Getting Started with Reflection Desktop Deployment

You can choose from several different approaches for installing and deploying Reflection Desktop. Deciding which approach to use is typically based on a variety of factors, including your approved business processes, the scale of the deployment, your deployment tools, and whether you want to customize the installation.

Use this guide to get started and get the high level information you need.

"Exploring Deployment Options" on page 1 highlights common deployment tasks and shows where to find more information about them in the Reflection Desktop Deployment Guide or other documents.

"Best Practices" on page 5 lists things you can do to avoid common mistakes and problems.

"Setting up a Basic Deployment" on page 7 shows how to deploy Reflection by placing the required files on a file server.

"Frequently Asked Questions" on page 11 answers questions asked by administrators who have installed Reflection.

Exploring Deployment Options

The Reflection Deployment Guide includes best practices, instructions, and other information for a number of deployment environments.

Some content may apply to you regardless of your deployment environment. You may be interested in:

- "Finding Information Specific to your Deployment Environment" on page 1
- "Customizing Reflection Sessions" on page 2
- "Customizing Reflection" on page 3
- "Packaging custom files and customizing the Install" on page 4
- "Designing and Creating Secure Solutions" on page 4

Finding Information Specific to your Deployment Environment

Use these guidelines to find the sections that pertain to your deployment environment.

If you are using...	See
A share that users install from	Setting up a simple deployment in this guide.

If you are using...	See
A reference image	Information about how to select installation options and how to customize settings in the Reflection Help: Installation Get Started How Do I?
Group Policy	Information about how to install and use templates for locking down Reflection and instructions for publishing: Control Access to Settings and Controls with Microsoft Group Policy Publish with Active Directory
Setup.exe	Information about setup and instructions for deploying on the Setup command line: Setting up the Reflection Administrative Tools Deploy with the Reflection Setup program
MSI Command line	Information about prerequisites when deploying with MSI directly. Deploy with MSI
Host Access Management Server	Information about setting up Reflection to use centrally managed sessions. Using a Centralized Management Server

Customizing Reflection Sessions

You can set up and customize session files that use custom keyboard maps, controls, themes, and other settings. To customize these settings, see Create and Customize Session Documents.

You can save these session settings as compound session files or standard session document files (the default).

Compound Session Document files include all of the customized settings for QuickPads, keyboard maps, themes, mouse maps, hotspots, and ribbons. These files allow you to deploy your sessions without having to deploy dependant files for these settings.

Session Document files save these settings in separate files. If you save sessions using this default, you'll need to make sure that you deploy the custom files to the correct locations as shown in Customized Files and Where to Deploy Them in the Deployment Guide.

Compound files are easier to deploy because you don't have to deploy the supporting files. Regular session files offer more flexibility for sharing common configurations. For example, you can share one keyboard map in several regular session files. With compound session documents, you have to recreate the custom settings in each file.
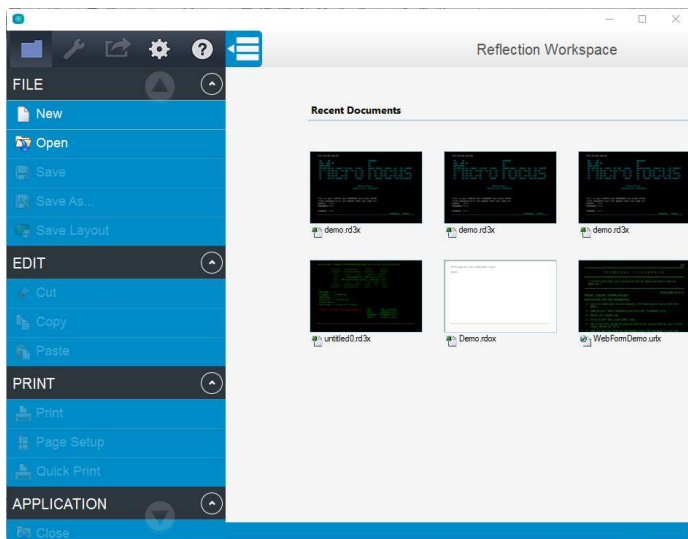
Customizing Reflection

You can customize Reflection by changing it's appearance and functionality and by locking down access to settings and controls.

Changing Reflection's appearance and functionality

You can change the appearance and basic functionality of the main Reflection window in a variety of ways, including specifying startup macros and actions.

You can also change the appearance of the window (for example, by opening Reflection in TouchUx mode).
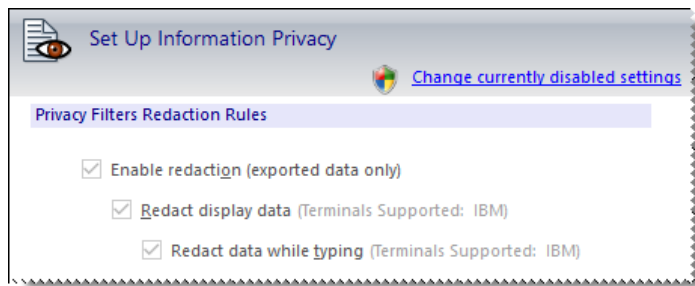

For more, see Configure Workspace Behavior and Appearance.

Locking down settings and controls

You can lock down Reflection to limit access to settings and controls so that they are not available to users. This allows you to simplify support requirements and resolve security concerns.

To prevent a user from changing a setting, you set the permission level for that setting or control to **Restricted**. For example, you could restrict the users's ability to modify security settings.

As shown below, the restricted settings are grayed out. The security shield and the **Change currently disabled settings** link indicate administrative access is required to change them.

For more about locking down settings and controls, see:

- Control Access to Settings and Controls with Reflection Administrative Tools
- Control Access to Settings and Controls with Microsoft Group Policy

Packaging custom files and customizing the Install

After you customize session files or the Reflection workspace, you can bundle the customized session and settings files into a deployable companion installer package (.msi) to make it easier to deploy to your users. You can deploy companion installer packages separately or you can add them to a customized installation. You can also create and install packages at any time after the initial installation. See Package Sessions and Custom Settings Files
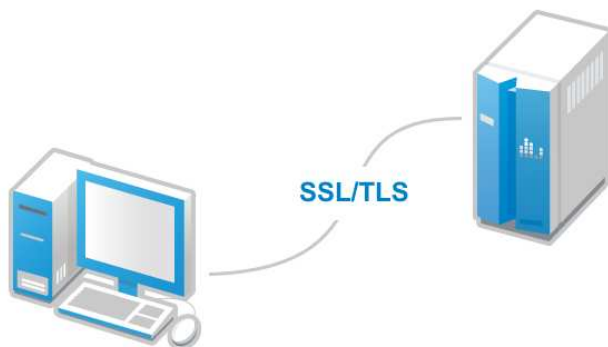
You can also create a Microsoft transform (.MST file) to customize how Reflection is installed. for example, you can specify the installation directory, or remove or add commands from the Windows Add or Remove Programs list. See Modify the Installation.

Designing and Creating Secure Solutions

Reflection provides support for a number of secure solutions, including secure sessions for data in motion, Information Privacy features that support PCI-DSS, and enforcement of Trusted Locations. Using Reflection, you can:

Creating secure sessions for data in motion

Set up secure sessions for a number of secure protocols including FIPS 140-2 validation, SSL/TLS encryption, SSH, Kerberos, SOCKS, and PKI. See Create SSL/TLS or SSH Session Documents in the Deployment Guide.
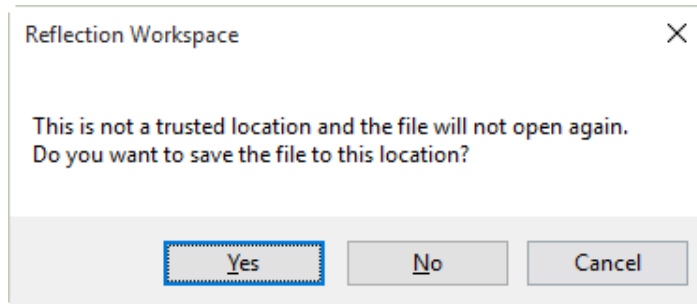
Setting up Information Privacy

Set up Information Privacy to help comply with PCI-DSS requirements, including redaction of sensitive data such as credit card or social security numbers.

You can also set up the Reflection API to log access to unredacted data. See Configure Information Privacy in the Deployment Guide.

Defining trusted locations

Define Trusted Locations to differentiate safe files from potentially harmful files. When a file is in a trusted location, it's files are assumed to be safe. If you try to save a file in a location that is not trusted, Reflection warns that it will not be able to reopen the file.

Reflection enforces trusted locations by default, so if you want to save sessions in directories that are not default trusted locations, you'll have to define these locations or disable the Trusted Locations feature. See Add Trusted Locations.

Best Practices

Use this checklist to avoid common problems with Reflection deployments.

✓ *Deploy files to trusted locations.*

The Trusted Locations feature provides a way to differentiate safe files from potentially harmful files. When a file is in a trusted location, it's files are assumed to be safe. Reflection enforces trusted locations by default, so if you want to save sessions in directories that are not default trusted locations, you'll have to define these directories or disable trusted locations. See Add Trusted Locations in the Reflection Deployment Guide.

✓ *Deploy customized files to the correct locations*

Reflection looks for session files and supporting custom files in specific locations. If you deploy one of these files to another location, Reflection will be unable to find it. See Customized Files and Where to Deploy Them in the Reflection Deployment Guide.

✓ *Consider using the Reflection setup.exe*

Setup.exe is the recommended tool for installing and deploying Reflection. This tool uses the primary Reflection MSI file to install Reflection but it also installs prerequisite software (if needed) and has several other features that provide a smoother deployment than installing directly with the primary Reflection MSI file.

It determines whether each workstation has the required .NET Framework and Microsoft Windows Installer version and automatically installs them if necessary. It also automatically uses the correct language for the installation and removes previous versions of Reflection.

If the Visual Basic feature is selected, Setup.exe also installs the Visual Basic core MSI, along with the appropriate VB language MSI.

✓ *If you are deploying with MSI directly, make sure all prerequisites are installed.*

If you use msiexec.exe for your install, prerequisites are not installed automatically. If the required prerequisites are not already on your users' workstations, you need to install them separately. You can find installers for the required prerequisites in the Prerequisites folder in the distribution media, or in your administrative installation. The prerequisites you need to install depend on which programs and features you are installing:

- ◆ All Reflection Workspace features require Microsoft .NET Framework 4.5.1. If you attempt an install using msiexec.exe and this prerequisite is not found, a message displays and the installer stops. To install the .NET framework, run the executable file in `Prerequisites\DotNet451`.

- ◆ The Visual Basic for Applications feature requires Microsoft VBA 7.1. Use the core and language-specific *.msi packages in the `Prerequisites\VB71` folder.

✓ *Ensure your user systems meet Reflection's Requirements*

To make sure users have the Reflection hardware and software requirements, see System Requirements.

✓ *If your users have legacy macros, install legacy macro compatibility features*

To run a legacy macro, the Micro Focus compatibility feature for that type of macro must be installed. This feature is available on the Reflection Setup program Features tab, under 3270/5250 | Compatibility. See Select Features, Components, and Languages in the Reflection Deployment Guide.

✓ *Follow guidelines for setting up security certificates*

You can configure certificate authentication for both Secure Shell and SSL/TLS connections.

All SSL/TLS sessions require certificates for host authentication; without the necessary certificate, you cannot make a host connection. Depending on the host configuration, you may also need to install certificates for user authentication.

Secure Shell sessions typically require both host and user authentication. Certificates can be used for either host and/or user authentication, but are not required by default.

For more, see Digital Certificates and Reflection Certificate Manager in the Deployment Guide.

✓ *Follow best practices for upgrading*

If you are upgrading from another Micro Focus product such as Extra! or a previous version of Reflection, see the following tech notes: Technical Note 2808, 2508, 2193

✓ *If you are using Citrix or AppV, Follow best practices for these platforms*

Whenever possible, save sessions that have customized settings for QuickPads, keyboard maps, themes, mouse maps, hotspots, and ribbons as compound session document files (see "Customize Session Document Files" on page 16). This prevents problems caused by sessions not being able to access or find configuration files.

If you specify a user data directory, do not use the Setup user interface to set the directory and do not use a drive letter as part of the directory. Setting the user data directory in this way on a Citrix server causes all users to have the same data directory. Instead, create a transform that sets the WRQ_USERDIR property to the location you want to use for the user data directory (see Add/Modify Registry Data in the Deployment Guide) and install Reflection with the transform. Be sure to use a Reflection property (such as [PersonalFolder]) to specify the directory instead of a drive letter.

Setting up a Basic Deployment

This video and walkthrough show a way to deploy Reflection out-of-the-box by installing an image of Reflection on a file server and then sending a link to its Setup.exe program to users. When users are ready to install, they click on the link to the Setup.exe program.

It also shows how to use the Installation Customization Tool to create a package of customized files that can be installed in the same way.

Video: Setting up a Basic Deployment

Deploy Reflection out-of-the-box

1 Download the Reflection installation files.

2 Create a network share on a network file server.

3 From the root directory of the installation files, double-click `setup.exe`.

   This starts the Reflection Setup program.

4 Click **Continue** and accept the license.

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

6 Click **Continue**.

   The **File Location** tab is selected.

7 Browse to the network share you want to use for the administrative install image and then click **Install Now**.

> **NOTE:** Be sure to specify a UNC path for the network share. For example:
> `\\share_name\administrative_install_point`

8 To deploy to users, distribute the network path to the Reflection Setup.exe file through e-mail or another type of notification: `\\share_name\administrative_install_point\setup.exe`

> **NOTE:** All the files required to install Reflection are on the administrative installation point. This location also includes the administrative tools provided to help you customize reflection.

Create and Deploy Customized session files

After you create an administrative installation point, you can use it along with a local installation of Reflection to create and deploy customized session files to your users.

First, you'll need to install Reflection on a workstation so you can create and customize your configuration files.

Install Reflection on a workstation

1 On the workstation, navigate to the network share where you have created the administrative installation point, and double-click `setup.exe`.

2 From the Reflection Setup program, click **Continue**, and then accept a license.

3 To select which features, components, or languages are installed, click the **Feature Selection** tab. The default installation does not include all features and components.

> **NOTE:** If you are working with legacy macros or other legacy files, select the compatibility features that support the products you are upgrading or migrating from.
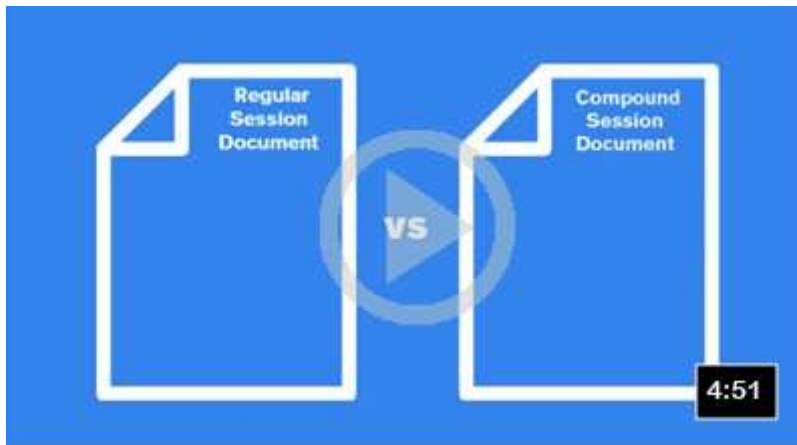
4 Click **Install Now**.

Create a custom compound session document file

After you install Reflection on the workstation, you can use it to create custom session document files.

You can simplify your deployment by saving your customized settings in a compound session document file. Compound session document files save all of the settings for QuickPads, keyboard maps, themes, mouse maps, hotspots, and ribbons in a single file (see "Customizing Reflection Sessions" on page 2).
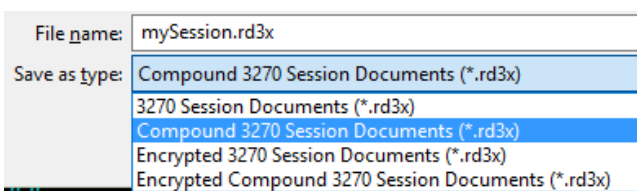
This video and the instructions that follow show how to create a session with a custom keyboard map, save all of the settings in a compound session document file, and then package that file in an .msi file.

Simplifying Deployment with Compound Session Document Files

1 On the workstation, open Reflection. If the Create New Document box doesn't open automatically, select **File** | **New** to open it.

2 Select 3270 terminal and then click **Create**.

3 In the **Host Name /IP address**box, enter the host name. To use the Reflection onboard demo, enter

```
demo:ibm3270.sim
```

4 After the session opens, click the Document Settings button 🖉 on the Quick Access toolbar and then select **Manage Keyboard Map**.

5 In the **Manage Keyboard Map** dialog box, select **Create a new keyboard map from an existing keyboard map file**.

6 In the Create a New Keyboard Map file dialog box, select to base the new keyboard map on the default map.

7 In the Keyboard Mapper, press the key combination to map (for example, Ctrl+F8) and then click **Select Action**.

8 In the Select Action dialog box, select an action.

9 Enter a new file name for the keyboard map and save it.

10 From the **File** menu, choose **Save As** and then save the session as a compound session file type:

NOTE: Saving a session in a compound session document file simplifies your deployment. When you save the session as a compound session document, the custom keyboard map settings are saved in your session file. If you were to save the session as a regular session document, these settings would be saved in a separate file that you would need to deploy along with your session file.

The Installation Customization Tool is designed to be opened from a command line. However, you can create a desktop shortcut that opens this tool. This will save time when you are working with the tool.

Set up a shortcut that opens the Installation Customization Tool

1 On your administrative installation point, right-click the setup.exe file, and choose **Create Shortcut**.

2 Right-click the shortcut and choose **Properties**.

3 In the **Target**box, add the `/admin` option to the end of the command line. For example:
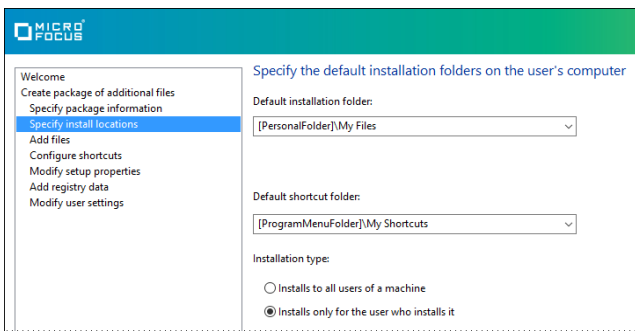
myServer\adminInstallPoint\setup.exe /admin

NOTE: The path in the **Target**box must conform to the Uniform Naming Convention (UNC) format and cannot include drive letters. Drive letters can cause problems if you try to use the shortcut on other workstations.

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4 Rename the shortcut and save it on the desktop of your workstation.

Create a companion installer package

1 To start the Installation Customization Tool, double-click the shortcut on your workstation, and in the **Select Customization**dialog box, select **Create a new Companion installer**.

2 On the left pane, click **Specify install locations**, and specify the **Installation type**.

- ◆ **Installs to all users of a machine** installs the file in a common folder so that the settings apply to all users of the machine.

- ◆ **Installs only for the user who installs it** installs the file in a personal folder so that the settings apply only to a single user.

3 On the left pane, click **Add files** and then click in the **Add files to** box and type the rest of the path. The final entry should be:

[PersonalFolder]\Micro Focus\Reflection\

NOTE: By default, this folder is a trusted location. If you use another folder, you will need to add it to the trusted location list and deploy that setting. Reflection does not open files unless they are in trusted locations.

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4 Click the **Add**button, and browse to the file you added earlier.

5 From the navigation pane, click **Specify package information**.

  ◆ In the **Add/Remove**name box, type the package name that will appear in the Windows **Programs and Features**control panel.

  ◆ In the **Organization**name box, enter the name of your department.

6 From the **File**menu, save the `.msi` file on the administrative installation point.

Now that you have created the companion MSI file, distribute a link to the file to users. When they run this MSI, the session document file is installed to their workstations in the location specified in the MSI.

Frequently Asked Questions

Frequently asked questions are organized in the following sections:

  ◆ "Get Started" on page 11
  ◆ "Customize Workspace" on page 13
  ◆ "VBA" on page 15
  ◆ "Customize Session Document Files" on page 16
  ◆ "Package Files" on page 18
  ◆ "Restrict Access or Lock Down" on page 18
  ◆ "Install Updates or modify Existing Installs" on page 19
  ◆ "Set up Secure Solutions" on page 19
  ◆ "Deployment Commands" on page 21

Get Started

What are the Reflection Desktop requirements? What is supported?

For a list of Reflection Desktop hardware and software requirements, see System Requirements in the Deployment Guide.

For a complete list of supported operating systems and virtualization environments for Reflection Desktop products, see Technical Note 2809: Reflection Desktop Supported Platforms.

How do I find out what's new in a release?

To find a description of the main features for a release, see What's New? in the Help.

To get a complete list of features and resolved issues, see Technical Note 2805: Reflection Desktop 16.0 New Features and Release Notes.

What are the differences between Reflection 14 vs Reflection Desktop?

Reflection Desktop is Micro Focus's new solution for terminal emulation. It supports newer versions of Windows, has a more modern interface, and provides a number of features that are not available in the Reflection14.x products.

The Reflection 14.x product line is not scheduled for new feature development, whereas Reflection Desktop products will continue to be developed. To find more information about Reflection Desktop:

- See Reflection Desktop Features or VT Sessions in the Reflection Help.
- Open the Micro Focus Reflection Desktopproduct page and then browse to the data sheet or Tech spec for the product you are interested in.

Can I use Reflection to connect through iOS or another mobile device?

You can connect from your iOS, Windows, or Android mobile devices by accessing Reflection Desktop sessions through a Citrix server.

The Reflection TouchUx user interface mode provides a mobile user experience and includes an on-screen terminal keyboard that can be set as a transparent overlay or docked in a separate pane. To set this mode, see The User Interface in the Help. To deploy the application.settings file that includes this setting, see Configure Workspace Behavior and Appearancein the Deployment Guide.

Micro Focus also provides additional products to support terminal emulation in mobile environments:

For native android and iOS apps, see:

- Reflection for TN3270 and TN5250
- Reflection for UNIX

For browser-based HTML5 access to host sessions, see the Reflection ZFE product.

Where is the Reflection MSI located in the download package?

The Reflection MSI is located in the root folder of the package.

If you are installing with the MSI directly, be sure to install the prerequisite software as shown in Deploy with MSI in the Deployment Guide.

Is it possible to burn an installation that was set up on a server to a dvd?

Yes, after you extract the file, you should see a folder with the same name as the .exe you ran (for example, `rdunixovms-16.0-prod-w32`). Copy the whole folder onto a DVD. You can run `setup.exe` from within that folder.

Can I install the API without the desktop client?

You cannot install API components of Reflection Desktop separately from the Reflection Desktop product.

Can I install the Reflection Desktop as part of a server-based application?

Reflection Desktop cannot be used as a component of a server-based application that provides connections to host systems for multiple users. Micro Focus licensing terms specifically prohibit this type of usage. Reflection Desktop is a standard Windows application designed for a single end user at a time, and would not perform well in a server environment.

Why would I use Reflection deployment tools if I deploy with MSI?

You can use these tools to create transforms and packages of configuration files (see Create or Modify a Transform and Package Sessions and Custom Settings Files in the Deployment Guide).

You can also use them to limit access to features as shown in Control Access to Settings and Controls in the Deployment Guide.

You can deploy the transforms and MSI packages that you create with the Reflection administrative tools directly with MSI.

How can I deploy MSI plus an MSP?

Apply the MSP to your administrative installation point as shown in Distribute Software Updates in the Deployment Guide.

Then redeploy to workstations using the same method you used to deploy Reflection.

Customize Workspace

How do I deploy workspace settings for all users or for user specific settings?

When you package your application.settings file, specify the Installation type (all users or only the user who installs it) as shown in Package Sessions and Custom Settings Files.

How do I modify and deploy workspace settings (like trusted locations) with the Installation Customization Tool

Set up workspace settings as shown in Configure Workspace Behavior and Appearance in the Deployment Guide.

You can package the workspace settings as shown in Package Sessions and Custom Settings Files in the Deployment Guide.

Alternatively, you can configure and package all workspace settings (except those related to Information Privacy) directly from the Installation Customization Tool as shown in Configure and Automatically Package Workspace Settings in the Deployment Guide.

NOTE: Do not use this approach to package the PrivacyFilters.xml or PCIDSS.settings files for Information Privacy.

How do I set or change the default user data directory?

Create a transform and set the WRQ_USERDIR property to the location you want to use for the user data directory (see Add/Modify Registry Data in the Deployment Guide) and deploy the transform with your installation.

Why doesn't Reflection let me save a file in a nontrusted location?

Reflection enforces trusted locations to protect your data. A trusted location is a directory that's designated as a secure source for opening files. By default, Reflection allows you to open documents only in directories specified as trusted locations in the Reflection settings (see "Defining trusted locations" on page 5 in this guide).

How do I add or turn off trusted locations and deploy these settings for multiple users?

You'll need to configure the trusted locations as described in see Specify Trusted Locations Dialog Box in the Reflection Help. To add a location, you'll need to add it to the trusted location list. To disable trusted locations, you'll need o clear the **Enable file only from trusted locations** option. You can set and deploy this workspace setting for all users or specific users as shown in Package Sessions and Custom Settings Files in the Deployment Guide.

How do I configure Copy and Paste?

Configure the clipboard settings as described in Configure Clipboard Settings Dialog Box (VT) in the Help. These settings are saved in your session document file.

How do I specify and deploy settings for barcode scanners and other input devices?

Specify the input device settings as shown in Technical Note 2756: Preventing Character Loss When Using Barcode Scanners with Reflection. Then package this workspace setting as shown in Package Sessions and Custom Settings Files in the Deployment Guide.

How do I change the context menu?

Change the context menu or create a new one as shown in Create a Custom Context Menu in the Help. The menu is saved in your session document file. If you map a mouse action to open the new menu, you'll need to deploy the custom mouse map as shown in Package Sessions and Custom Settings Files in the Deployment Guide.

How do I change the mouse cursor shape?

Change the cursor style as shown in Select a Cursor Style in Reflection Help.

If you save your session as a compound session file, the theme is deployed as part of the session file. If you save it as a regular session file, you'll need to deploy the theme `.themex`file to the Themes subfolder as shown in Package Sessions and Custom Settings Files in the Reflection Deployment Guide.

How do I set up whether to prompt before disconnecting?

Select or clear the **Prompt for disconnect** option as shown in Configure Workspace Defaults Dialog Box in the Help. You can set and deploy this workspace setting as shown in Configure Workspace Behavior and Appearancein the Deployment Guide.

How do I modify the Quick Access Toolbar (quick launch icons)?

Set up the QAT as shown in Customize the Quick Access Toolbar in the Help.

The Quick Access Toolbar is a workspace setting and is save in the `Reflection2007.Application.Ribbon.xuml` file. You'll need to deploy this file to users as shown in Package Sessions and Custom Settings Files. If you use the Installation Customization Tool to create this setting, it automatically sets the correct file location for this file in the package (see Configure Workspace Behavior and Appearance).

Can I add the QAT in Classic mode?

No. This control is a Ribbon control and can only be added to a Ribbon.

Reflection provides a similar option called QuickPads that you can use for Classic mode. To set up a QuickPad, see Manage QuickPads Dialog Box in the Help. If you save your session as a compound session file, the QuickPad is deployed as part of the session file. If you save it as a regular session file, you'll need to deploy the `quickpad .rqpx` file to the QuickPads subfolder as shown in Package Sessions and Custom Settings Files in the Deployment Guide.

How do I edit QuickPad buttons?

To edit a QuickPad, see Manage QuickPads Dialog Box in the Help. Then deploy it as shown in the previous question about adding QAT in Classic mode.

How do I map events to actions?

See Set up Actions for Reflection Events in the Reflection Help.

How do I minimize vertical space required for the title bar or collapse the Ribbon when Reflection opens?

To set up Reflection to open with the ribbon minimized, see Minimize the Ribbon in the Reflection Help. You can set and deploy this workspace setting as shown in Configure Workspace Behavior and Appearance in the Deployment Guide.

How do I disable the splash screen?

You'll need to choose which dialog box (if any) you want to open when Reflection opens by configuring the **When starting workspace** option as described in Configure Workspace Defaults Dialog Box in the Reflection Help. You can set and deploy this workspace setting as shown in Configure Workspace Behavior and Appearance in the Deployment Guide.

VBA

How do I deploy macros?

You can save macros in the session document project file or in the common project. Macros that are apply to a particular session are typically saved to session document project, which is included as part of the session document file.

Macros that are intended for use by more than one project are saved in the common project, which is saved in the vbaProject.bin file. You 'll need to deploy this file to one of the following folders:

For all users:

[CommonAppDataFolder]\Micro Focus\Reflection\Desktop\v16.2\

For only the user who installs:

[AppDataFolder]\Micro Focus\Reflection\Desktop\v16.2

For more, see Package Sessions and Custom Settings Files.

How do I run or convert legacy macros?

To run legacy macros in Reflection or convert them to Reflection macros, see Using Legacy Macros in the Reflection Help.

How do I set up a macro to screen scrape data?

To set up screen scraping, see Screen Scrape Data to a Spreadsheet in the Reflection VBA Guide.

Can I call a session from JavaScript?

Reflection Desktop does not support opening a session from JavaScript.

How do I install Reflection and VBA with MSI directly?

To deploy Reflection directly with MSI and get information about where to find the files required to install the .Net and VBA versions required for Reflection, see Deploy with MSI in the Reflection Deployment Guide. You can use the same commands to deploy the VBA .msi as you use for the Reflection .msi.

How do I start and stop macro recording?

Record macros on the Tools tab as shown in Record a VBA Macro in the Help.

Can I handle legacy macros with ActiveX solutions?

Reflection Desktop does not support ActiveX controls. If you have these controls in your legacy macros, you will need to replace the code.

NOTE: The Reflection .Net API supports embeddable .NET controls. These controls are not available for VBA.

How do I get started with VBA and what are some typical ways to use it?

See the Reflection VBA Guide (http://docs.attachmate.com/reflection/16.0/vba-prog-guide/).

Customize Session Document Files

What are best practices for customizing sessions?

For best practices and information about customizing sessions, see Create and Customize Session Documents in the Deployment guide.

How do I create and deploy a session?

Create a session and save it in a session document file. Then package this file in a companion MSI file and specify to install it to a trusted location. See "Setting up a Basic Deployment" on page 7 in this guide.

What is the difference between using compound session document files versus regular session document files?

Compound session document files include customized session settings for QuickPads, keyboard maps, themes, mouse maps, hotspots, and ribbons. Regular session document files save these settings in separate files. Compound files are easier to deploy because you don't have to deploy the supporting files but regular session files offer more flexibility for sharing common configurations. See "Customizing Reflection Sessions" on page 2 in this guide.

How do I set up a serial port connection for a bidirectional device?

When you want a bidirectional device on a serial port (such as a printer or bar-code reader) to be able to send information via Reflection, you can enable serial device-to-host communications. See Enabling Serial Device-to-host Communications in the Help. These settings are saved in your session file.

Can I open and use .rsf files in Reflection Desktop?

You can open `.rsf` files as shown in Supported Legacy Reflection, Extra!, and KEA! Files in Reflection Desktop (http://support.attachmate.com/techdocs/2807.html)

How do I customize the screen text, input fields, theme colors, background colors and other attributes?

You can configure these settings by changing the theme used for your session or by creating a new theme as shown in Change the Look and Feel of a Session in the Help.

If you save your session as a compound session file, the theme is deployed as part of the session file. If you save it as a regular session file, you'll need to deploy the `.themex`file to the `Themes` subfolder as shown in Package Sessions and Custom Settings Files in the Reflection Deployment Guide.

How do I set up Hotspots?

To set up a Hotspot, see Define Hotspots in the Help.

If you save your session as a compound session file, the Hotspot is deployed as part of the session file. If you save it as a regular session file, you'll need to deploy the Hotspot `.hxs`file to the `Hotspots Maps` subfolder as shown in Package Sessions and Custom Settings Files in the Deployment Guide.

How can I create numerous session files that have the same settings but with different host names?

Set up a Reflection Desktop template with all of the settings you want to use as shown in Set up Session Templates in the Deployment guide. Then use VBA or .NET API to create the session document files based on that template and specify the host name for each file from a list of host addresses.

How do I modify and deploy the Ribbon for specific users?

See Customize the Ribbonin the Help. To deploy the custom Ribbon interface `.xuml` file that these settings are saved in, see Package Sessions and Custom Settings Files in the Deployment guide.

How do I create a layout?

See Create or Modify a Layout in the Help. To deploy the layout, see Package Sessions and Custom Settings Files in the Deployment guide.

How do I Import a toolbar from a legacy session?

To import a legacy toolbar, see Import Legacy VT Toolbars to the Ribbon.

How do I set up and deploy custom keyboard maps or themes or other files referenced by a session?

To configure these settings, see Select and Map the Keyboard and Mouse and Change the Look and Feel of a Session in the Help.

If you save the session that uses a custom keyboard map or theme as a compound session document, these settings are saved in your session file. Compound session documents also include settings for QuickPads, mouse maps, hotspots, and ribbons.

If you save it as a regular session document, they are saved in separate files. You will need to make sure these files are deployed to the correct locations. (For information about deploying these files, see Package Sessions and Custom Settings Files in the Deployment Guide.)

Package Files

How do I create and deploy a package?

After you customize Reflection, bundle the customized session and settings files into a deployable companion installer package (.msi) as shown in Package Sessions and Custom Settings Files.

How can I set up a configuration that can be deployed with Microsoft SCCM?

See Deploy with System Center Configuration Manager.

How do I deploy a session to all users?

When you create the package with the Installation Customization Tool, select **Installs to all users of a machine** and specify the folder to deploy to as shown in Customized Files and Where to Deploy Them.

Can you deploy menu and desktop shortcuts?

To configure a shortcut that opens one of the product executable files, see Configure Shortcuts in the Reflection Deployment Guide.

Which files and folders are workspace settings and session settings deployed to?

See Customized Files and Where to Deploy Them in the Deployment Guide.

Restrict Access or Lock Down

How do I lock down Reflection with Permissions Manager?

See Control Access to Settings and Controls with Reflection Administrative Tools in the Deployment Guide.

How do I lock down Reflection with Group Policy?

See Control Access to Settings and Controls with Microsoft Group Policy in the Deployment Guide.

How do I deploy files that restrict access to controls and settings (like the actions.access file)?

Package and deploy these files as shown in Package Configuration Files in the Reflection Deployment Guide.

How do I limit the number of sessions that can be open at a time?

Use Reflection VBA macros or .NET API to detect and limit the number of sessions that can be open in a workspace. See the Reflection Desktop VBA Guide or the Reflection Desktop .NET API Guide.

Install Updates or modify Existing Installs

How do I add compatibility features to an existing install?

Create a transform to add these features as shown in Select Features, Components, and Languages in the Deployment Guide and save it on your administrative installation point.

How do I apply a patch, update, or service pack?

See Distribute Software Updates in the Reflection Deployment Guide.

Set up Secure Solutions

How do I set up an Express Logon Feature (ELF) session?

See Connect 3270 Sessions using the Express Logon Feature (ELF) in the Help.

How do I deploy Information Privacy (PCIDSS) settings?

See Configure Information Privacy in the Deployment Guide.

How do I set up and deploy an SSL\TLS session?

See Set up SSL/TLS Connections in the Deployment Guide.

How do I import a certificate?

See Digital Certificates and Reflection Certificate Manager in the Deployment Guide.

How can you force users to set up sessions with SSL?

Set up a session template as shown in Set up Session Templates and deploy as shown in Package Configuration Files.

To prevent users from creating other types of sessions, you can select **Hide built-in templates for new documents** in the Workspace Defaults dialog box and deploy that setting with your template.

Do I need a certificate for TLS encryption?

All SSL/TLS sessions require certificates for host authentication; without the necessary certificate, you cannot make a host connection. Depending on the host configuration, you may also need to install certificates for user authentication. See Digital Certificates and Reflection Certificate Manager in the Deployment Guide.

How do I set up Reflection for certificates?

See Digital Certificates and Reflection Certificate Manager in the Deployment Guide.

How do I set up SSH as the default for new connections?

Set up a session template as shown in Set up Session Templates and deploy as shown in Package Configuration Files.

To prevent users from creating other types of sessions, you can select **Hide built-in templates for new documents** in the Workspace Defaults dialog box and deploy that setting with your template.

How do I prevent RUO from saving the SSH username, so that users are prompted for it each time they connect to the host?

In the Document Settings dialog box, click on "Set Up Safeguards" and then clear the "Cache Secure Shell user name" setting.

How do I set up and deploy an SSH session?

See Set up Secure Shell Connections in and Package Configuration Files in the Deployment guide

What is an SSH configuration scheme?

Secure Shell configuration information is saved to your Secure Shell configuration file using SSH configuration schemes. When you make a Secure Shell connection, Reflection uses the SSH configuration scheme to determine how the connection is made.

You can create a scheme and use it for multiple connections. If you don't specify a scheme, Reflection automatically creates a new SSH configuration scheme as soon as you change any of the Secure Shell settings. For more, see SSH Configuration Schemes.

Deployment Commands

How do I perform a silent install?

To use Setup to perform a silent install that displays a progress bar and disables the Cancel button, enter:

```
setup.exe /install /passive
```

To perform a silent install with no display, enter:

```
setup.exe /install /quiet
```

How do I apply a transform from the Setup command line?

To apply a transform, enter:

```
setup.exe /install TRANSFORMS=myCustomInstall .mst
```

Do settings files get changed when Reflection is deployed or upgraded?

If you are upgrading or updating from Reflection 2007 (or more recent versions), settings files are not changed. If you want to change settings, you'll need to package and deploy them as a separate MSI file.

How do I deploy with Group Policy?

You can use Reflection deployment tools to create transforms and packages (companion msi files) and then publish them to your users. (See Publish with Active Directory.)

Reflection also provides templates that you can use to lock down settings and controls. (See Control Access to Settings and Controls with Microsoft Group Policy.)

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