Reflection ZFE provides terminal emulation for 3270, 5250, VT, and UTS host types with nothing more than an HTML5-capable browser. It simplifies management, provides centralized patching and security rollouts, and makes administration on a desk-top level a thing of the past.

Reflection ZFE consists of a session server, management server (Micro Focus Host Access Management and Security Server), and the web client. Session allocation, and authorization and authentication are handled through the Management and Security Server (MSS) Administrative Console. The session server provides the engine that serves the sessions to the multiple users that need to connect to your host data. The web client is a terminal emulator that is accessed through a browser. Once assigned a session, as long as your user has browser access, they have access to the host.

See Technical Note 2837 for system requirements and install notes.
Walking Through Reflection ZFE

You are an administrator. You have installed Reflection ZFE and pointed it to the appropriate Management and Security Server (MSS), now you want to start assigning, authenticating, and providing host access for your users.

In this walk through you will give a user access to a browser-based terminal emulation session using Reflection ZFE and the Management and Security Server.

Before you start

Verify that Reflection ZFE and MSS are installed, including the Reflection ZFE activation file if needed. Information on activation files is available in the Micro Focus Host Access Management and Security Server Installation Guide. To connect to a UTS host, a separate activation file is needed.

The steps

As an administrator, follow these steps to create and configure Reflection ZFE sessions for your users.

1. Open the Administrative Console.
2. Create and launch a new session. This opens a new browser window and the web client Connection panel displays.
3. Configure settings, including key and color mapping, enabling hotspots and macros, and other connection and user preference options.
   End users, after you set the necessary user preference rules, can customize their sessions; recording their own macros, setting host color options, and mapping keys.
4. Assign users to sessions.

Open the Administrative Console

1. From the Windows Start menu, under Micro Focus Reflection ZFE, click Administrative Console or open the URL for the administrator login page in your web browser. The URL uses this format: https://myserver.mycompany.com:443/adminconsole.
2. If you connect using HTTPS on port 7444 and your server has a self-signed certificate, your browser will warn you about the certificate you created. This is expected behavior; you can accept the self-signed certificate or choose to proceed and the administrator login page will open. After you purchase a CA-signed certificate or import the self-signed certificate into your certificate store, these warnings will stop.

3. Log on as an administrator by entering the password that you specified during the Management and Security Server (MSS) installation. The default user name is *admin*.

**Create a new session**

When you add a session it is available in the Session Manager. The Session Manager is where you add sessions, edit those sessions, and copy and delete them as necessary.

Click 💼 to personalize the Session Manager table. You can choose the columns you want to see and hide those you don’t.

To add additional sessions:

1. In the Session Manager, click **Add** to create a new session

![Session Manager - Add New Session](image)

2. If it is not already selected, select Reflection ZFE as the session type, enter a session name and click **Launch** to open a new browser window and start configuring the session for the server listed at the ZFE server address.
Configure settings and connect

You configure different settings and options for the session, as well as connect to the host, in the web client browser window.

1. From the left panel, click **Settings**. On the **Connection** panel, for the session you are creating, choose the host type, and enter the name and port number of the host.

![Connection panel](Image)

2. Connection settings vary depending on the type of host connection. For detailed descriptions of the setting options for each host type, see the web client online help. Setting options include mapping keystrokes to selected keys, mapping host colors to match your preferences, and recording session macros.

3. To map keys to selected keys, open **Key Mappings**.

4. Press the key or key combination you want to use to trigger the selected action.

![Key Mappings table](Image)
5. From the Action drop down list select the action you want mapped to the selected keystroke. Click ✔️ to complete the key mapping. You can continue adding and mapping keys.

6. Click Save to complete mapping keys.

7. From the left navigation panel, you can map host colors and enable hotspots by opening the Display panel. Color choices are specific to each session.

8. Under Macros set various macro options. See Record macros for instructions on how to record, create, and edit macros.

9. To set IND$File file transfer settings before you connect to the host, open File Transfer.

10. Open User Preference Rules to extend configuration options to your end users.

11. Click Exit to return to the Administrative Console browser window and assign users to the session you have created.

Record macros

Macros are made available to users in two ways; created by an administrator or recorded by users for their own private use. All advanced macros are associated with a session and they all accomplish the same goal, automating host interaction. The only difference between the two flavors is simply who can access them and who manages their creation and availability.

Administrators record macros when they create the session. They are specific to a session and are available to all users who have access to the session from the Macro icon on the toolbar.

Recording a macro

1. After connecting to the session, click the Macro icon on the toolbar and then click Record Macro.

2. Start recording the macro. The red dot on the toolbar pulses to indicate that you are recording.

3. Click ✗ to stop recording and, when prompted, name the macro.

4. The new macro is available in the macro list. You can run the macro from here or open the Macro Editor to edit the macro.

Editing the macro

Reflection ZFE records and saves advanced macros as JavaScript, making it easy to edit and enhance your recorded macros. You can record and edit macros to playback later, or you can write macros from scratch to perform complex tasks that the recorder cannot capture.

To open the Macro Editor, select the macro you want to edit, expand the field, and click Edit.
There is a complete Macro API reference and other detailed information, including how to debug your macros, available in the online help system.

**Assign users to sessions**

Now that sessions are created, you need to grant users access to those sessions. Using the URL you provide, each user has access to the sessions you assign to him. A user can be assigned to multiple sessions.

To assign users to sessions you use the Access Control Setup and Access Mapper in the Administrative Console.

1. Access Control Setup uses authentication and authorization to validate the identity of a user and the method you want to use to map sessions to individual users or groups of users. From the left navigation panel, select Access Control Setup.
2. Choose an authentication method. Your options change depending on your selection.
3. Click Help for descriptions of the various options. Currently LDAP, SiteMinder, and None options are supported.

4. Click Apply to complete the process.

5. Open the Access Mapper to map sessions to individual users or groups of users.

6. Map the sessions to the users you want to access the sessions and click Apply. You can also choose to allow users to inherit access to sessions and to the Administrative Console.

Next steps

Your users have been assigned to sessions you created. You have authentication and authorization in place, now it’s time to make your legacy data available through the web browser. The Reflection ZFE Web client provides your users with just that.

NOTE: You can create a direct link to a specific Reflection ZFE session using the following format:

<zfe-session-server:port>/zfe/?name=<session-name>.

Users can use this link to directly launch a Reflection ZFE web session. If a user uses the link and the specified session already exists, a new session is not launched.
Navigating the Web Client

You now have a list of created sessions, assigned to specific users, and they can now log in using the URL you supply. The Reflection ZFE web client is easy to use and simple to learn.

Accessing the Web client

As an administrator you can share the primary Reflection ZFE login URL (https://myserver.mycompany.com:7443/zfe.) with your users. They can use this address to access the Reflection ZFE sessions assigned to them.

When your users open the web client they see the list of sessions assigned to them. They do not have access to sessions assigned to others.

To connect to a session, they click the selected session and the session connects to the configured host. Each session is identified by name, configured in the Administrative Console, and by host type.

Working within the Web client

Users can navigate between sessions, close sessions and open duplicate sessions from within the web client. If you have recorded macros for a session, they are available to your users from the macro icon on the toolbar. If you extend permission, using User Preference Rules, they can also record their own macros for their sessions, as well as change other display settings and key mappings.

Using the toolbar and session tabs

In this example the user has two open sessions available; each session is identifiable by name. A grey tab indicates a session that is not currently visible. Users can easily switch between available sessions.
This user has permission to record macros for their session and edit certain display settings. Quick Keys are available to all users.

Once you have configured sessions and assigned users to those sessions, you know that your users will have host access, through a platform-independent web browser without the need for any desktop installations. The Reflection ZFE web client provides an easy-to-navigate workspace and access to all your important host applications.