ICPSR VDE User Guide

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Technical Support
This guide shows you how to connect to the ICPSR VDE and how to access your project data.

For assistance with the ICPSR VDE please contact ICPSR-help@umich.edu.

The VMware login and installation windows that you encounter on your personal computer may differ slightly from the screenshots shown in this Guide due to variations in the VMware client version that you install, your operating system, your networking setup, and the web browser that you use.

Obtain a VDE ID and Activate Duo Two-Factor Account
When your research project has been approved and all required agreements have been signed and processed the VDE support group will provide each project collaborator with a unique username, a temporary password, and instructions for setting up a Duo Two-Factor account. With these credentials you can access the ICPSR VDE.

Passwords
Upon receipt of your password please visit https://password.it.umich.edu to change your temporary password. This must be done before you use your account credentials to access the VDE.

Your password must use nine or more characters, with characters in at least three of the following categories:

- lowercase letters
- uppercase letters
- numerals
- punctuation

While on the password change website, please also configure security questions and an email address that can be used to automatically reset your password if needed.

If you do not set up your security questions and email address, send your request for a password reset to ICPSR-help@umich.edu.

Two-factor Authentication
When you attempt to log on to the VDE you will be required to provide two credentials: (1) your U-M uniqname (i.e., username) and U-M password and (2) approval of a Duo notification or a code generated by a Duo hardware token.
### Hardware Token vs. Software MToken

<table>
<thead>
<tr>
<th>Hardware Token</th>
<th>Software MToken</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Hardware token can be purchased from ICPSR</td>
<td>Once installed on a mobile device and configured, the Duo app will allow for approvals, or will display codes</td>
</tr>
</tbody>
</table>

#### Duo Two-Factor Account

Logging in to the VDE requires a password and a second-factor device from Duo. Duo provides a smartphone app for easy access. The smartphone app is available for iOS, Android, Blackberry, and Windows phones. When you attempt to logon to the VDE a notification will be sent to your smartphone Duo app. You will be prompted to approve or deny the logon attempt. If you approve your logon will proceed. If you are in a location without phone or internet service, you can use a code generated by the smartphone app to complete your logon to the VDE. If you do not have access to a smartphone, your Duo account can be configured to send you an access code via SMS message or to call a landline for approval. A small hardware token can be purchased from ICPSR if you are unable to use any of these methods. For more information about Duo Security, please visit [https://www.duo.com](https://www.duo.com).

Your Duo Two-Factor Account can be configured on the password management page at [https://password.it.umich.edu](https://password.it.umich.edu). Follow the steps illustrated there.
From the U-M password change page, select the ‘Two-Factor Management’ tab.

Click ‘Start Setup’

Select the type of device you are enrolling and click ‘Continue’
If prompted, enter your device’s phone number, confirm the number is correct and click ‘Continue’

If prompted select your device’s Operating System and click ‘Continue’

Follow the directions to install the Duo Mobile app on your device. Once installed, click ‘I have Duo Mobile Installed’
Follow the instructions to use your device’s camera to activate Duo Mobile.

Once activated a checkbox will automatically appear on the screen. Click ‘Continue’

Check the box to automatically send a push notification and click ‘Save’

Your Duo app is now configured to provide approvals.

Click the ‘X’ to exit.
Purchasing a Hardware Token from ICPSR

If you do not have access to a smartphone and do not want to use text messaging or landline phone calls for access, you may purchase a hardware token from ICPSR for $35. To purchase a token, please contact Ren Lee at (734) 763-9023 between 8:00 a.m. and 4:00 p.m. EST.

Lost Hardware Tokens

You must contact ICPSR-help@umich.edu if a hardware token is lost or stolen.

Launch VMWare Horizon Client

To connect to the VDE launch the VMWare Horizon Client.¹

<table>
<thead>
<tr>
<th>Windows</th>
<th>Mac</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the <strong>Start</strong> menu select</td>
<td>Click on the <em>VMware Horizon Client</em> icon in your <strong>Applications</strong> folder</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><em>All Programs</em> &gt;&gt; <em>VMware</em> &gt;&gt; <em>VMware Horizon Client</em></td>
<td></td>
</tr>
</tbody>
</table>

¹ For installation guidance consult [https://www.icpsr.umich.edu/files/VDE/VMWare_Download_Instructions.pdf](https://www.icpsr.umich.edu/files/VDE/VMWare_Download_Instructions.pdf).
Log On to the VDE

Once the VMware client launches connect to the virtual desktop server.

Double-click the icon labelled 2fa.midesktop.it.umich.edu

A dialog will prompt you for your username and a passcode.

The passcode is your U-M PASSWORD

Click the Logon button to proceed.

Next, you will be prompted for Duo Two-Factor approval.

Press ‘1’ and click ‘Login’ to receive a push notification to your smartphone for approval.

Press ‘2’ and click ‘Login’ to receive an automated phone call for approval.

Press ‘3’ and click ‘Login’ to receive a passcode via SMS. Then Enter the token code received.

Or enter the token code displayed on your smartphone app or hardware token.
If you selected a push notification, open the push notification received on your smartphone.

Once the Duo app is open, click the green ‘Approve’ button. You will then automatically be logged in.

If you receive a push notification when you did not attempt to login, press the red ‘Deny’ button to deny access.
If you cannot receive a push notification, open the Duo Mobile app, and press the green key icon. A 6-digit passcode will appear. Enter that passcode on the VDE Duo-factor login screen. Note that the passcode changes every 60 seconds. You must enter the current passcode to be approved.

Upon logon double-click the icon to open a VDE session.
Set the VDE Display Size

Those who use the Windows VMWare client can configure the VDE session to display in full screen or as a window. The display options are:

<table>
<thead>
<tr>
<th>Display Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Monitors</td>
<td>Full screen display across all connected monitors. This is the default setting.</td>
</tr>
<tr>
<td>Fullscreen</td>
<td>Full screen display on primary monitor</td>
</tr>
<tr>
<td>Window - Large</td>
<td>Large window display</td>
</tr>
<tr>
<td>Window - Small</td>
<td>Small window display</td>
</tr>
<tr>
<td>Custom</td>
<td>Custom window size</td>
</tr>
</tbody>
</table>

To change the display configuration, follow these steps. You need do this only once. The setting is persistent.

1. Log on to the VDE server
2. Right-click your project icon
3. Select Display from the pop-up menu
4. Select a display option from the fly-out menu

Note: These configuration options are not available to those who use the Mac client.
Start a VDE Instance

Double-click the icon to start a VDE session.

While the connection is established you will see a notification that your virtual desktop is being prepared.
After the connection is established you will see a Login Notice. Review the notice and if you accept the terms of use click the OK button to continue.

You will see a spinning circle as the new virtual machine instance is created. At this stage your user profile, files, and software are being prepared for your use.
The Windows Start menu for your VDE is independent of your local desktop. The applications listed on the VDE Start menu will execute in the virtual environment only.

The VDE Start menu includes an Internet folder that contains links to several SSH clients. Those clients can connect to approved ICPSR servers.

All access between the Internet and VDE is blocked.
Log Off from the VDE
Logging off disconnects you from the VDE instance, stops all open programs in the VDE, and logs you off. Unsaved data are lost.

To Log off, open the Start menu and click the Log off button.

Do not simply close the VDE session window. Doing so will not log you off.

If any programs in the VDE are open when you select Log off, a warning message lists the programs that are open and gives you the opportunity to either cancel logging off or to continue to log off and force the closure of the open programs.
Disconnect from the VDE

If you need to close your session, but you want to have a program continue to run in the background, you can disconnect from the VDE.

To disconnect, open the **Start** menu and click the arrow button to the right of the **Log off** button. Select **Disconnect** from the fly-out menu.

Disconnecting closes the VDE desktop but leaves any open programs in their current state. When you reconnect to the desktop, programs resume in the same state in which you left them.

Log off if you do not need a program to continue to run. If you disconnect from a VDE instance that you no longer need you tie up VDE resources. Those resources are unavailable for use by other users or project team members.
VDE Security

To prevent access to the VDE by unauthorized persons do not leave your computer unattended while you are logged in to the VDE. If you need to leave your computer either disconnect or log off from the VDE.
Project Folders

Master Project Folder
When you log on to the VDE your project’s Master Project folder will be mapped to the [H:] drive. By default the master project folder contains two additional subfolders. You cannot change the access permissions on these two folders.

<table>
<thead>
<tr>
<th>Folder Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OriginalData</td>
<td>This folder contains read-only copies of the datasets and associated documentation.</td>
</tr>
<tr>
<td>DisclosureReview</td>
<td>Place files that you would like to have reviewed in this folder. Contact ICPSR to request a review of those files.</td>
</tr>
</tbody>
</table>

You can create other subfolders within the master project folder. You can set access permissions on the folders that you create.

Your project is allocated a limited amount of storage space. It is important that you manage your files to conserve storage space. The drive location for your data within the VDE will be mapped to the [H:] drive when you log on.

Note: Please change your U-M password from its temporary value. Your project folder will not be mapped automatically to [H:] at log on if you fail to change your password.

Folder Naming Conventions
The convention used to name the master folder is:

```
PrimaryPILastname_1
```

For example, if the primary PI’s last name is Smith, the master folder name is:

```
Smith_1
```

File Management Guidelines

All project files should be saved to your PROJECT FOLDER

- In the VDE do not save anything to the Desktop or My Documents folder.
- Your user profile (personal settings for the Windows environment) and the files you have saved are retained after you log off.
- The virtual machine is deleted when you log off. Files that you have not saved will be lost.