Evaluation Guide

Host Access Management and Security Server

12.5

Legal Notice

Contents

Evaluation Guide: Host Access Management and Security Server

Host Access Management and Security Server provides an administrator the means to centrally secure, manage, and monitor users' access to host connections. Management and Security Server can manage several products including Reflection Desktop, InfoConnect, Reflection ZFE, Reflection for the Web, and Rumba.

Your Host Access Management and Security Server 12.5 evaluation software is fully functional for 120 days. During that time you can install, configure, and test any configuration or feature.

1 Introduction to Host Access Management and Security Server 12.5

From one central location, an administrator can use Host Access Management and Security Server to secure, configure, and monitor Windows terminal client sessions, Java-based browser sessions, and HTML5 sessions (that do not require Java).

Meeting Business Challenges

These security challenges are top of mind for our customers. Follow the Evaluation Scenario in this guide to see how Host Access Management and Security Server can meet these challenges:

- Strengthen mainframe authentication—without making difficult changes on the mainframe.
- Reinforce security—without jeopardizing usability.
- Integrate mainframe authorization with existing Identity Access Management (IAM).
- Upgrade to TLS—without disrupting business processes.
- Ensure that only authorized personnel can connect to the host.
- Easily and efficiently harden those applications that access host resources to enforce our security mandates.

Related Topics

- Product Features
- Add-On Products
- Technical Resources

Product Features

The 12.5 release of Management and Security Server introduces the **Administrative Console** as the product's user interface.

Using Management and Security Server, the administrator can

- Centrally secure, manage, and monitor users' access to mainframes and other hosts.
  - Use the **Administrative Console** to create and configure Windows-based terminal emulation sessions to deploy to users.
  - Use **Manage Packages** to "push" application settings (for Windows-based sessions) to a user or user group, thereby locking down (or hardening) the application.

    - Use your current enterprise directory service, such as Active Directory or LDAP, to control access to Windows terminal client sessions, Java-based browser sessions, and HTML5 sessions.
    - Use **Assign Access** to assign sessions to authorized users.
    - Use the **Metering Server** to centrally audit and limit user access to host sessions.
- Manage Reflection Desktop (version 16.1) and InfoConnect Desktop (version 16.1) sessions without requiring Java on the desktop.
- Manage other emulation products, including Extra, InfoConnect, Reflection ZFE, Reflection for the Web, and Rumba.

For more information about new features, see the Management and Security Server Release Notes.

Related Topics

- Meeting Business Challenges
- Add-On Products
- Technical Resources

Add-On Products

You can enhance the value and benefits of Management and Security Server with add-on products. The Evaluation download includes these add-on products, which require separate production licenses:

- **Security Proxy Server** delivers end-to-end encryption and enforces access control at the perimeter with patented security technology. Specifically, the Security Proxy encrypts the data between the client and the Security Proxy Server. The Security Proxy connects to the host computer and encrypts the data before forwarding it to the user.
- **Terminal ID Manager** enables you to centrally manage access to terminal and printer sessions by dynamically allocating terminal IDs based on username, DNS name, IP address, or address pool.
- **Automated Sign-On for Mainframe** enables automated sign-on to IBM 3270 applications via your identity and access management system, including multi-factor authentication such as smartcards.
- **PKI Automated Sign-On** enables automated application sign-on to your critical enterprise systems.
- **Micro Focus Advanced Authentication** enables strong multi-factor authentication using a variety of authentication methods, including biometrics, one-time passwords, and smartphone authentication.

Related Topics

- Meeting Business Challenges
- Product Features
- Technical Resources

Technical Resources

Refer to these resources for more information while evaluating Host Access Management and Security Server.

- **Installation Guide**

  The Management and Security Server Installation Guide provides details about installing and setting up the Management and Security Server components and the Add-On Products.

- **Administrator Guide**

  Context-sensitive Help is available on each page in the Administrative Console. The entire Help set is available as the Management and Security Server Administrator Guide, which includes supplemental Technical References.

- **Technical Resources Page**

  The Technical Resources Page provides a comprehensive list of resources, including technical notes, documentation, security information, and product news.

- **Technical Support**

  To request technical support, see Contact Support.

Related Topics

- Product Features
- Add-On Products
- Evaluation Scenario
- Configuration Steps

2 Evaluation Scenario

To simplify the evaluation of this platform-independent product, follow this use-case scenario to learn about Management and Security Server's primary features and the administrator's workflow. In addition to this scenario, you can evaluate other options on your own.

Our customers typically install Management and Security Server and its components on server-class machines. From there, they manage Windows Desktop emulation applications, such as Reflection Desktop, across their enterprise.

NOTE: Even if your environment is different from the evaluation scenario presented here, you can walk through the steps to see how business objectives and company requirements can be met.

In this scenario, you will use Management and Security Server to

- assign sessions to only authorized users.
- configure secure connections to host applications.
- restrict users' access to application settings.

For evaluation purposes, install both products on your Windows workstation, provided you have both an administrator logon and a user logon.

Company Requirements

In this evaluation scenario, a desktop application administrator is in charge of setting up and using Management and Security Server. The company requires that

- The administrator can centrally manage the deployment of Micro Focus terminal emulation products to 1000 user workstations (in production).

  For this evaluation, the administrator will deploy to one user.

- Only authorized users are allowed to access the mainframe applications.
- All sessions are connected over a secure protocol.
- Applications are locked down (hardened) to ensure company security mandates are enforced.
- PCI compliance policies are enforced.
- Implementing centralized management and security does not disrupt the end-user experience.

The Assumptions

This scenario demonstrates the "before" and "after" effect of using Management and Security Server 12.5 to secure access to the company's mainframe applications.

- The company uses Reflection Desktop version 16.1.
- The company uses a Windows 64-bit system environment with LDAP directory services. Users authenticate to the Windows domain.

- The “domain user” in this scenario represents the end user.
- The end users are accustomed to logging on before accessing their mainframe sessions.

Configuration Overview

To meet the company requirements, the administrator’s evaluation of Management and Security Server 12.5 would include these steps.

To test the results of the configuration, you will need both an administrator logon and a domain user logon. If you do not have all of the required systems set up, you can still follow along.

Detailed steps follow this high-level overview.

Set Up Single Sign-On and Centralized Management

1. Install the Host Access Management and Security Server 12.5 evaluation software.
2. Configure Management and Security Server for Windows Single Sign-On.
3. Install Reflection Desktop version 16.1 evaluation software.
4. Enable Centralized Management, set the Workspace view, and create an installation point.
5. Install the customized companion package to the workstation.

Create, Deploy, and Test a TLS Session

6. Create a Windows-based 3270 session that uses TLS 1.2.
7. Deploy the session to the domain user’s workstation.
8. Test the deployment.

Lock Down the Workstation and Test the User Experience

9. Update (modify) the security settings.
10. Upload and deploy the updated companion.msi.
11. Test the domain user’s updated configuration.

Expected User Experience

After these steps are performed:

- The authorized domain user logs on to the Windows domain and can access the mainframe applications.
- The user’s sessions are connected over a secure TLS protocol.
- The user cannot alter settings because Reflection Desktop v16.1 has been locked down.
- The user experience has not been disrupted.

3 Configuration Steps

For this evaluation, you will use Management and Security Server to secure Reflection Workspace sessions created by Reflection Desktop. Some settings are configured in Management and Security Server, while others are configured in Reflection Workspace.

The steps are organized into three sections:

- Set Up Single Sign-On and Centralized Management
- Create, Deploy, and Test a TLS session
- Lock Down the Workstation and Test the User Experience

Review your progress

After you complete a set of steps, the ***Review your progress*** sections help you determine where you are in the evaluation scenario -- what you accomplished and what comes next.

Set Up Single Sign-On and Centralized Management

For the initial setup, you will install the evaluation software for two products:

Host Access Management and Security Server 12.5 – with an administrator logon
Reflection Desktop version 16.1 – for the administrator and domain user's workstations

Steps in this section:

- Step 1. Install the Host Access Management and Security Server evaluation software.
- Step 2. Configure Management and Security Server for Windows Single Sign-On.
- Step 3. Install Reflection Desktop version 16.1 evaluation software.
- Step 4. Enable Centralized Management and set the Workspace view.
- Step 5. Install the customized companion package to the workstation.

Step 1. Install the Host Access Management and Security Server evaluation software.

In this step, you will obtain and install the Management and Security Server evaluation software. Later in Step 3, you will obtain and install the Reflection Desktop evaluation software.

The **test server**, for this scenario (which could be the administrator workstation) requires:

- Windows 64-bit OS
- Java Virtual Machine 8 or higher, capable of running Java applications
- a web browser using JRE 8 or later
- no previous installation of Management and Security Server or Reflection for the Web

The **domain user's workstation** requires:

- Windows workstation

Note: System requirements for Management and Security Server are detailed in the Installation Guide.

Obtain and install an evaluation copy of Management and Security Server

In this section, you will obtain an evaluation copy of Management and Security Server, and then install it on a test server, which could be the administrator's workstation.

1. Log on as administrator to the Windows machine that you are using for your evaluation.
2. Request the **Host Access Management and Security Server** evaluation software:

   https://www.attachmate.com/products/mss/mss-eval-form.html

   Enter the requested information and click **Submit**. You will receive an email message with download instructions.
3. Open the Product Evaluation email message and click the link to download the software.
4. Find the line for Windows 64-bit and click the filename: `mss-12.5.0.<nnn>-eval-wx64.exe`
5. Accept the **Terms of Use** and download the file. Run the self-extracting executable. Refer to the Installation Guide, as needed.
6. Open the **install_automated** folder and click the `.exe` file to start the installation. Proceed through the installation dialogs, accepting the defaults.

   Note: The password you enter here will be used to access the Administrative Console.
7. On the **Install and Start Services** page, click **Next** to Start server components now.
8. On the **Installation Complete** page, click the link under **Administrative Server** to start Host Access Management and Security Server.

   Acknowledge the Security messages:

   - When you first open the Administrative Server, you may see a security message about verifying the site's certificate. Click **Yes** to proceed.
   - When asked, "Do you want to run this application?," select "**Run**" or "**Grant this session**" (depending on your browser).

   NOTE: After installation, open the **Administrative Server** from the **Start** menu (under Micro Focus Host Access Management and Security Server).

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9. Notice that you are logging in as server administrator.

   Enter the password you entered during installation, and click **Submit**.
10. The **Administrative Console** opens with the Manage Sessions. Any sessions you create and save will display on this page.

About the Administrative Console

The **Administrative Console** provides the tools to create, secure, and manage terminal emulation sessions. The Administrative Console is the interface for the Administrative Server.

The product Help (?) available on each **Administrative Console** page is also available as the Management and Security Server Administrator Guide. Expand any Help page to see the entire guide. Click: 

NOTE: To avoid a session timeout while you are evaluating, in the Administrative Console, open **Configure Settings > General Security**. Find the "**Require new login**" field, and enter a value greater than the 60-minute default.

Step 2. Configure Management and Security Server for Windows Single Sign-On.

Of the many authentication types that Management and Security Server supports, in this evaluation you will use **Windows Active Directory** for authentication (to the Administrative Server) and **LDAP** for authorization.

By using **Single Sign-On** and your existing identity management system, the user experience will not be disrupted because the user is already familiar with their Windows domain logon.

When users authenticate to Management and Security Server's Administrative Server with their Windows domain logon, they will have access to the sessions that the administrator makes available to them.

As the administrator:

1. In the Administrative Console, open **Configure Settings** > **Authentication & Authorization**.
2. Select **Single sign-on through Windows authentication**.

   NOTE: If you do not have access to Active Directory or LDAP, you can leave Authentication set to **None**; however the business objective for this evaluation will not be met.

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3. On the same page, select the Authorization method: **Use LDAP to restrict access to sessions**.
4. **Click +Add** to add a server.
5. Enter your **LDAP Server** information, with **Windows Active Directory** as the Server type.
6. Enter the **Single Sign-on through Windows Authentication Configuration** (NTLM v2).
7. Click **Test Connection**, and then click **OK**.

Step 3. Install Reflection Desktop version 16.1 evaluation software.

Now that Management and Security Server is installed and configured for Single Sign-On, you are ready to install the evaluation copy of Reflection Desktop v16.1.

A. Obtain the Reflection Desktop version 16.1 evaluation software:

1. On the same machine where Management and Security Server is installed, request the Reflection Desktop version 16.1 evaluation: https://www.microfocus.com/products/reflection/desktop/trial/
2. Enter the requested information and click **Try now**. You will receive an email message with download instructions.
3. Open the email message from Micro Focus and click the Download link.
4. Agree to the Terms of Use, and click the file to download now:

   `rdesktop-16.1-eval-w32.exe`
5. Note the download location. Rather than installing the product directly, you will create an administrative installation point.

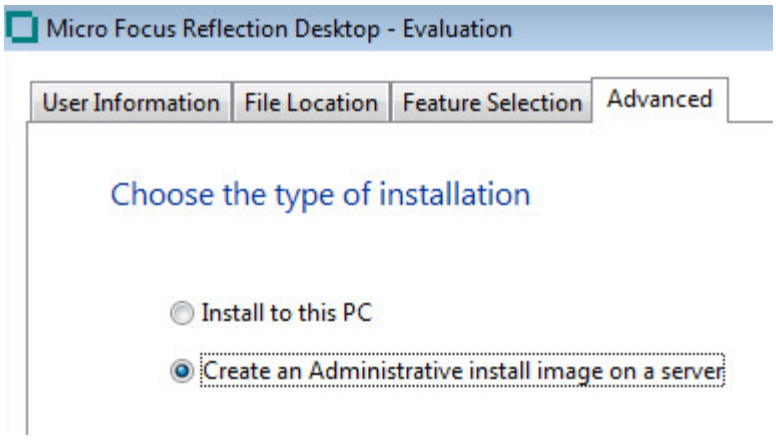
B. Create an Administrative installation image of Reflection Desktop.

Use this procedure to create an **administrative installation point** on a networked file server.

The administrative installation point provides a single location for all of the administrative tools and installation files, including a source image of the application, needed to customize and install Reflection. From there you can customize the deployment for your users.

To create an administrative installation point:

1. Be sure you are logged on to your workstation with **administrator** privileges to install Reflection Desktop.
2. Navigate to the folder where you downloaded Reflection Desktop .
3. From the root directory of the installation files, click `setup.exe` to start the Micro Focus Reflection Desktop Setup Program. Click **Continue** to install Micro Focus Reflection Desktop.
4. Click **Continue** and accept the license.
5. Open the **Advanced** tab and click **Create an Administrative install image on a server**.



6. Click **Continue**. The File Location tab is selected automatically.
7. For this evaluation, use the default location, `C:\Reflection`, for the administrative install image.

NOTE: For testing, you can create the image in any folder on a local hard disk.
For production, the installation image would be created on a network drive accessible to user's workstations, and you need to specify a UNC path for the network share. For example: `\\share_name\administrative_install_point`

8. Click **Install Now**. Click **Close** when the installation is complete.

From this administrative installation point (C:\Reflection), you can enable centralized management and customize the installation's security settings.

Review your progress

Now that Management and Security Server is installed (Steps 1-2) and the Reflection Desktop administrative installation point is created (Step 3), you are ready to enable **Centralized Management** so that access to the mainframe can be secured by Management and Security Server.

Step 4. Enable Centralized Management and set the Workspace view.

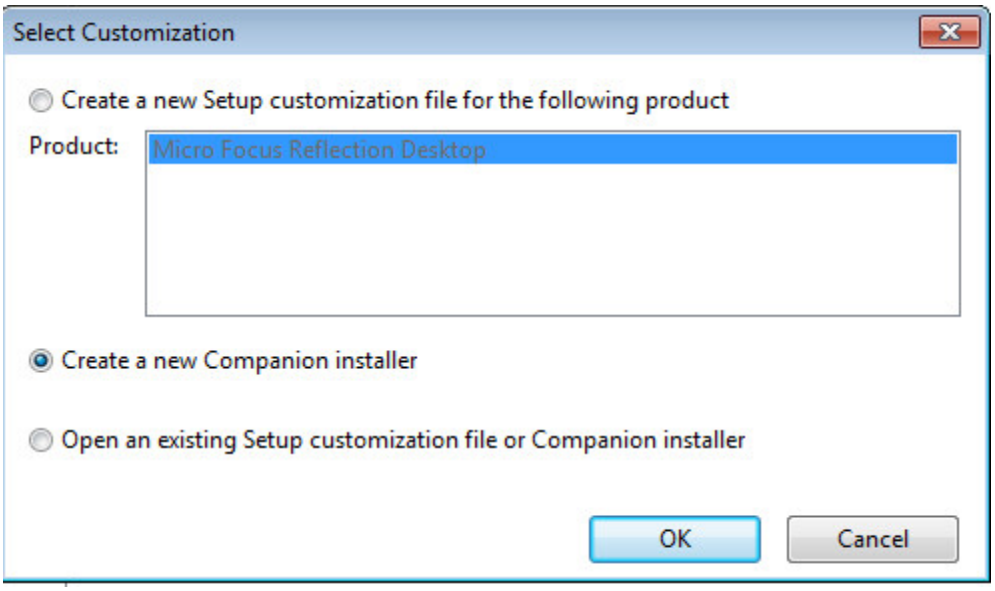
To enable centralized management, the administrator must modify the settings for all users.

These steps configure a companion package that will be installed on user workstations. The package enables centralized management and customizes the Workspace opening view to make it easy for users to find their customized sessions.

First, you need to install Reflection Desktop 16.1 on your administrator workstation so that you can use the **Installation Customization Too**l to configure the settings.

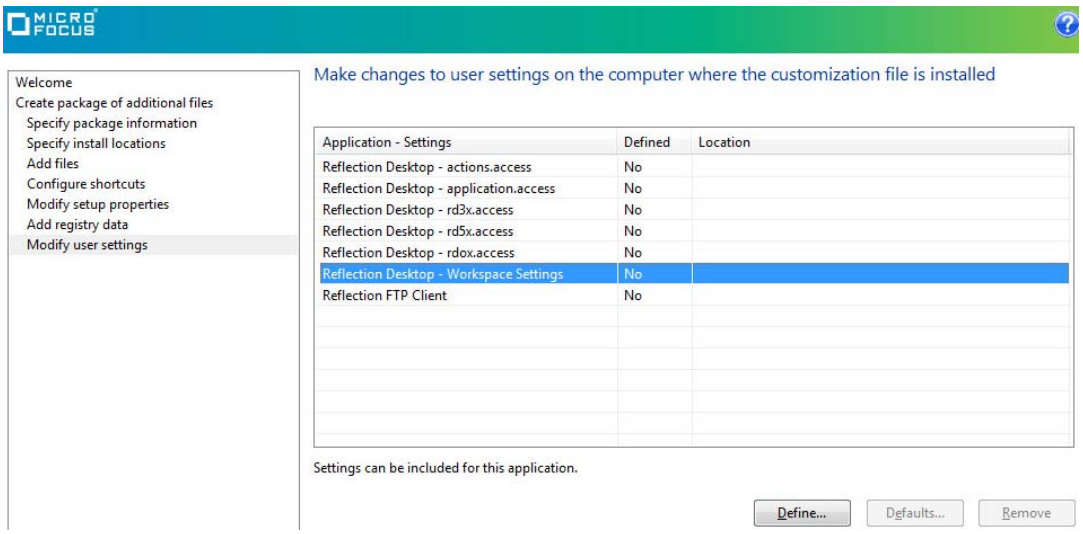
1. **Install Reflection Desktop to your administrator workstation:**
   a. From the administrative install point (`C:\Reflection`, created in Step 3), run `setup.exe`.
   b. Proceed through the installation, accepting all defaults. (**Install to this PC** is selected on the Advanced tab.) Click **Close** when the installation is complete.
2. **Use the Installation Customization Tool:**
   a. In the Windows **Run** line, enter `<path_to_setup>\setup.exe /admin`

      The default is `C:\Reflection\setup.exe /admin`
   b. In the Select Customization dialog, select **Create a new Companion installer**. Click **OK**.



c. From the left nav, click **Modify user settings**.

d. From the list of Application - Settings, select **Reflection Desktop - Workspace Settings** and then click **Define**.



The Reflection Workspace Settings open in a separate window. (There may be a pause.)

3. **Enable Centralized Management:**

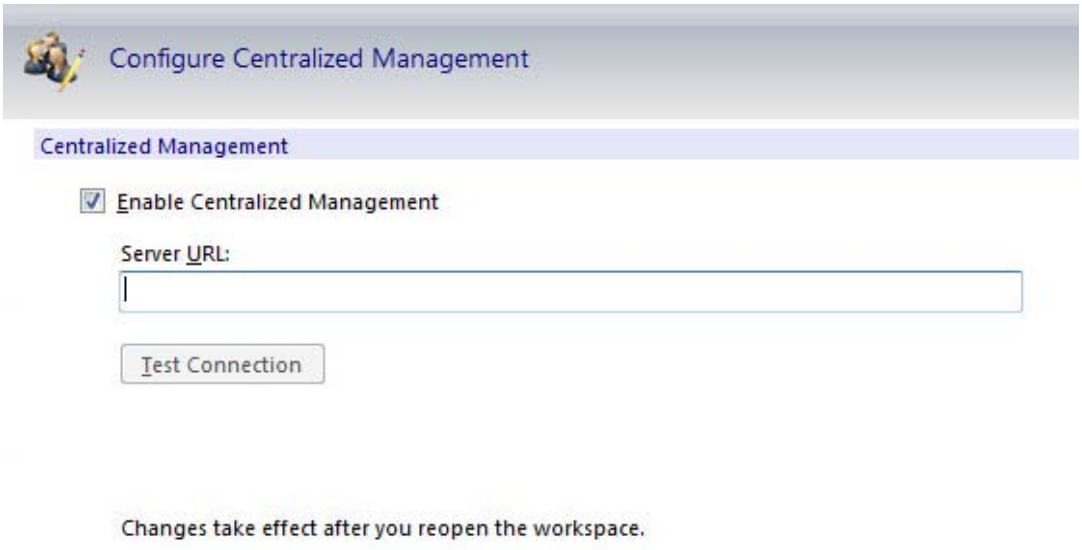
a. Under Workspace Settings, click **Configure Centralized Management**.

b. Click **Enable Centralized Management**.

   For the **Server URL**, enter the URL that displays in the Management and Security Server browser when the administrator logs on. This URL is for the Administrative Server.

   For example, `http://<servername>/mss/`

c. Click **Test Connection** to verify the entry.



d. Do *not* click OK so that **Reflection Workspace Settings** stays open. Changes will be saved when you close the Customization Tool (step 4d).

   If Reflection Workspace closes, re-open it by clicking Define in the Installation Customization Tool. If prompted for credentials, click Cancel.

4. **Set the Workspace opening view:**

   By default Reflection Desktop displays the “Create new Document” dialog box when it first opens. Because you will be managing sessions from Management and Security Server Workspace, users will not need to create their own sessions.

   These steps configure the Workspace to show the File > Open dialog box.

   a. Click File > Settings > **Reflection Workspace Settings**.

   b. Under Workplace Settings, click **Configure Workspace Defaults**.

   c. On the “When starting workspace” drop-down menu, change the setting to **Show Open dialog**.

d. Click **OK**. Reflection Workspace closes.

e. In the Installation Customization Tool, click **File** > **Save**. Save the file with the default name, companion.msi, in the default location, C:\Reflection.

f. Click **File** > **Save** to close the customization tool.

Step 5. Install the customized companion package to the workstation.

Now, switch to the domain user's perspective. For this evaluation, you will install the companion package manually.

In a production scenario, the administrator would likely deploy both the product msi file and the companion.msi in a chained sequence using the **Installation Customization Tool** or through other standard deployment tools.

1. Log off Windows as the administrator, and log on as the domain user.
2. Browse to the administrative install point, and double-click `companion.msi` to install it. You may be prompted for administrative credentials to install the package.

   A progress bar displays as the msi runs and the companion package is installed.

NOTE: In a production scenario, the administrator would likely deploy both the product msi file and the companion.msi in a chained sequence through the standard deployment tools.

For more information about chaining the companion.msi to the product deployment, refer to Reflection Deployment Guide, https://www.attachmate.com/documentation/reflection-desktop-v16.1/deployment-guide/

Review your progress

The initial setup is completed. Now you are ready to create and deploy a TLS session.

Related Topics

- Create, Deploy, and Test a TLS 1.2 Session
- Configuration Steps

Create, Deploy, and Test a TLS 1.2 Session

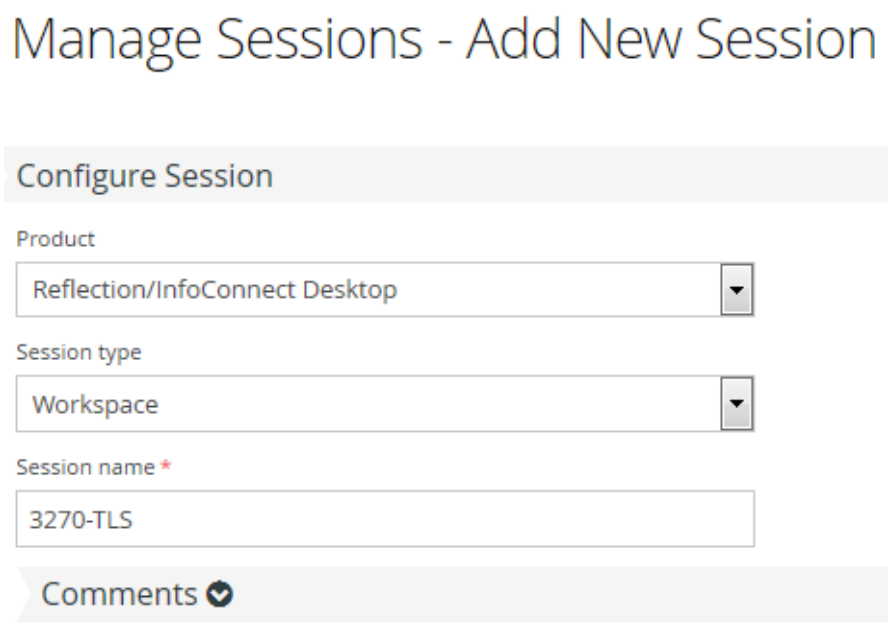
In this section, you will create a TLS 1.2 session and then test the “before” security settings -- before the workstation is locked down.

Steps in this section:

Step 6. Create a Windows-based 3270 session that uses TLS 1.2.

The administrator’s company requires secure access to the mainframe. To meet this requirement, create a session to an IBM 3270 host, using both Management and Security Server and Reflection Desktop.

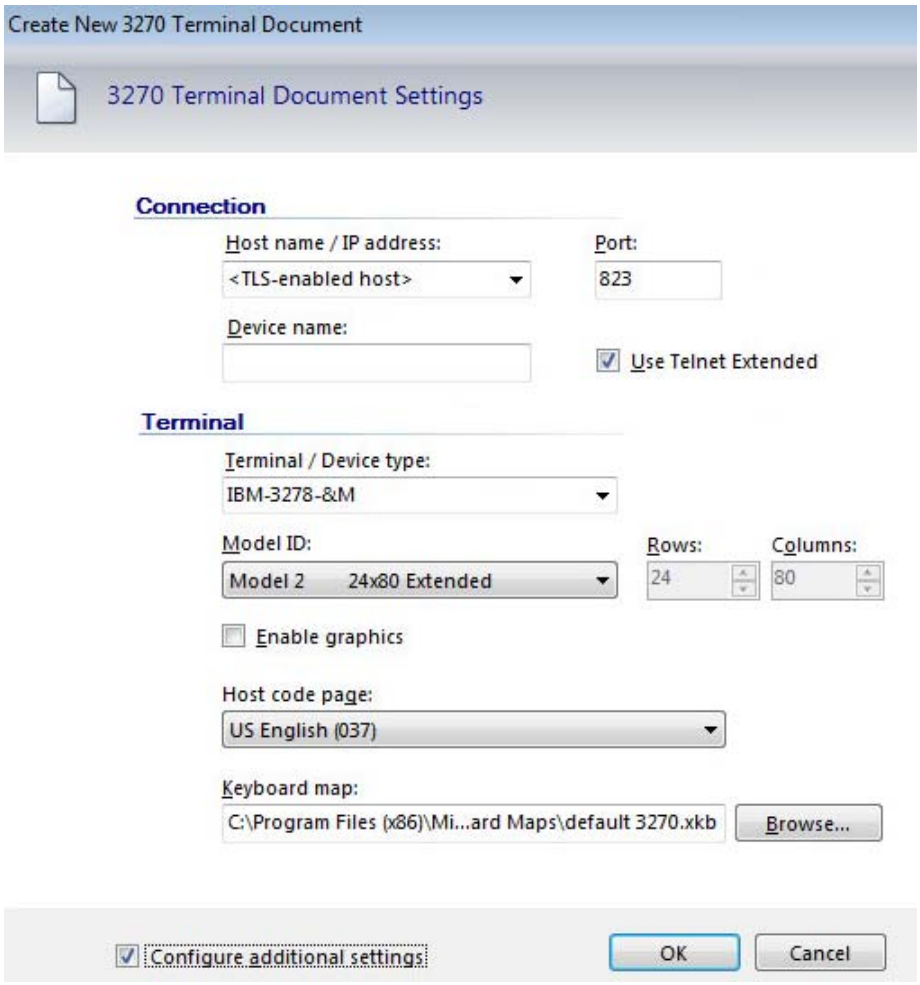
1. Log off Windows as the domain user, and log on as the administrator.
2. Open **Management and Security Server**, and log on as the Management and Security Server administrator.
3. The **Administrative Console** opens to the **Manage Sessions** panel.
4. Click **+Add**.
5. Select **Reflection/InfoConnect Workspace** as the Product, and **Workspace** as the Session type.
6. Enter a **Session name**, such as `3270-TLS`.



7. Add a comment for internal reference, if desired.
8. Accept the default settings and click **Launch**. Reflection Workspace launches in a separate window.

9. In Reflection Workspace, create a new document using the **3270 terminal template**. Click **Create**.
10. In the Create New 3270 Terminal Document dialog, enter the **Host name** of a TLS-enabled host name and the appropriate **port**.

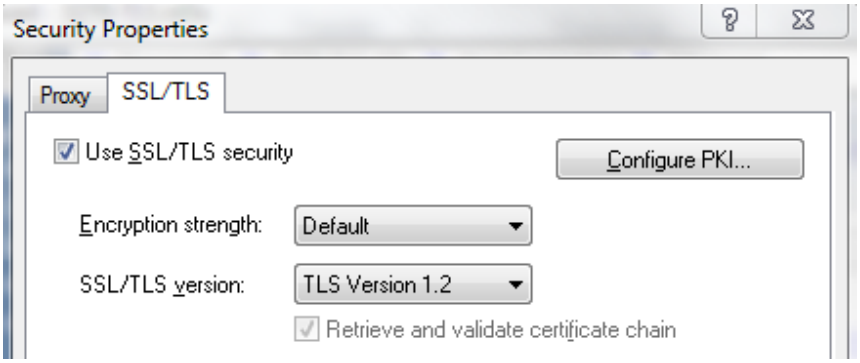
    If you cannot connect with TLS, enter the name of another mainframe host. You will not be able to evaluate the exact behavior on your system, but you can follow along.
11. Check **Configure additional settings** (at the bottom), and click **OK**.



12. In the Settings for 3270 dialog under Host Connection, click **Configure Advanced Connection Settings**. Scroll to and click **Security Settings**. (If prompted, disconnect the session.)

13. On the SSL/TLS tab:
    a. Check **Use SSL/TLS security**, and keep the Default Encryption strength.

b. In the SSL/TLS version drop-down menu, select **TLS Version 1.2**.



c. Click **OK** twice. The session is now configured.

As mentioned earlier, if you cannot connect with TLS, you will not be able to evaluate the exact behavior on your system, but you can follow along.

14. In Reflection Workspace, click **File** > **Save**. Click **OK** to send the settings to the Administrative Server.

    For this evaluation, you do not need to send it as a compound session.

    (When the session is sent as a compound file, all of the custom keyboard maps and other settings that apply to that session are saved in the session file. Compound files simplify the deployment process because you do not have to deploy these settings in separate files.)

15. **Close** Reflection Workspace. You are returned to the Administrative Console in Management and Security Server.

Review your progress

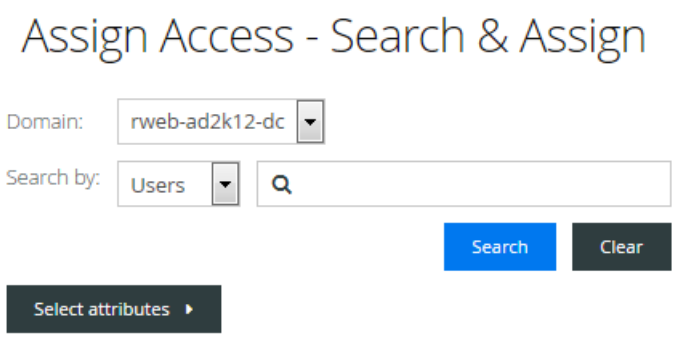
The security settings are configured (Steps 4, 5), and the session to the mainframe is created (Step 6). Now you can “push” the settings to the domain user.

Step 7. Deploy the session to the domain user’s workstation.

In Management and Security Server, use **Assign Access** to authorize the domain user to access the mainframe session.

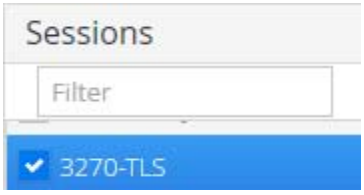
1. In the Administrative Console, open **Assign Access**. Or, if the Session Saved page is still open, click **Assign Access**.
2. For this evaluation, deploy the `3270-TLS` session to the domain user. Because you are using LDAP for authorization, you can **Search** for users and groups.

   To find the user, enter a user name, a group or folder name, along with an asterisk (*) wildcard, or a combination of * and letters. Click **Search**.



Note: If you are *not* using LDAP, the only option is to deploy the session to all (or no) users.

3. On the same **Search & Assign** panel, verify that the correct user name is displayed
4. Then, in the **Session** list, check your session, `3270-TLS`, to grant access to that domain user.



5. Click **Apply**.

   Now, when that domain user opens Reflection Workspace, they will see the 3270-TLS session.
6. Log off as administrator.

Review your progress

The companion package is installed on the user workstation, with settings to enable Centralized Management in the Reflection Workstation and to display the Open dialog box when the Workstation first opens.

The completion of Steps 1–7 meet the company requirements to ensure that:

- Only authorized users are allowed access to the mainframe applications.
- All sessions are connected over a secure protocol.

Step 8. Test the deployment.

Test the initial deployment and make note of what the user can and cannot change.

1. Log on as the Windows domain user.
2. Click **Start** > **All Programs** > **Micro Focus Reflection** > **Reflection Workspace**.

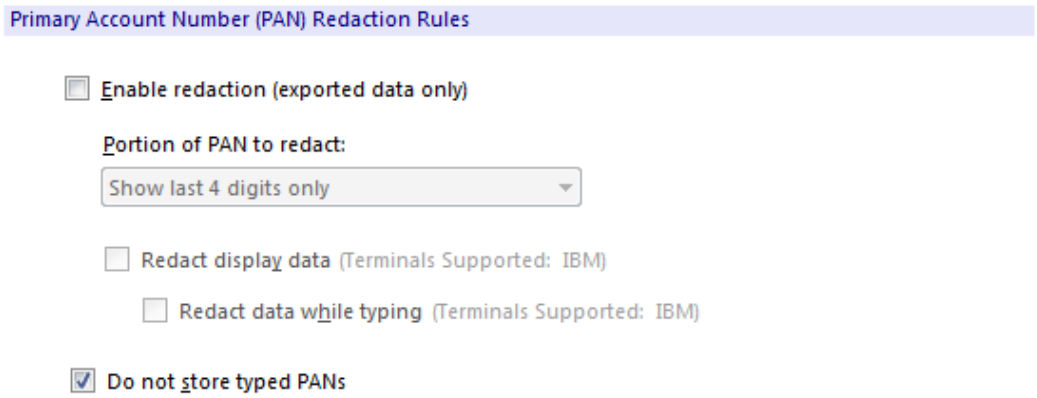
   When the domain user launches Reflection Workspace, any sessions made available to that user using Management and Security Server are downloaded to the users documents folder.

   Notice that Reflection Workspace opens and presents the **Open** dialog (that you configured earlier).
3. Find and double-click the `3270-TLS` session you created (in Step 6).
4. Note the default security settings for **Primary Account Number (PAN) Redaction Rules**:
   a. Open **Reflection Workspace Settings** (File > Settings > Reflection Workspace Settings).

b. Under Trust Center, click **Set Up Information Privacy**, and scroll to **Primary Account Number (PAN) Redaction Rules**.

NOTE: The first three check boxes under Primary Account Number (PAN) Redaction Rules are *not* checked for this user. (These settings will be modified in a future step.)

Click **OK**.



5. View the **TLS Connection settings** (from Step 6):
   a. Click File > Settings > Document Settings, and under Host Connection, click **Configure Advanced Connection Settings**.
   b. Scroll to and click **Security Settings**.

NOTE: Although the **Use SSL/TLS security** setting is checked, the user could change the setting.

Review your progress

When you tested the initial deployment (Step 8), you observed the “before” settings – before access to the company’s mainframe applications is locked down.

Now the administrator needs to restrict the end user’s ability to change the security settings and thereby lock down the workstation.

Related Topics

- Lock Down the Workstation and Test the User Experience
- Configuration Steps

Lock Down the Workstation and Test the User Experience

In this section, you will lock down the user’s workstation by restricting the ability to change settings, and then deploying the updated package of security settings.

Steps in this section:

Step 9. Update (modify) the security settings.

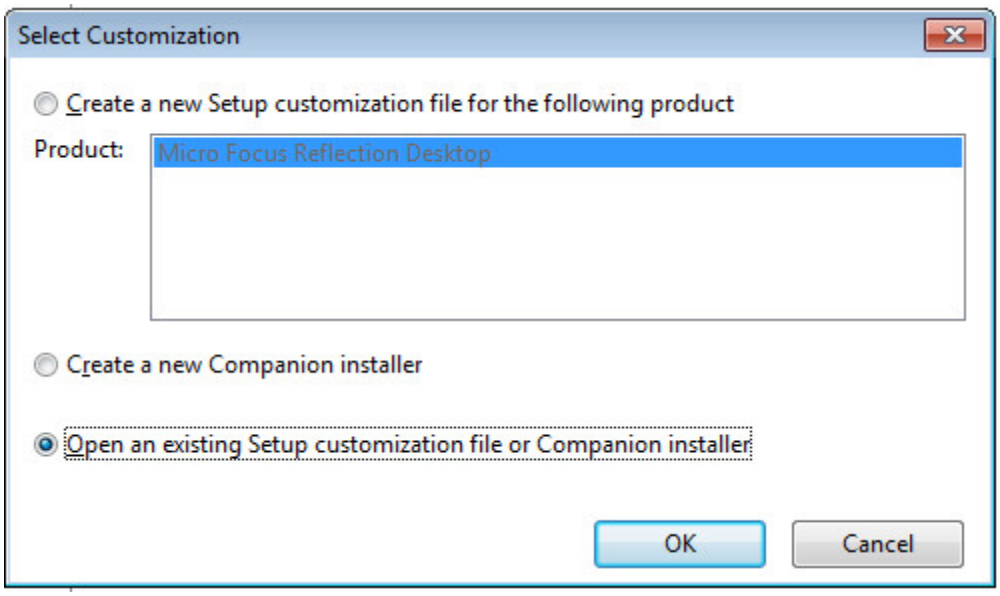
The administrator can modify the existing companion.msi and "push" those restrictions to lock down the user's workstation.

NOTE: You will use the Installation Customization Tool for all of Step 9.

A. Open the Installation Customization Tool, as before.

1. Log off Windows as the user; log on as the administrator.
2. Open the **Installation Customization Tool**, as before:

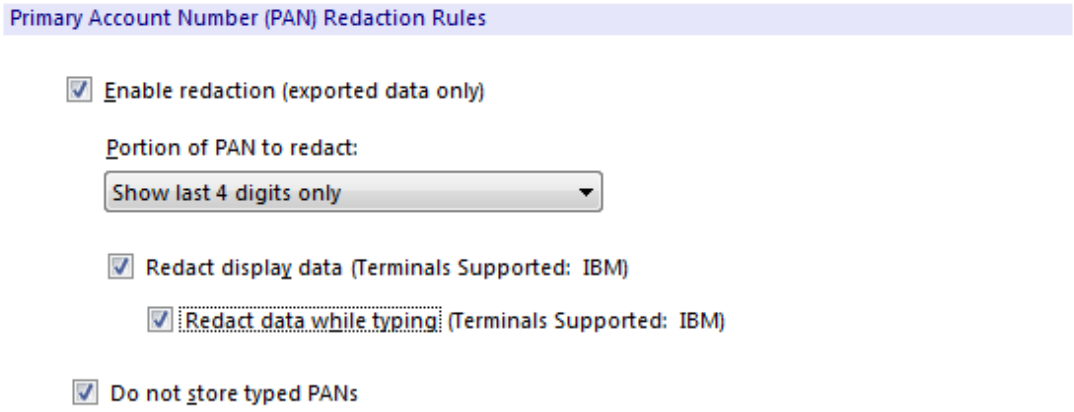
   In the Windows **Run** line, enter `C:\Reflection\setup.exe /admin`
3. In the Select Customization dialog, select **Open an existing Setup customization file or Companion installer**. Click **OK**.



4. Select the `companion` msi that you previously customized.

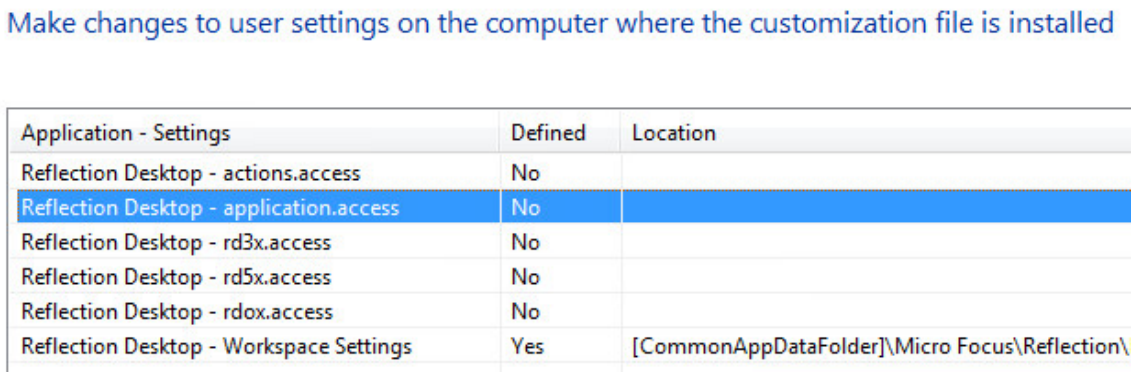
B. Restrict the user from modifying the PAN Redaction Rules.

1. From the left nav, click **Modify user settings**.
2. From the list of Application – Settings, select **Workspace Settings**, and click **Define**.
3. In Reflection Workspace Settings under Trust Center, select **Set Up Information Privacy**.
4. Scroll to **Primary Account Number (PAN) Redaction Rules**, and check the first three boxes.



Click **OK**.

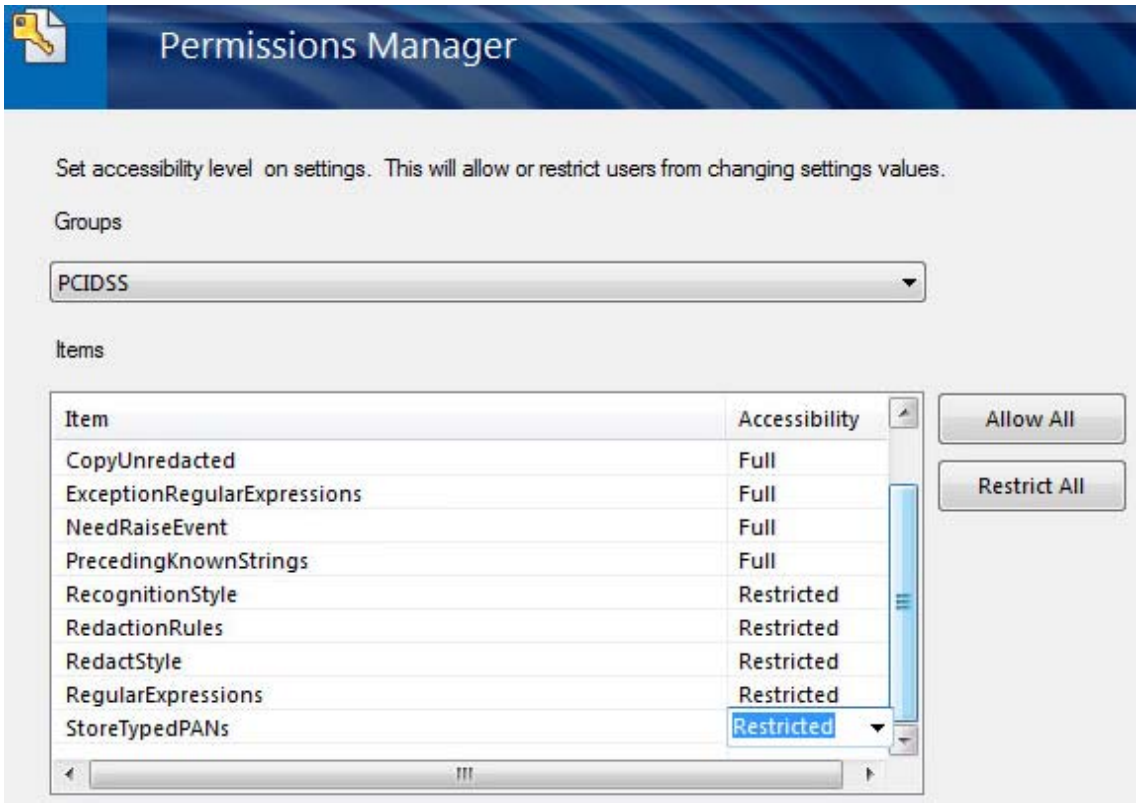
5. From the list of Application - Settings, select **Reflection Desktop – application.access**, and then click **Define**.



The Reflection Desktop **Permissions Manager** opens in a separate window. (There may be a pause.)

6. In the **Groups** drop-down menu, select **PCIDSS**.
7. Select these five items one at a time, and change the setting to **Restricted** for each. The "Restricted" setting requires an administrator logon to change the setting.

RecognitionStyle
RedactionRules
RedactStyle
RegularExpressions
StoreTypedPANs

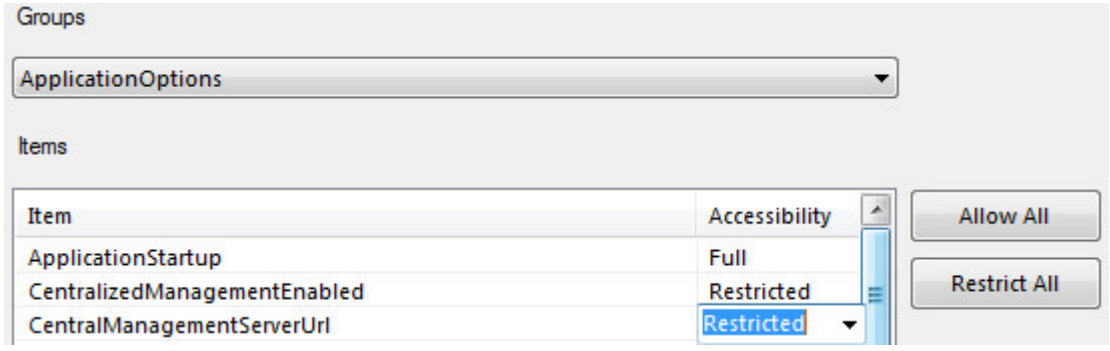


8. Click **Next**; then click **Finish**. Continue in the Installation Customization Tool

C. Restrict the user from modifying Centralized Management capabilities.

If Centralized Management is not enabled, the user's workstation will no longer be managed by Management and Security Server, which defeats the administrator's goal.

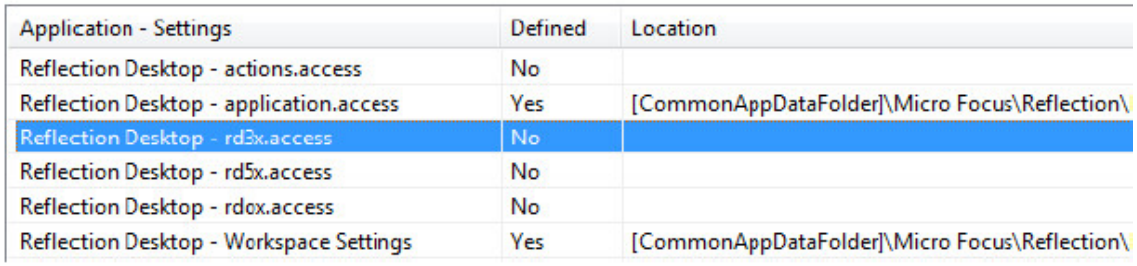
1. Select **Reflection Desktop – application.access** again, and click **Define**.
2. In the **Permissions Manager Groups** drop-down menu, select **ApplicationOptions**.
3. Select **CentralizedManagementEnabled** and change the setting to **Restricted**.
4. Select **CentralizedManagementServerUrl**, and change the setting to **Restricted**.



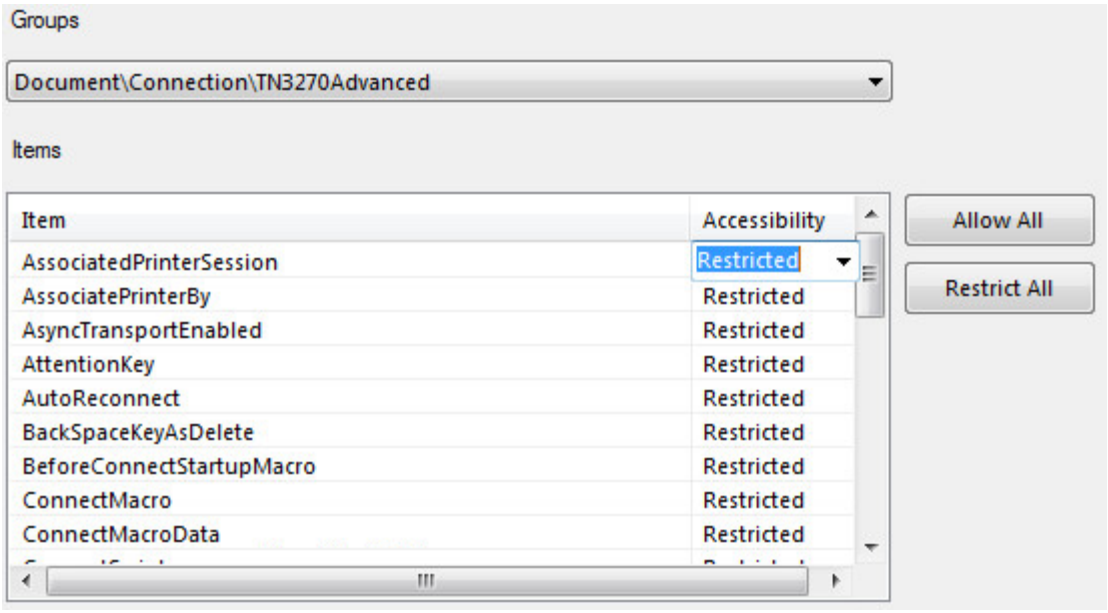
5. Click **Next**; then click **Finish**. Continue in the Installation Customization Tool.

D. Restrict the user's ability to change the TLS settings.

1. Select **Reflection Desktop-rd3x.access**, and click **Define**.



2. In the **Groups** drop-down menu, select **Document\Connection\TN3270Advanced**.



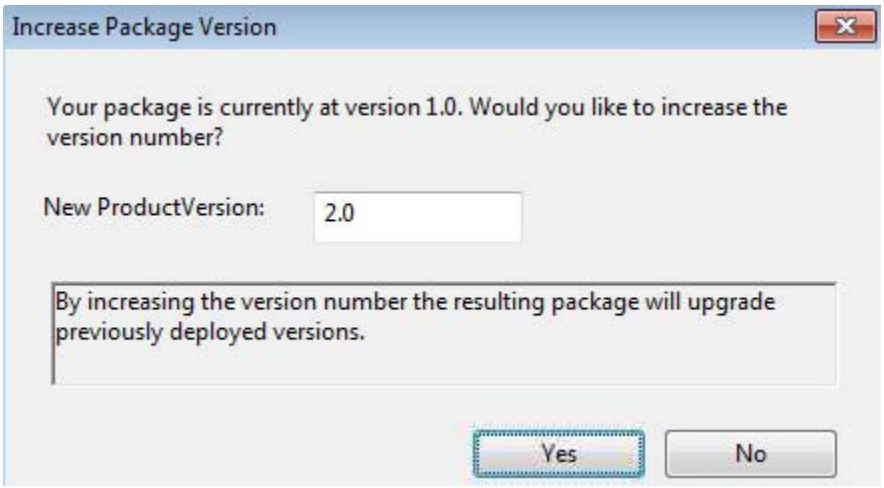
3. On the right, click **Restrict All**. Click **Next**; then click **Finish**.

E. Save the companion file.

1. Click **File** > **Save**. Click **Yes** to increase the version number.

   The new version number for the same file name will be recognized as a revision, and the resulting package will upgrade the previously deployed file.

2. **Save** the companion file using the same name. Click **Yes** to replace it and increase the version number.



3. **Exit** the **Installation Customization Tool**.

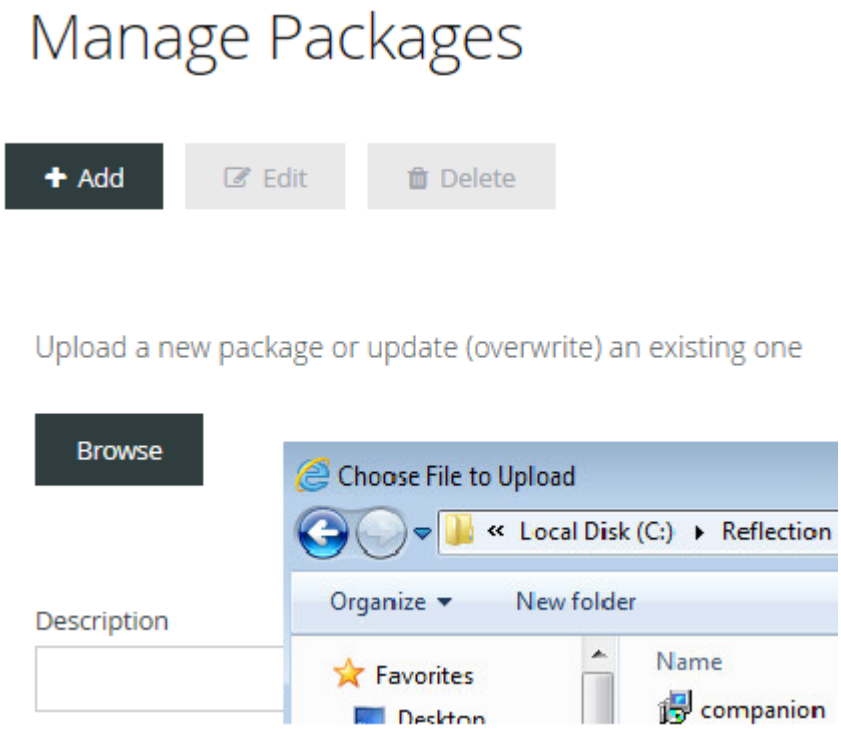
Step 10. Upload and deploy the updated companion.msi.

You can use **Manage Packages** in Management and Security Server to upload and then deploy the updated `companion.msi` with restricted settings to the end user workstation.

A. Upload the updated companion.msi file.

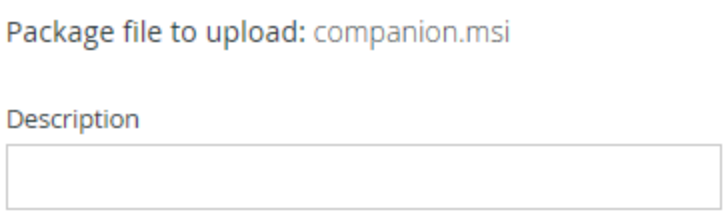
1. In Management and Security Server, open the Administrative Console to **Manage Packages**.
2. Click **+Add** and then **Browse** to the `companion.msi` file that you created and updated on the administrative installation point.

   The default location is `C:\Reflection\`.



3. Click the `companion.msi` file and note the file name next to **Package file to upload**.

   Enter a **Description** and click **Save** to upload the package to the Administrative Server. Verify the package is included in the list.



   Next, you will return to **Assign Access** to assign the package (with your updated companion.msi) to your domain user.

B. Deploy the updated companion.msi to the domain user.

Earlier, you used **Assign Access** to make a session available to the domain user. This time, you will use Assign Access to "push" the modified companion package to the domain user.

1. In the Administrative Console, open **Assign Access**.
2. As before, **Search** the LDAP directory for the domain user.
3. On the right select **Packages** (instead of **Sessions)**.
4. Verify that the correct user name is highlighted, and click check `companion.msi`.

5. Click **Apply** to deploy the package.

   Now, when the domain user launches Reflection Workspace or a session, the package is downloaded, and the changes in the `companion.msi` are applied. The contents of the package are installed to the location specified in the .msi package.

   Later, if you update the package (with the same file name), the newer one will be downloaded.

Review your progress

After updating the `companion.msi` with restricted security settings (Step 9) and deploying the msi package to the domain user (Step 10), you can now observe the "after" effect on the user's restrictions.

Step 11. Test the domain user's updated configuration.

1. Log off as the Windows administrator; log on as the domain user.
2. Launch the 3270-TLS session either in Recent Documents or by launching the product and the session.
3. NOTE: The settings for **PAN Redaction Rules** (Step 8: 4) are checked and cannot be changed without entering the administrator credentials.
4. NOTE: The **TLS Connection** settings (Step 8: 5) are restricted and cannot be changed by the domain user without entering administrator credentials.

Review your progress

Your test in Step 11 confirms that the company requirements to lock down the desktop are met:

- Applications are hardened (locked down) to ensure company security mandates are enforced.
- PCI compliance policies are enforced (with the PAN Redaction Rules).
- Implementing centralized management and security does not disrupt the end-user experience.

Related Topics

- The Results

The Results

This evaluation scenario demonstrates how Management and Security Server can be used to meet a company's security requirements when managing a domain user's access to the mainframe.

Specifically, the administrator is able to

- integrate mainframe authorization with Windows Single Sign-On -- the existing Identity Access Management (IAM).
- upgrade to TLS 1.2 -- without disrupting the business processes.
- reinforce security -- without jeopardizing usability.

The user

- is able to log on as usual, access a secure mainframe session, and begin working.
- is *not* able to alter settings that were locked down.

In production, a similar approach can be used to secure and manage thousands of workstations.

Related Topics

- After You Finish the Evaluation Scenario

4 After You Finish the Evaluation Scenario

As you continue to evaluate Management and Security Server, you can explore more features -- including the add-on products.

Try Optional Features

Consider evaluating these optional features, which are available in the evaluation download.

Note: In production, each add-on product requires a separate license along with Host Access Management and Security Server.

- Metering
- Security Proxy Add-On
- Terminal ID Management Add-On

Refer to the Technical Resources for assistance and overviews.

Moving to Production

When you transition from the evaluation software to a licensed copy, be sure to download the most recent update of Host Access Management and Security Server.

See the Release Notes for more information.

Contact Us

If you have any questions about Management and Security Server, please contact us.