msiexec -?`

Use the Attachmate Customization Tool

To customize Reflection or customize the way it is installed, you can use the Attachmate Customization Tool (ACT). This tool has two modes that are used for different customization tasks:

- To install configuration files that customize the products you are installing, use the Attachmate Customization Tool to create a companion installer package (MSI); then deploy your companion installer with the original installation, or install the companion package independently.
- To customize how Reflection is installed (for example, to change the feature set that is installed), you can use ACT to create a Microsoft transform (MST) file that modifies the primary installation performed by the Attachmate Reflection MSI file. When the transform is deployed along with the Attachmate Reflection MSI file, it changes the default installation settings to the settings specified in the MST file.

To open the Attachmate Customization Tool

1 Open a DOS command window and enter the following command:

```
path_to_setup\setup.exe /admin
```

2 The **Select Customization** dialog box prompts you to choose which mode you want to open.

The procedures that follow describe two basic modifications you can making using the Attachmate Customization Tool. More detailed information is available in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf), and in the Attachmate Customization Tool application Help screens.

Specify which Features are Installed on User Workstations

You can use the Attachmate Customization Tool to create a transform file (*.mst) that modifies which features are installed.

To select features, components, and languages to install

1 Create an administrative install point. (page 6)

2 Start the Attachmate Customization Tool.

```
path_to_setup\setup.exe /admin
```

3 Select **Create a new Setup customization file for the following product**.

4 Under **Features**, choose **Set Feature Installation States**.

5 Use the feature tree to configure each feature's installation state.

6 Click **File** > **Save As.**

Your changes are saved to a transform (*.mst) file.

You will need to deploy the transform with the primary installation. Transforms can be used with any install started with `setup.exe` or with command-line installs (used by many deployment tools). The installer can only apply transforms during an installation. The following procedure describes how to add your transform file to installations started with the Attachmate Installation Program (`setup.exe`).

To add the transform to an install started with setup.exe

1 Start the Attachmate Customization Tool.

```
path_to_setup\setup.exe /admin
```

2 Select **Open an existing Setup customization file or Companion installer**, and then click **OK**.

3 In the **Open** dialog box, browse to select your transform (`.mst`) file.

4 Click **User interface** and select **Use this customization with interactive installs using setup.exe**.

When you save your transform with this option selected, Attachmate Customization Tool automatically updates the `setup.ini` file to apply your transform to the Reflection installation by adding the following line to the `[Setup]` section:

```
CustomTransform=<your_transform.mst>
```

5 From the **File** menu, click **Save**. (If **Save** appears dimmed, click **Exit** and you will be prompted to save the file.)

The transform can now be deployed to end users via the `setup.exe` file. (Users can run `setup.exe`, the `setup.exe` file can be called from a script, or `setup.exe` can be initiated from a command line.)

Include Customized Configuration Files with the Installation

Reflection applications use a variety of files to store configuration information. You can use the Attachmate Customization Tool to create a companion installer (*.msi) to install these files on user computers. The tool also includes a feature to include your companion package automatically when users run the Attachmate Installation Program.

Before you start, become familiar with how to customize your Reflection application and identify the file or files that contain your customized settings.

To create a companion package that installs customized files

1 Create an administrative install point. (page 6)

2 Install the product you want to customize on your administrative workstation.

3 Make your customizations and locate the file or files that contain your customized settings.

4 Start the Attachmate Customization Tool.

```
path_to_setup\setup.exe /admin
```

5 Select **Create a new companion installer**.

6 Select **Add files** and specify which files you want to include in this package and where you want to install them on user workstations.

7 Click **File** > **Save As** to save your companion package.

You can deploy the package you just created in a number of ways. The next procedure is one example. It creates a transform file that you can use to include this package with the Reflection installation.

To install the companion package automatically when users run the Attachmate Installation Program

1 Start the Attachmate Customization Tool (or, if it is still running click **File** > **New**) and select **Create a new Setup customization file for the following product.**

2 Click **Add installation and run programs**.

3 Click **Add.** For **Target**, specify the companion package you just created.

4 Click **File** > **Save As** to save your transform.

Note: When you save your transform, the Customization Tool automatically updates the `setup.ini` file, adding a `[RunPrograms]` section with instructions for installing your companion package.

5 Instruct users to install using the Attachmate Installation Program (`setup.exe`).

.NET Installation

If you use the Attachmate Installation Program (`setup.exe`) to install Reflection 2011 on Windows Vista or Windows 7, it determines whether the system has the .NET Framework and automatically installs it if necessary. (This applies only for installs that use the Attachmate Installation Program. It does not apply when Reflection 2011 is installed directly with MSI.)

Reflection 2011 has several features that require the Microsoft .NET Framework 4.0. If these features are selected for the primary Reflection 2011 installation and this framework is not already installed, the Attachmate Installation Program automatically installs it after the primary installation is complete. Both 32-bit and 64-bit versions of this software are distributed with Reflection 2011.

Notes

- Reflection X Advantage and Legacy Reflection X do not require the .NET Framework. The Reflection Workspace features do require .NET.
- If you are using Microsoft Windows Server 2008 R1 and the .NET Framework 4.0 is required, you will need to make sure it is installed on the server. The Attachmate Installation Program does not install .NET on this server.

Installing Directly with MSI

If you install Reflection 2011 directly with MSI and the .NET 4 Framework is not installed, the Windows Installer will display a warning dialog box and terminate. If the product features you are installing do not require .NET 4, you can use the SKIPDOTNET=1 property on the command line to bypass this test. For example:

```
msiexec /i SX11R3c.msi SKIPDOTNET=1
```

Installing on Windows XP

If you are installing Reflection 2011 on Windows XP, you must make sure that the Microsoft .NET Framework 2.0 SP1 (or greater) is installed before installing Reflection. This applies to installs performed with either the MSI or setup.exe and regardless of which product features are to be installed. If this minimum requirement is not met when installing on Windows XP, a warning dialog will be displayed and the install will terminate. (The setup.exe program assumes the required .NET framework exists on Vista and Windows 7). The section above describing Installing Directly with MSI and handling the .NET 4 requirement also applies to installing on Windows XP.

CHAPTER 3

Deploying Sessions using Reflection for the Web

Reflection for the Web is an Attachmate product that provides administrators with the ability to deploy Reflection sessions from a single management console. If you installed the Reflection Management Server, you can use the Reflection Administrative WebStation to deploy sessions for all of the products included in Reflection X 2011 and Reflection Suite for X 2011. Features available include the following:

- Manage sessions for multiple Reflection products from a single console.
- Configure connections to go through the Reflection for the Web security proxy server, which provides SSL/TLS encryption to the proxy. The security proxy server can also restrict the visibility of your hosts over the network, which enables you to limit host access to authorized users and members of LDAP groups.
- If you are deploying Reflection X Advantage, configure sessions to launch X clients directly, without displaying the X Manager window.

Note: Reflection for the Web is sold and licensed separately from Reflection X 2011 and Reflection Suite for X 2011.

Setting up Sessions using the Reflection Administrative WebStation

You can use the Reflection Administrative WebStation to deploy sessions for all of the products included in Reflection X 2011 and Reflection Suite for X 2011. The basic procedure is outlined below.

To deploy Reflection sessions using the Reflection for the Web Administrative WebStation

1. Install Reflection X 2011 or Reflection Suite for X 2011 on the administrative and end-user workstations.
2. Install the Reflection for the Web Management server on the web server as shown in your Reflection for the Web documentation and make sure you have administrative credentials for the Reflection Management Server.
3. Launch the Administrative WebStation and click **Session Manager**.
4. Create a session for any Reflection application you installed in Step 1. When you do this, Reflection for the Web launches that application in Administrative WebStation mode. Configure and save your settings. You'll be prompted to confirm that you want to send the settings to the Administrative WebStation.
5. Use the Access Mapper to configure user access to the session.
6. Point users to the Reflection for the Web URL to access Reflection sessions.

For a more detailed procedure, see *Deploying Session Documents with the Administrative WebStation* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Requirements for Reflection X Advantage sessions

If you are deploying Reflection X Advantage sessions using the Reflection Administrative WebStation, be aware of the following additional requirements and limitations.

- A Reflection for the Web proxy server must be configured.
- Clients must connect using Secure Shell
- Reflection PKI Services Manager must be installed and configured to validate the security proxy certificate.

  Note: Reflection PKI Services Manager is a separate utility that you can download from the Attachmate website at no additional charge.

- Administrator and user workstations must be Windows systems, and X Manager (standalone) must be installed on these computers.
- Users who launch sessions from Reflection for the Web can't save X Manager settings.

For detailed information about deploying Reflection X Advantage sessions, see *Distributing Sessions with the Administrative WebStation* in the Reflection X Advantage Planning and Installation Guide. (http://docs.attachmate.com/reflection/rxa/4.2/en/rxa_plan_install_guide_en.pdf)

CHAPTER 4

Deploying Reflection X Advantage Sessions

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Deploy Reflection X Advantage with Java Web Start 14

Set up a Reflection X Advantage Domain for Centralized Session Management 16

Control Startup Behavior 17

This chapter provides an overview of deployment and distribution methods that apply specifically to Reflection X Advantage.

For additional information and detailed procedures to help you implement the strategies described here, refer to the Reflection X Advantage Planning and Installation Guide. (http://docs.attachmate.com/reflection/rxa/4.2/en/rxa_plan_install_guide_en.pdf)

Deploy Reflection X Advantage with Java Web Start

If you set up a Reflection X domain, you can use Java Web Start technology to deploy X Manager for Domains to user workstations from a Web server.

Features

- Create a web link that installs and launches X Manager for Domains.
- Deploy updates to the software and session settings from the same web link.
- Deploy to all supported platforms.

Requirements and limitations

- The domain controller and any required nodes must be installed and configured.
- Deploys X Manager for Domains only (not standalone X Manager).
- Java Web Start support for Reflection X Advantage 4.2 requires Hotfix 1 or later.

To deploy X Manager for Domains with Web Start

Configure your Web server so that all files with the extension .jnlp are set to the `application/x-java-jnlp-file` MIME type as follows:

- If you are using an Apache Web server, add the following line to the `.mime.types` configuration file (typically found in the `.../conf/default` folder):

  ```
  application/x-java-jnlp-file jnlp
  ```

-or-

- If you are using another type of Web server, consult your Web server documentation for instructions on adding MIME types.

1 Navigate to the folder in which you installed X Manager for Domains, and then from the installation folder, copy the `webstart` folder (and all of its contents) to a folder on your Web server.

2 Change the name of the new folder on the Web server to `rxwebstart`.

3 Copy the `images` and `help` folders from the `Reflection X Advantage` folder to the `rxwebstart` folder on your Web server.

4 Copy all of the .jar files in the `Reflection X Advantage\lib` folder to the `rxwebstart\lib` folder on your Web server.

Note: There are two `lib` folders in the installation folder: the `Reflection X Advantage\webstart\lib` folder and the `Reflection X Advantage\lib` folder. The first `lib` folder was copied in step 1 above.

5 In the Web server folder `rxwebstart`, edit the following files as noted:

In this file	Do this
`jsafe.jnlp`	Change `localhost` in the following line to your host name. `<jnlp spec="6.0+" codebase="http://localhost/rxwebstart" href="jsafe.jnlp">`

`atmXManager.jnlp`	Move the following two lines outside the commented block in which they reside by default:
	`<argument>-domain</argument>`
	`<argument>domainComputerName</argument>`
	Edit the domain name argument (*`domainComputerName`*) to specify the network name of the computer running your domain controller.
	Change *`localhost`* in the following line to your host name.
	`<jnlp spec="6.0+" codebase="http://localhost/rxwebstart" href="atmXManager.jnlp">`

`jogl.jnlp`	Change *`localhost`* in the following line to your host name. `<jnlp codebase="http://localhost/rxwebstart/" href="jogl.jnlp" >`
`gluegen-rt.jnlp`	Change *`localhost`* in the following line to your host name. `<jnlp codebase="http://localhost/rxwebstart/" href="gluegen-rt.jnlp">`

6 (Optional) Edit the file `atmXManager.jnlp` to specify user name, password, and other configurable options. By defining these options, you can set up a Web Start link that automatically logs the user on to a domain and launches a session. Instructions are included in the `atmXManager.jnlp` file.

7 In a Web browser, navigate to the URLs you assigned to the variables `codebase` and `href`, and make sure that the files `rxadvantage.jar` and `atmXManager.jnlp` are accessible.

8 Distribute the link to the `StartReflectionX.html` page to users.

Notes:

- Web browsers, when determining how to handle content returned from the Web server, typically use the MIME type. To open Web Start, the server must return the following MIME type for `.jnlp` files:

  ```
  application/x-java-jnlp-file
  ```

- Java Web Start is an application launcher for Java applications that are written for Web deployment. Java Web Start caches resources locally on the disk, but also provides a secure execution environment and virtually transparent updating facility for applications. It is not necessary for the end user to initiate a software update manually, because the application is automatically updated each time it is used.

Set up a Reflection X Advantage Domain for Centralized Session Management

You can use Reflection X domains to simplify session setup for end users. As administrator, you can configure public session definitions. Users running X Manager for Domains can launch these preconfigured public sessions from their workstations.

Features

- The domain administrator can provide preconfigured public sessions to users.
- Updates to centralized sessions are automatically available to users.
- Users can configure and save personal sessions in addition to using public sessions.
- By setting up a domain, you can take advantage of other domain services; such as session suspend/resume, and improved performance in high-latency or low bandwidth networks.

Requirements

- The domain controller and any required nodes must be installed and configured.
- X Manager for Domains must be installed on user workstations.

For a detailed procedure, see *Domain Setup: Centralize Session Configuration* in the Reflection X Advantage Planning and Installation Guide (http://docs.attachmate.com/reflection/rxa/4.2/en/rxa_plan_install_guide_en.pdf).

Control Startup Behavior

Reflection X Advantage provides command line options that can be used to launch the standalone X Manager (**rxmgr**) and X Manager for Domains (**rxmgrdomains**). Available features include:

- Ability to launch one or more X clients using preconfigured session and client definitions.
- Ability to launch X clients without displaying the X Manager user interface.

Command line options are documented in the Reflection X Advantage application Help. For details about command line options and sample commands, see *rxmgr Command Line - Standalone X Manager* and *rxmgrdomains Command Line - X Manager for Domains*.

CHAPTER 5

Deploying Reflection Workspace Terminal Sessions

In this Chapter

Using Attachmate Customization Tool to Modify User Settings 18

Customize Reflection Terminal Sessions 19

Control Startup Behavior 21

Lock Down Workspace Settings 21

This chapter provides an overview of deployment and distribution methods that apply specifically to the Reflection Workspace. Both Reflection X 2011 and Reflection Suite for X 2011 include the Reflection Workspace, which you can use to open terminal sessions for connecting to your host systems. Both products include support for connecting to UNIX and OpenVMS terminals. Reflection Suite for X 2011 also includes support for terminal and printer emulation for IBM hosts.

There are two basic approaches available for deploying customized versions of the Reflection Workspace:

- Create configuration files for your users and include them in a companion installer. You can use this approach to deploy host connection settings, and to deploy a variety of custom configuration files, including keyboard maps, hotspots, mouse maps, and themes, as described in Include Customized Configuration Files with the Installation (page 9).
- Use the **Modify User settings** feature of the Attachmate Customization Tool. You can use this approach to configure settings that apply globally to the Reflection Workspace and all user documents. For example, you can use this option to set your preference for the Workspace look and feel (ribbon, classic, or browser), and to control which features end-users have access to.

This chapter provides a brief overview of features available for system administrators who are deploying the Reflection Workspace. For more detailed information, see the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Using Attachmate Customization Tool to Modify User Settings

You can use the **Modify user settings feature** of the Attachmate Customization Tool to configure custom Reflection Workspace settings and control user access to Workspace features.

To modify user settings from the Attachmate Customization Tool

1 Create an administrative install point. (page 6)

2 Install Reflection on your workstation.

3 From the workstation on which you installed Reflection, open a DOS command window and enter the following command:

path_to_setup\setup.exe /admin

4 Select **Create a new companion installer**.

5 From the navigation pane, click **Specify install locations** and choose whether you want this installation to apply to all users of a machine or only the user who installs it.

6 From the navigation pane, click **Modify User settings**.

- Select "Reflection 2011 - Workspace Settings" to open the **Reflection Workspace Settings** dialog box, which you can use to change the default trust center and workspace settings. The settings you configure are saved to an `Application.settings` file.
- Select one of the "*.access" options to open the Permissions Manager tool, which you can use to restrict access to Reflection settings and features. The settings you configure are saved to a special configuration file (an `.access` file).

The settings you configure are automatically saved to the correct file (`Application.settings` or `*.access`). If you selected to deploy the file to everyone who uses the machine, the companion installer file is automatically configured to deploy this file to the `[CommonAppDataFolder]\Attachmate\Reflection\Workspace\R2011_R3` folder. If you select to deploy the file only for one user, it is configured to deploy this file to the `[AppDataFolder]\Attachmate\Reflection\ Workspace\R2011_R3` folder.

Customize Reflection Terminal Sessions

You can configure a variety of customizations for end users. Options include: preconfigured session documents with host connection information, custom configuration files (such as keyboard maps) that can be referenced by your session documents, and changes to the default look and feel of the Reflection Workspace.

Deploy session documents with host connection information

Settings for connecting to hosts from the Reflection Workspace are saved in session document files. Use these files to store connection information such as host name or IP address, port and terminal type. Different host types are identified by different file extensions. (The options available depend on which product you installed.)

File Extension	Terminal Type
rdox	VT, Linux console, XTERM, WYSE and others
rd3x	3270 terminal
rd5x	5250 terminal

For the basic procedure to deploy these files, see Include Customized Configuration Files with the Installation (page 9).

Note: Additional files may be required if you configured secure connections. For a complete list of these files, see *Table 1. Where to Deploy Customized Files* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Deploy customized Reflection configuration files

You can configure Reflection to use a variety of custom configuration files. These custom settings are saved in separate files that can be referenced by your session documents. Customizable options include:

- Keyboard maps
- Hotspots
- Mouse maps
- Themes

For the basic procedure for adding configuration files to your installation, see Include Customized Configuration Files with the Installation (page 9).

For more detailed information see *Configure Reflection Sessions* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Customize the Reflection Workspace

You can use the **Modify user settings** feature of Attachmate Customization Tool to change default settings that apply globally to the Reflection Workspace and all user documents. Features you can customize include:

- Trust Center settings (trusted location, information privacy, and macro security)
- User interface mode (ribbon, classic, or browser)
- Document arrangement (tabs or windows)
- Default data directory

For the basic procedure, see Using Attachmate Customization Tool to Modify User Settings (page 18).

For more detailed information see *Customize Workspace Sessions* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Control Startup Behavior

You can use either or both of the following approaches to control startup behavior.

Configure Workspace Startup Settings

You can use the **Modify user settings** feature of Attachmate Customization Tool to specify what actions occur when starting the workspace. Examples of available settings include:

- Specify which dialog box, if any, should appear.
- Configure a Startup action such as displaying help, launching an application, or running a macro.

For the basic procedure, see Using Attachmate Customization Tool to Modify User Settings (page 18).

For more detailed information, see *Set up a Startup Action Sequence* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Deploy Layout files

In the Reflection Workspace, the size, location, and arrangement of the workspace window, and any open terminal or web session documents can be saved to a layout file (*.rwsp). When opened, a layout automatically opens and arranges all documents saved to the layout, opens and positions any docked panes (such as Scratch Pad or Screen History), and connects session documents to configured hosts.

To deploy a Workspace layout:

1 Launch the workspace and configure your layout.

2 Use **File** > **Save Layout** to save your layout file.

3 Add the file to your installation as described in Include Customized Configuration Files with the Installation (page 9).

For more detailed information, see *Create Layouts* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Lock Down Workspace Settings

You can limit or restrict a user's ability to change configuration settings or to use a particular feature. (For example, you can prevent users from changing the host address that a session connects to.) To configure restricted access, use Group Policy, Permission Manager, or Permission Manager with the Attachmate Customization Tool.

For detailed information about these options, see *Restrict Access to Features and Settings* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

- **Permission Manager**

  Use the Attachmate Permissions Manager tool to create `access` files that control access to features. Then create a companion installer package to deploy these files.

- **Attachmate Customization Tool with Permission Manager**

  Use Attachmate Customization Tool with Permissions Manager to create `access` files that are automatically packaged in a companion installer package that you can deploy to users.

- **Group policy**

  You can use Microsoft Group Policy to manage permissions. Reflection 2011 supports both ADM and ADMX formats. Group policy files are installed to a `Configuration` folder located in the program installation folder. The default location is:

  ```
  C:\Program Files\Attachmate\Reflection\Configuration\GroupPolicy\
  ```

CHAPTER 6

Deploying Reflection X (Legacy) Sessions

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This chapter provides an overview of deployment and distribution methods that apply specifically to the legacy Reflection X server (14.1).

Deploy Settings for Connecting to Client Hosts

In Legacy Reflection X, settings for connecting to X Clients are saved to client files (*.rxc). You can use the Attachmate Customization Tool to add these files to your installation. For the basic procedure to deploy these files, see Include Customized Configuration Files with the Installation (page 9).

Note: Additional files may be required if you configured custom Secure Shell connections, or want to include a list of known hosts. These files are installed to the Reflection documents folder and are also used by Reflection Workspace terminal sessions. For a complete list of these files, see *Table 1. Where to Deploy Customized Files* in the Reflection 2011 Installation and Deployment Guide (http://docs.attachmate.com/reflection/2011/r3/deploy/deploymentguide.pdf).

Control Startup Behavior

You can use **RunRX** command line utility to control Legacy Reflection X startup behavior. This executable (`runrx.exe`) is installed to the program folder.

For a description of parameters supported by **RunRx**, see *RunRX Utility* in the application Help.

Lock Down Reflection X (Legacy) Features and Modify Default Settings

System administrators can use the X Profiler to customize Reflection X. You can use it to set default values for settings and determine which settings can be modified by users. Profiled settings are stored in a profile file called `rx.ini`.

To modify settings using the X Profiler

1 Install **Reflection X (Legacy)** on your administrative workstation. Include the **Profiler** feature, which is not included by default.

2 Start the profiler. From the **Start** menu, go to **All Programs** > **Attachmate Reflection** > **Utilities** > **X Profiler**.

Note: On newer Windows systems that support User Account Control (UAC), you may see an error message. If this happens, modify the **X Profiler** shortcut as follows: Right-click and select **Properties**. On the **Compatibility** tab, select **Run this program as an administrator**.

3 Use the profiler tabs to modify your settings and save your changes to `rx.ini`.

4 Use a companion install package (page 9) to add `rx.ini` to your Reflection installation to one of the following locations. At run-time, Reflection X looks for `rx.ini` in the following order of precedence:

- The `\attachmate\reflection\x` subfolder in the user's personal Application Data folder.
- The `\attachmate\reflection\x` subfolder in the common Application Data folder.
- The Reflection program installation folder.