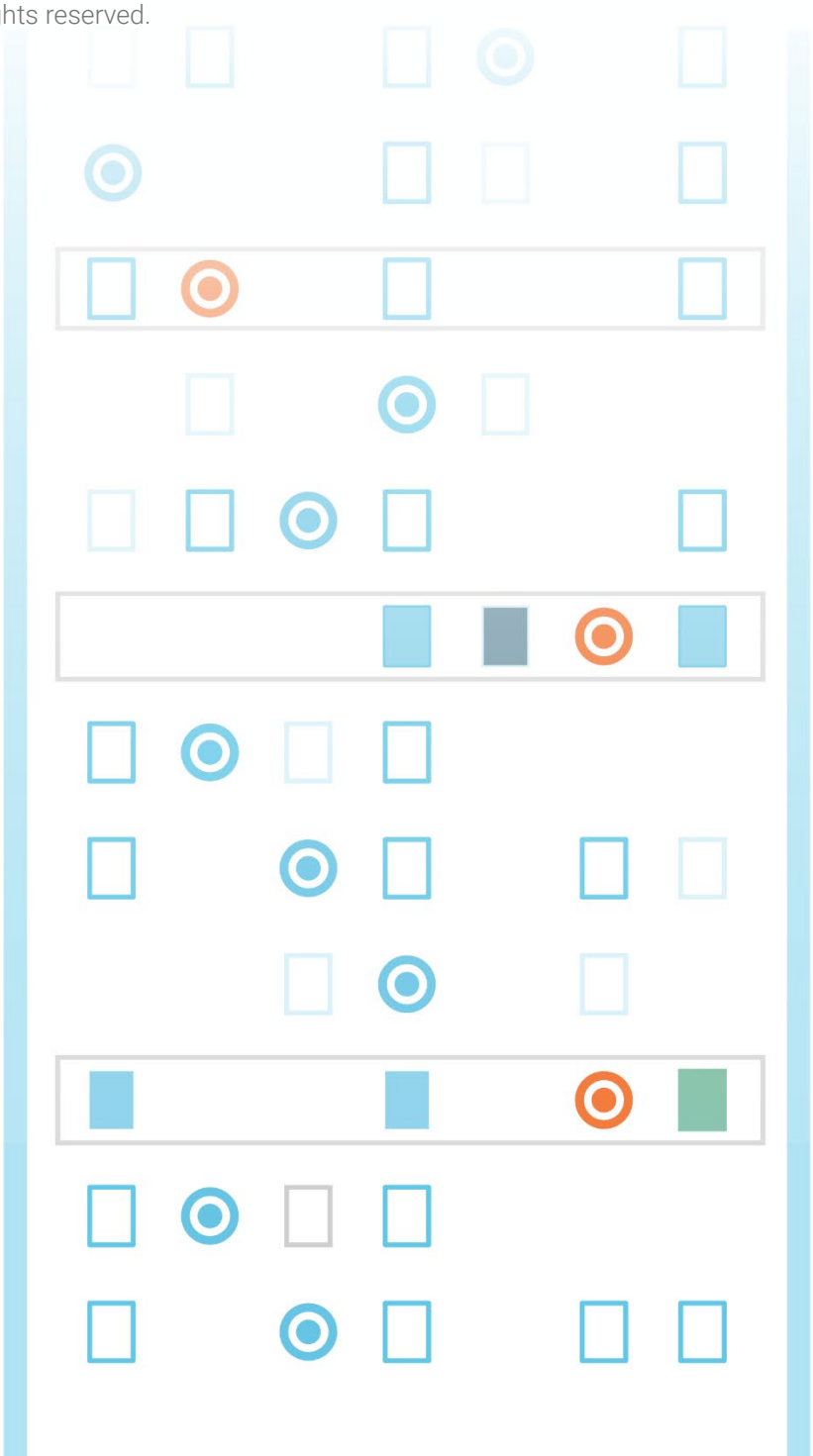
Instrument Networking and Data Management Guide

isoplexis

For Research Use Only. Not for use in diagnostic procedures.



Revision History

PRO-30

Version 4.0

Contents

The Different Options for Instrument Networking

This document is a reference for managing and maintaining networking connections on IsoPlexis instruments. It can be used to verify and troubleshoot the instrument or laptop connection.

1. Instrument to External USB Drive

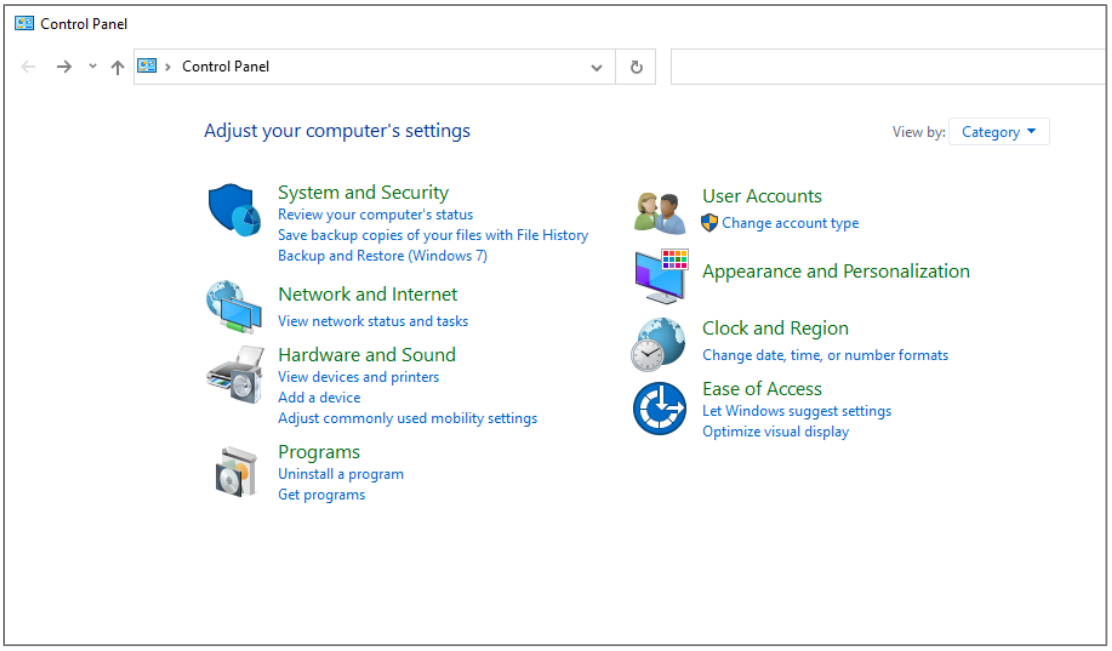
In this method, the IsoPlexis instrument is connected to a removable USB drive. This method does not require a network connection or any special instrument configurations.

2. Checking if Computer is Domain Joined

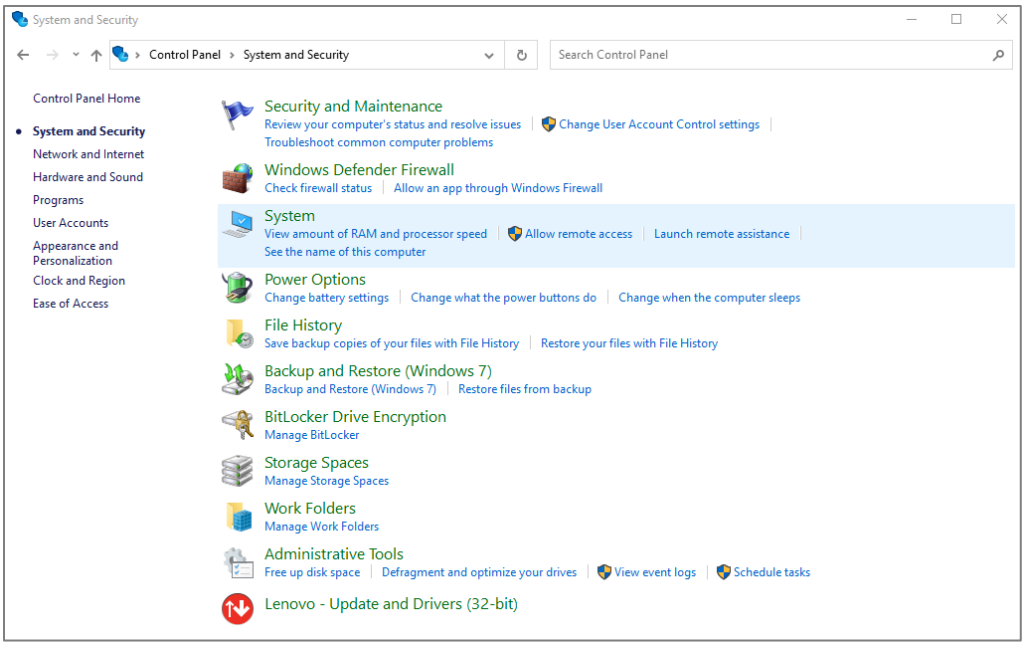
First, it must be determined if the laptop is domain joined or not. Execute these simple steps to determine the status of the laptop.

2.1. Search and open “Control Panel”.

If the screen does not look like the screenshot below, change the “View By” drop down at the top right of the window to “Category”.

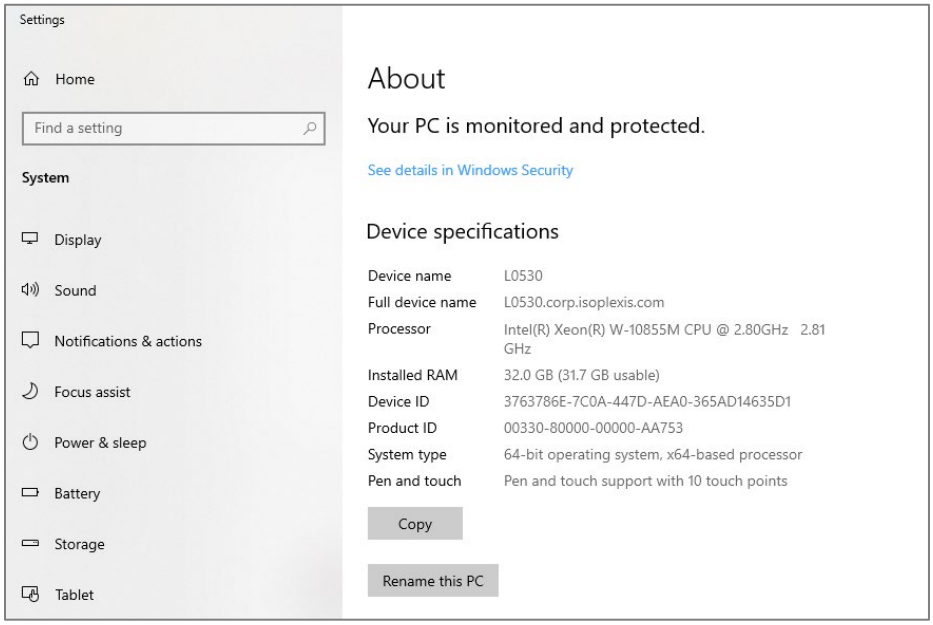


2.2. Select “System and Security”



2.3. Click on “System”

2.4. In "Device specifications", if the "Full device name" field has a custom domain, the computer is domain joined.



2.5. If there is no "Full device name" specification, or if the "Full device name" is "Local", the computer is not domain joined.

3. Instrument to Computer (Non-Domain Networked)

In this method, the IsoPlexis instrument is connected directly to the IsoSpeak laptop without being connected to the domain network. With this option, the instrument is transferring data to the associated laptop where it is then stored on the hard drive; no special configurations are present.

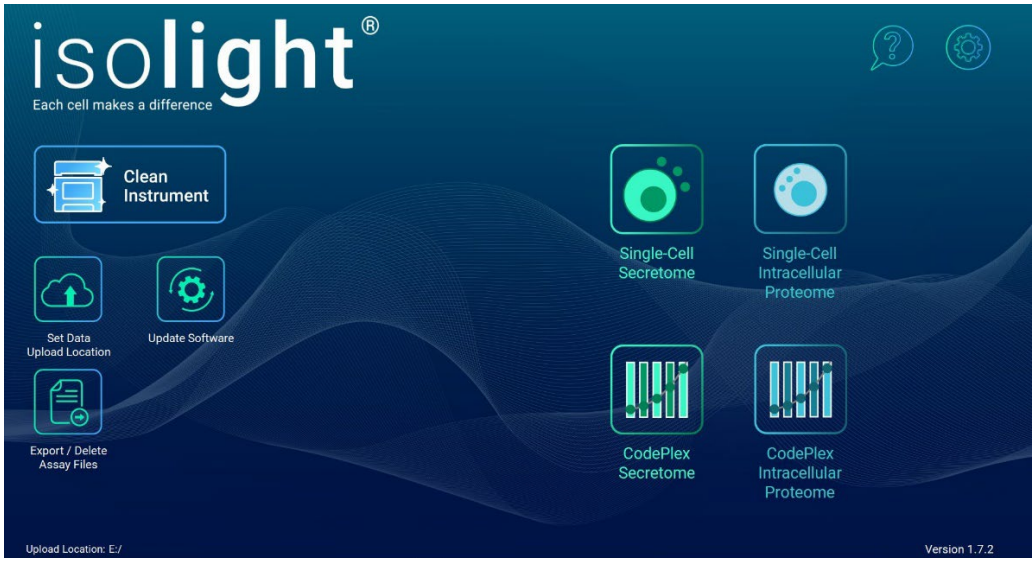
4. Instrument to Computer (Domain Joined)

In this method, the IsoPlexis instrument is connected directly to an IsoSpeak laptop that has been joined to the Active Directory domain network. With this option, the instrument is transferring data to the associated laptop under the customer's IT Department administrative control instrument transfers data to the associated laptop.

5. Instrument to Server

In this method, the IsoPlexis instrument is connected directly to the customer's local area network using an ethernet connection. This option uses server-side permissions to allow the instrument to write data to the server. The user's IT department may need to consult with IsoPlexis for additional information.

Verify Successful Connection and Upload Location



Note: The content in this section applies to IsoLight, IsoSpark, and IsoSpark Duo instruments. The above image shows an IsoLight UI, but the IsoSpark UI will look similar.

What A Correct Screen Should Look Like

- The bottom left hand of the instrument screen will display an "Upload Location"
    - This "Upload Location" will show where the data will be exported
- If the "Upload Location" text is white – connection is correct and successful
- If the "Upload Location" text is orange or missing – connection is incorrect and unsuccessful
    - If this happens, the run data will not be exported to your preferred location and will be saved on the instrument
        - See FAQ section for steps on how to access local files on your instrument

If you believe that you are experiencing a connection issue, ensure that the following conditions are met:

1. The laptop is on and signed into the correct user account
2. The ethernet cable connecting your instrument and laptop is plugged in completely
3. The Anker USB to Ethernet Adapter is ONLY being used to connect the instrument to the laptop, NOT the laptop to the ethernet port on the wall of the lab
4. The instrument and IsoSpeak Software have the most up to date software

Note: Conditions one, two, and three from the above list applies to the networking options "instrument to computer (non-domain networked)" and "instrument to computer (domain joined)".

USB Drive Troubleshooting Steps

USB storage is the simplest method of data transfer.

1. Acceptable USB/External Hard Drive Devices

IsoPlexis instruments are compatible with the following external hard drive devices:

1. USB Thumb Drive
2. Solid State Hard Drive (SSD) – Fastest Option
3. External Disc Drives (EHD)

If a user is using this method of data transfer, IsoPlexis recommends using the flash drive that is provided with the instrument upon installation.

Please do not encrypt external hard drives for data export. If the IsoPlexis instrument is uploading data or instrument logs to an external hard drive which has been encrypted, the data risks being corrupted and unusable for processing. Encrypted devices need their settings disabled before any data from the instruments are uploaded. Encryption can be re-enabled again once the data completes transferring and the IsoSpeak projects complete processing.

2. Proper Connection Ports on Instruments

The IsoLight instruments come with a white extension cable that runs from the USB port in the back of the instrument to the front for easy USB access. This extension cable can support USB Thumb Drives for data transfer. However, SSDs and External Disc Drives cannot utilize the extension cable and need to be plugged directly into the USB ports in the back of the IsoLight. Plugging SSDs and External Disc Drivers into the extension cable for file transfer may cause incomplete data transfer or data corruption.

The IsoSpark has USB ports in the front of the instrument that can be utilized for data transfer. USB Thumb Drives, SSDs, and External Disc Drives can all be plugged directly into the USB ports in the front of the IsoSparks.

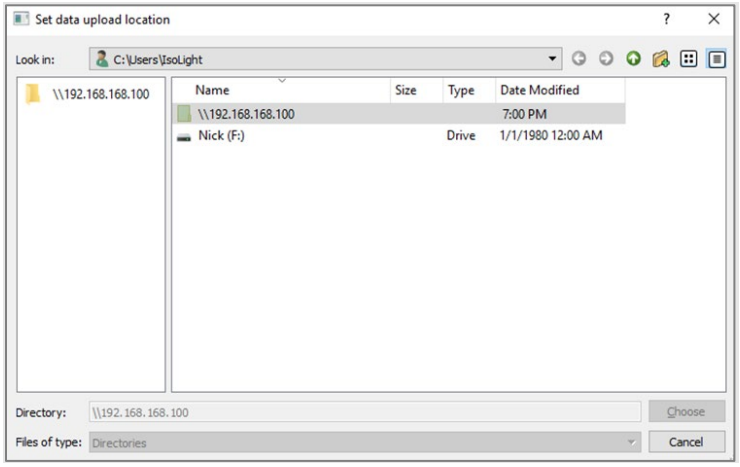
Please do not remove external hard drives from the instrument before data export is complete. Doing so will result in incomplete data transfer and may cause data corruption and IsoSpeak processing errors. IsoPlexis recommends that users monitor the progress of the data transfer by looking at the percentage, located underneath the “Export” button, keeping the device plugged in for at least two minutes after it reaches 100% before removing it from the instrument. This ensures that all data has transferred completely and correctly to your device.

3. Setting Correct Upload Location

If the correct external hard drive devices and connection ports are being used on your instrument but the data on the device post export cannot be located, the upload location may be incorrect. Use the steps below to check if the instrument is connected to the correct external hard drive.

3.1. Plug the external hard drive device into the appropriate port on the instrument.

3.2. At the Launcher, select “Set Data Upload Location.”



3.3. Click the name of the external hard drive device, Nick(F:) in the example above, which will be in the main section of the popup window. Once selected, the name of the USB will populate at the bottom in the “Directory” box.

3.4. Click “Choose”.

> Note: To save experiments within specific folders on the external hard drive, double click the hard drive in the popup window, then select the desired folder.

3.5. Confirm that the upload location on the bottom left-hand corner of the instrument displays the name of the USB as the file upload location.

For additional support, please contact IsoPlexis Customer Support at support@isoplexis.com or by dialing:

United States - Toll Free: 844-ISO-PLEX (476-7539) | Local: +1 (475) 221-8402

EMEA - +442045717730

APAC - Toll Free: +864008423244 | Local: +862180246223

Common Instrument to Laptop (Non-Domain) Networking Issues

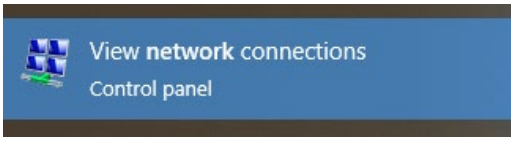
Networking Issue	Possible Root Cause	Troubleshooting Steps in Document
Upload Location on Instrument is Displaying Orange text, or nothing at all	Ethernet cable not plugged into the laptop or instrument all the way	Step 1: Check the adapter and its settings on the laptop
	IP address for the laptop is incorrect	Steps 1.1 – 1.6
	Password Protected Sharing is turned on	Steps 2.1 – 2.3
	IsoLight/IsoSpark Data Folder on laptop has incorrect sharing settings	Steps 2.4 – 2.7
	Network Settings on the instrument displays the incorrect IP address	Steps 3.1 – 3.11
Instrument cannot find laptop when networking/attempting to export data	The Ethernet Cable is being used to connect the laptop to a wall port as opposed to the instrument's Ethernet port	Step 1: Check the adapter and its settings on the laptop
	IsoLight/IsoSpark Data folder is located on the wrong drive on the laptop	Contact IsoPlexis Technical Support
IsoSpeak project is taking a long time to upload to Aspera	Raw data was being uploaded	Data Management FAQs
IsoSpeak project/Instrument logs did not upload correctly to Aspera	Incorrect data was exported from the instrument	Data Management FAQs
	Files were not zipped prior to upload to Aspera	Data Management FAQs

3. Check the Adapter Connection and its Laptop Settings

Note: The Anker USB to Ethernet Adapter should be plugged into the laptop and connected via Ethernet Cable to the instrument. It should NOT be connecting the laptop to an ethernet port on the wall in the lab to provide an internet connection to the laptop.

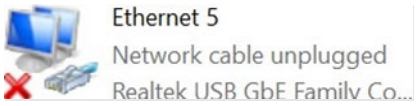
- Before beginning troubleshooting steps, ensure that the ethernet cable is plugged in completely to the laptop and the back of the instrument
    - If the connection feels loose, push the cable gently into the port until it feels snug

1.1. On the laptop, type “Network Connections” into the search bar, then select “View Network Connections”.



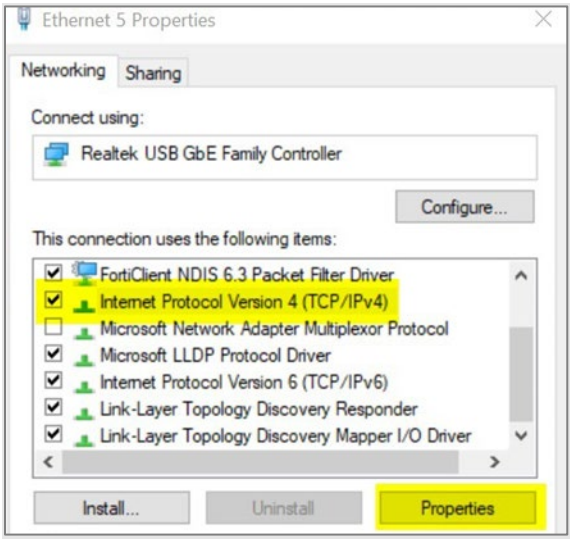
1.2. Look for “Realtek USB GbE Family Company”. This will not appear if the Anker USB to Ethernet Adapter is not being used.

1.2.1. If you have difficulties locating the proper ethernet connection, unplug the ethernet to USB adapter for 5 seconds, then plug it back it. You will notice that one of the options will change connection states; this is the option to use moving forward.

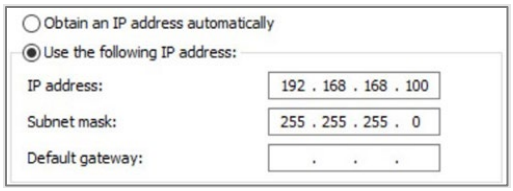


1.4. Right-click the Ethernet Port and select “Properties”

1.5. Single-Click Internet Protocol Version 4 and press “Properties”



1.6. Confirm that the information matches what is in the below image. If there are any discrepancies, make the appropriate changes where needed:

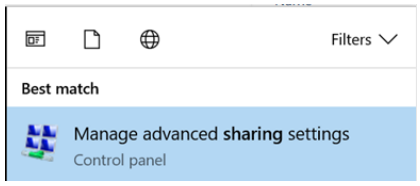


Note: The "Subnet mask" will update automatically and does not need to be manually entered.

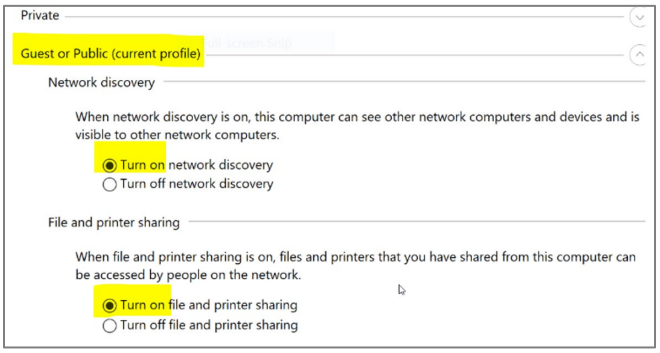
If any changes were made to these settings, click "Apply" and "Okay" until you return to the adapter options window. At this point, you are welcome to close the "Change Adapter Settings" window.

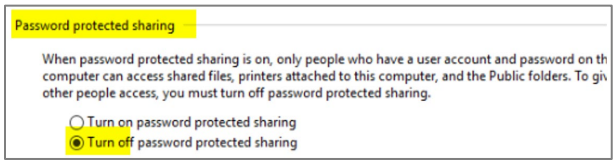
4. Check the Sharing Settings on the IsoSpeak Laptop

4.1. In the start bar on the IsoSpeak laptop, type "Manage Advanced Sharing Settings" and click the option that appears above "Control Panel"



4.2. Ensure that all options are turned On *EXCEPT* the "Require Username and Password" option; this remains Off.



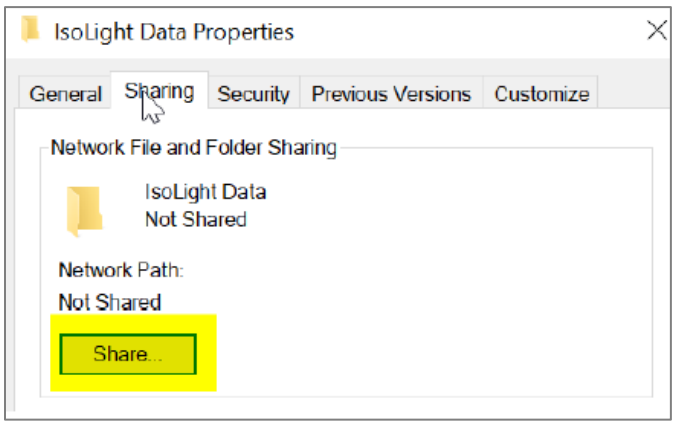


4.3. Once it is confirmed that all the network sharing options are correct, apply and save any changes and close out of all popup windows.

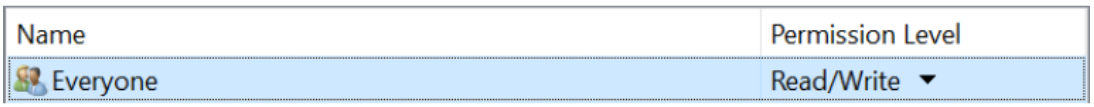
4.4. Open “File Explorer” ( ) and locate the “IsoLight Data” or “IsoSpark Data” folder.

4.5. Right click on the folder and choose “Properties”.

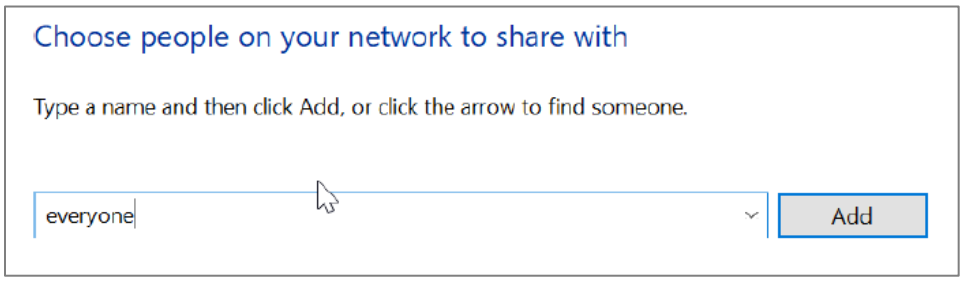
4.6. Switch to the “Sharing” tab and click the “Share” button:



4.7. Ensure that the word “Everyone” is included on the list and that the permission level is “Read/Write”:



If the “Everyone” group is not present on the list, then type the word “Everyone” in the box and click “Add” as shown in the image below:



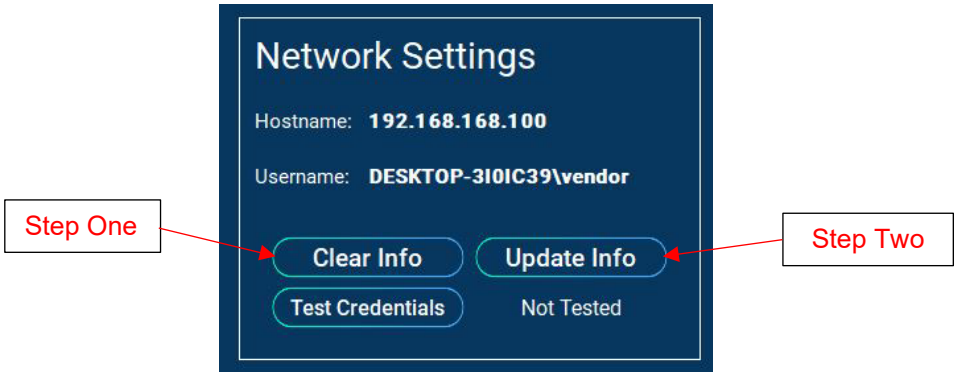
Clicking “Add” will cause the “Everyone” group to appear in the Sharing list (image shown in step 2.8). Please ensure that the newly added group has the permission level of Read/Write and then click “Share”. There will be a confirmation dialog that the folder is now shared.

5. Set the Instrument to its Upload Location

Note: The following steps are to be performed on the Instrument.

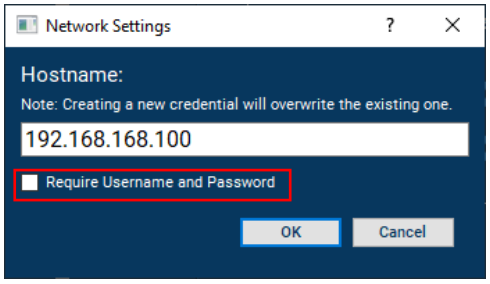
5.1. From the home screen, click the Settings Icon () in the upper right corner

5.2. Under the "Network Settings" section, first click the "Clear Info" button, then select the "Update Info" button.



5.3. For Host Name, enter the fixed IP address of 192.168.168.100 as shown above.

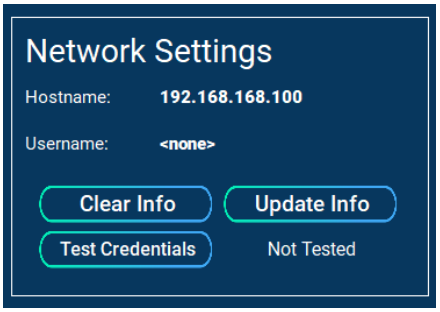
Note: Do not use slashes when entering the IP address.



5.4. Uncheck "Require Username and Password" and click OK.

5.5. Click OK to close the Network Credentials dialog. Correct settings will look like the following:

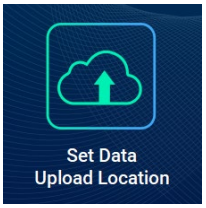
Successful Non-Domain Settings



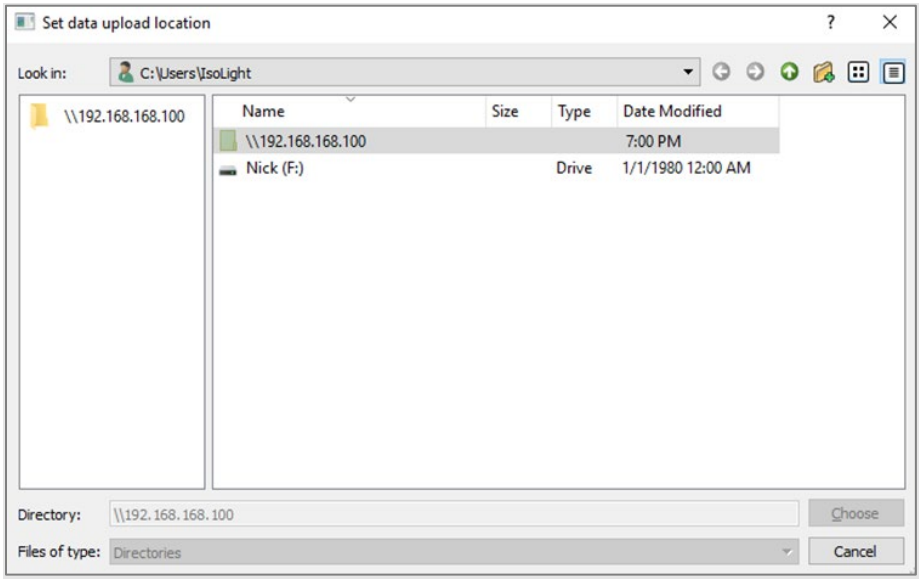
5.6. Under “Network Settings”, click “Test Credentials”. If the instrument displays “Pass”, move onto the next step. If the instrument displays “Fail”, double check your settings on the laptop and instrument and retest the credentials. If it fails a second time, contact IsoPlexis Technical Support.

5.7. Close the “Network Settings” window.

5.8. Back at Launcher, press “Set Data Upload Location”



5.9. A file dialog will pop up. The network location (\\192.168.168.100) should appear on the left sidebar if the network has been configured correctly. If not, try closing and reopening the file dialog (it takes a few seconds to test the network and add it to the sidebar).



5.10. Click the network location in the sidebar and choose the “IsoLight Data” or “IsoSpark Data” folder. Click “Choose”.

5.11. Confirm that the upload location on the bottom left-hand corner of the instrument displays the following file path: //192.168.168.100/IsoLight Data or //192.168.168.100/IsoSpark Data

For additional support, please contact IsoPlexis Customer Support at support@isoplexis.com or by dialing:

United States - Toll Free: 844-ISO-PLEX (476-7539) | Local: +1 (475) 221-8402

EMEA - +442045717730

APAC - Toll Free: +864008423244 | Local: +862180246223

Common Instrument to Laptop (Domain) Networking Issues

Networking Issue	Possible Root Cause	Troubleshooting Steps in Section
Upload Location on Instrument is Displaying Orange text, or nothing at all	Ethernet cable not plugged into the laptop or instrument all the way	Step 1: Check the adapter and its settings on the laptop
	Laptop is not turned on and no user is logged in	N/A, should be done before looking at troubleshooting document
	IP address for the laptop is incorrect	Steps 1.1 – 1.6
	Password Protected Sharing is turned off	Steps 2.1 – 2.3
	IsoLight/IsoSpark Data Folder on laptop has incorrect sharing settings	Steps 2.4 – 2.7
	Network Settings on the instrument displays the incorrect IP address	Steps 3.1 – 3.14
Instrument cannot find laptop when networking/attempting to export data	The Ethernet Cable is being used to connect the laptop to a wall port as opposed to the instrument's Ethernet port	Step 1: Check the adapter and its settings on the laptop
	IsoLight/IsoSpark Data folder is located on the wrong drive on the laptop	Contact IsoPlexis Technical Support
IsoSpeak project is taking a long time to upload to Aspera	Raw data was being uploaded	Data Management FAQs
IsoSpeak project/Instrument logs did not upload correctly to Aspera	Incorrect data was exported from the instrument	Data Management FAQs
	Files were not zipped prior to upload to Aspera	Data Management FAQs

Instrument to Laptop (Domain) Troubleshooting Steps

1. Check the Adapter Connection and its Laptop Settings

Note: The Anker USB to Ethernet Adapter should be plugged into the laptop and connected via Ethernet Cable to the instrument. It should NOT be connecting the laptop to an ethernet port on the wall in the lab to provide an internet connection to the laptop.

- Before the troubleshooting steps are taken, ensure that the ethernet cable is plugged in completely to the laptop and the back of the instrument.
    - If the connection feels loose, push the cable gently into the port until it feels snug

1.1. On the laptop, type the word “Ethernet” into the search bar, then click the “Ethernet Settings” option once available.

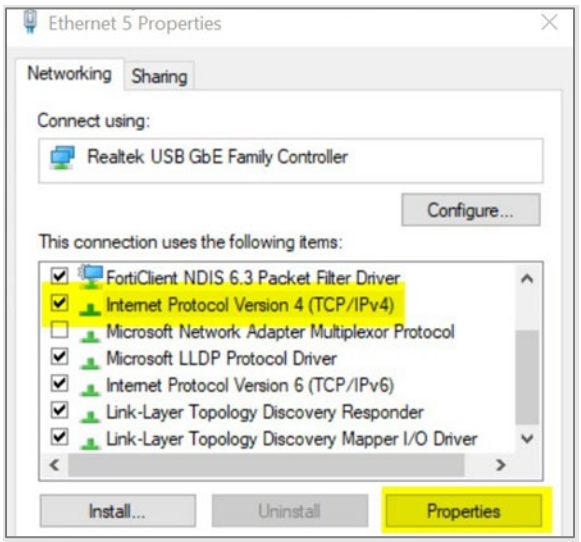
1.2. In this new window, click “Change Adapter Options”

1.3. Look for “Realtek USB GbE Family Company”. This will not appear if the Anker USB to Ethernet Adapter is not being used.

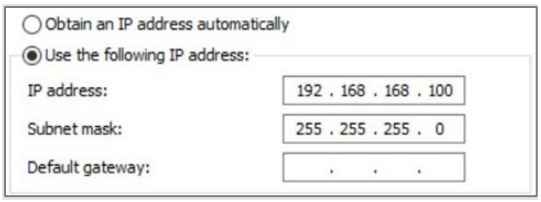
1.3.1. If you have difficulties locating the proper ethernet connection, unplug the ethernet to USB adapter for 5 seconds, then plug it back it. You will notice that one of the options will change connection states; this is the option to use moving forward.

1.4. Right-click the Ethernet Port and select “Properties”

1.5. Single-Click Internet Protocol Version 4 and press “Properties”



1.6. Confirm that the information matches what is in the below image. If there are any discrepancies, make the appropriate changes where needed:

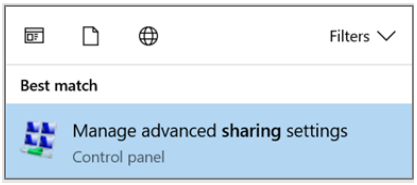


Note: The "Subnet mask" will update automatically and does not need to be manually entered.

If any changes were made to these settings, click "Apply" and "Okay" until you return to the adapter options window. At this point, you are welcome to close the "Change Adapter Settings" window.

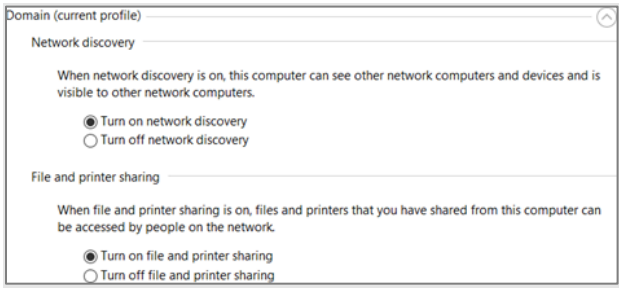
2. Check the Sharing Settings on the IsoSpeak Laptop

2.1. In the start bar on the **IsoSpeak laptop**, type "Manage Advanced Sharing Settings" and click the option that appears above "Control Panel"



2.2. Ensure that all options are turned on under "Network Discovery" and "File and Printer Sharing". Scroll down to "Password Protected Sharing" section and ensure that this option is on.

Note: Be sure you are modifying the "Domain (current profile)" section

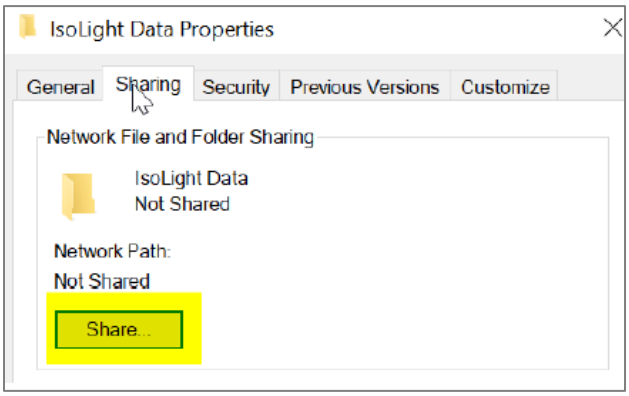


2.3. Once it is confirmed that all the network sharing options are correct, apply and save any changes and close out of all popup windows.

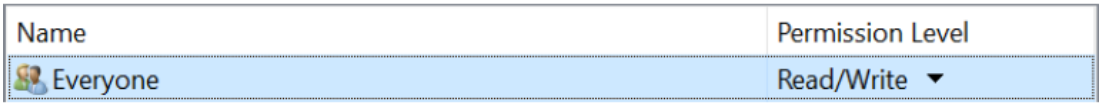
2.4. Open "File Explorer" ( ) and locate the "IsoLight Data" or "IsoSpark Data" folder.

2.5. Right click on the folder and choose "Properties".

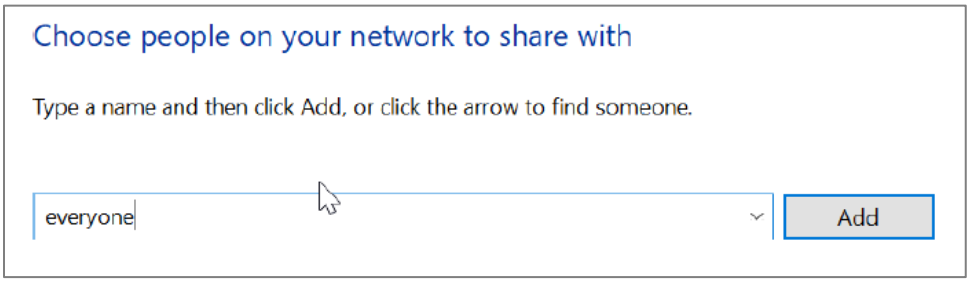
2.6. Switch to the "Sharing" tab and click the "Share" button:



2.7. Ensure that the word "Everyone" is included on the list and that the permission level is "Read/Write":



If the "Everyone" group is not present on the list, then type the word "Everyone" in the box and click "Add" as shown in the image below:



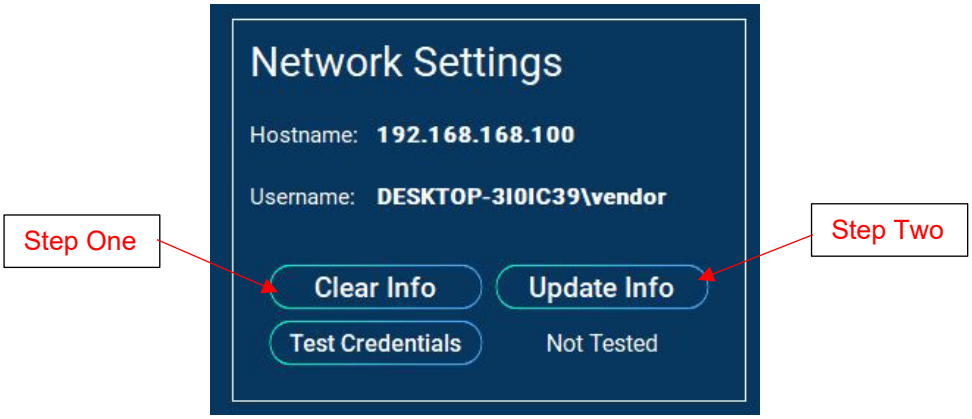
Clicking "Add" will cause the "Everyone" group to appear in the Sharing list (image shown in step 2.8). Please ensure that the newly added group has the permission level of Read/Write and then click "Share". There will be a confirmation dialog that the folder is now shared.

3. Set the Instrument to its Upload Location

Note: The following steps are to be performed on the instrument.

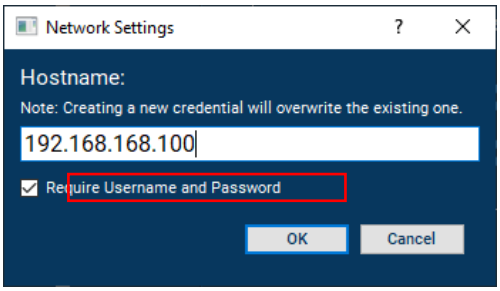
3.1. From the home screen, click the Settings Icon ( ) in the upper right corner

3.2. Under the "Network Settings" section, first click the "Clear Info" button, then select the "Update Info" button.

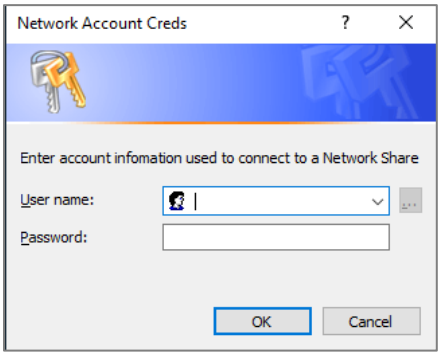


3.3. For Host Name, enter the fixed IP address of 192.168.168.100.

3.4. Make sure that "Require Username and Password" is checked and then click OK.



3.5. A dialog will appear called "Network Account Creds".



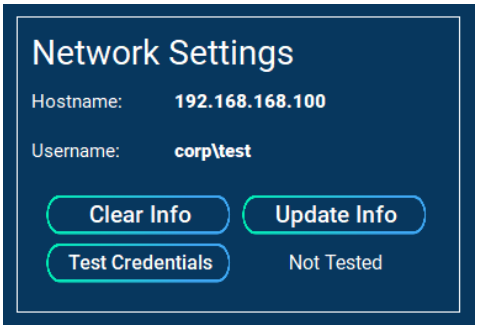
3.6. Enter a Username. If the IsoSpeak laptop is on a domain, use DOMAIN\USERNAME format.

3.7. Enter the password; this will be the same password for the user account on the laptop.

> Note: Be sure to type the password correctly. The system does not test the username + password combination at this point. Typing either incorrectly will result in a connection failure later.

3.8. Click OK to close the Network Credentials dialog. Correct settings will look like what is shown below:

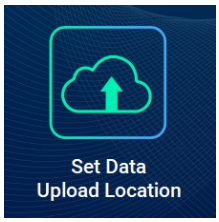
Successful Domain Settings



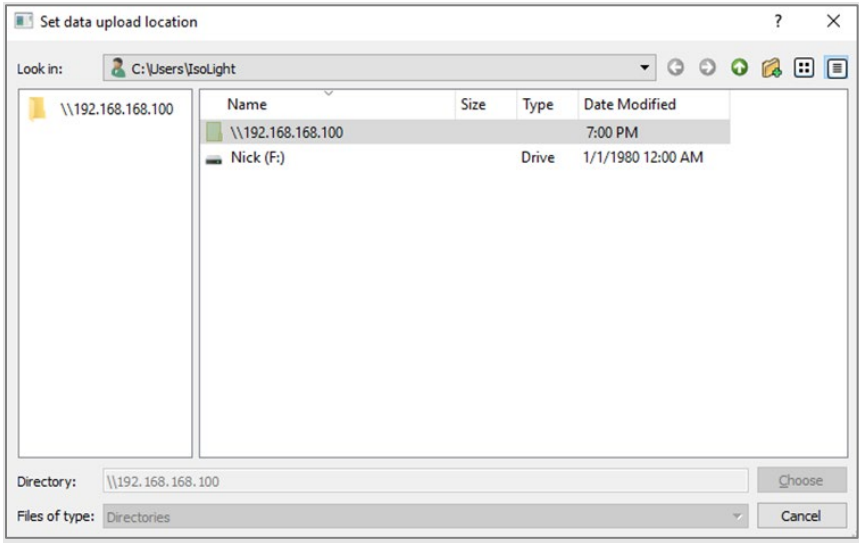
3.9. Under "Network Settings", click "Test Credentials". If the instrument displays "Pass", move onto the next step. If the instrument displays "Fail", double check the settings on the laptop and instrument and then retest. If it fails a second time, contact IsoPlexis Technical Support.

3.10. Close the "Network Settings" window.

3.11. Back at Launcher, press Set data upload location.



3.12. A file dialog will pop up. The network location (\\192.168.168.100) should appear on the left sidebar if the network has been configured correctly. If not, try closing and reopening the file dialog (it takes a few seconds to test the network and add it to the sidebar).



3.13. Click the network location in the sidebar and choose the “IsoLight Data” or “IsoSpark Data” folder. Click “Choose”.

3.14. Confirm that the upload location on the bottom left-hand corner of the instrument displays one of the following file paths: //192.168.168.100/IsoLight Data or //192.168.168.100/IsoSpark Data

For additional support, please contact IsoPlexis Customer Support at support@isoplexis.com or by dialing:

United States - Toll Free: 844-ISO-PLEX (476-7539) | Local: +1 (475) 221-8402

EMEA - +442045717730

APAC - Toll Free: +864008423244 | Local: +862180246223

Common Instrument to Server Networking Issues

Server networking requires an ethernet connection directly from the back of the instrument to an ethernet port located on the wall of the lab. This networking type follows a similar process to Domain Networking but requires a higher level of involvement of the customers IT Department.

Networking Issue	Possible Root Cause	Troubleshooting Steps in Section
Upload Location on instrument is Displaying Orange text, or nothing at all	Ethernet cable not securely plugged into the wall port/back of instrument	Step 1: Check the Physical Ethernet Connection and its Settings
	Ethernet IP on instrument is incorrect	Steps 1.1 – 1.6
	Password Protected Sharing is turned off	Steps 2.1 – 2.3
	Network Settings on the instrument is uploading to an invalid location	Steps 3.1 – 3.14
Instrument cannot find Server destination when networking/attempting to export data	IsoLight/IsoSpark Data folder is located on the wrong drive on the laptop	Contact IsoPlexis Technical Support
	More than one IsoLight Data folders exist on the laptop	Contact IsoPlexis Technical Support
IsoSpeak project is taking a long time to upload to Aspera	Raw data was being uploaded	Data Management FAQs
IsoSpeak project/Instrument logs did not upload correctly to Aspera	Incorrect data was exported from the instrument	Data Management FAQs
	Files were not zipped prior to upload to Aspera	Data Management FAQs

1. Check the Physical Ethernet Connection and its Settings

Note: The Ethernet cable should be plugged into the back of the instrument and then directly into the ethernet port on the wall of the lab. It should NOT be connecting the instrument to a nearby laptop.

- Before the troubleshooting steps are taken, ensure that the ethernet cable is plugged in completely to both the instrument and the ethernet wall port.
    - If the connection feels loose, gently push the cable into the port and ensure you hear a "click" sound

1.1. On the Windows interface of the instrument, type the word "Ethernet" into the search bar, then click the "Ethernet Settings" option once available.

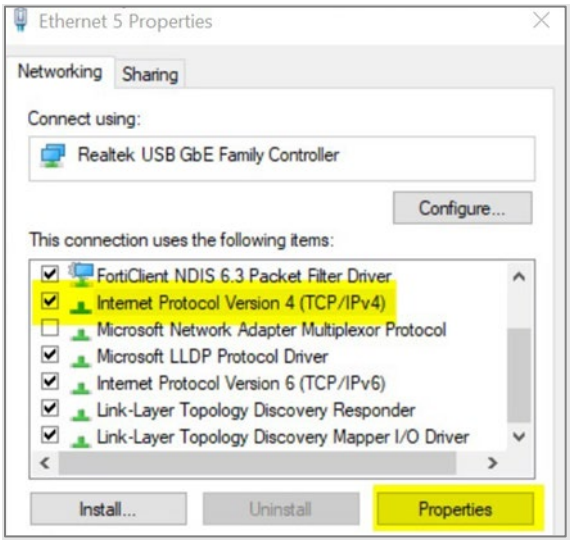
1.2. In this new window, click "Change Adapter Options"

1.3. Look for the Ethernet connection of the cable being used to connect the instrument to the wall of the lab.

1.3.1. If you have difficulties locating the proper ethernet connection, unplug the ethernet cable for no less than 5 seconds, then plug it back in. You will notice that one of the options will change connection states; this is the option to use moving forward.

1.4. Right-click the Ethernet Port and select "Properties"

1.5. Single-Click Internet Protocol Version 4 and press "Properties"



1.6. Either set the IP information statically as required on your network or confirm that "Obtain an IP address automatically" is selected. This is a setting dictated by the user's IT department. Please check with your IT representative to see which IP type is used for your networking protocols.

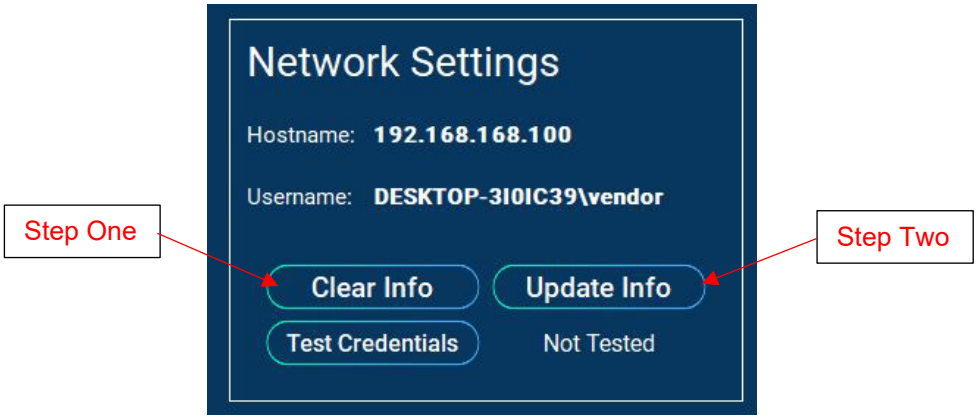
If any changes were made to these settings, click "Apply" and "Okay" until you return to the adapter options window. At this point, the "Change Adapter Settings" window can be closed.

Set the Instrument to its Upload Location

Note: The following steps are to be performed on the instruments UI

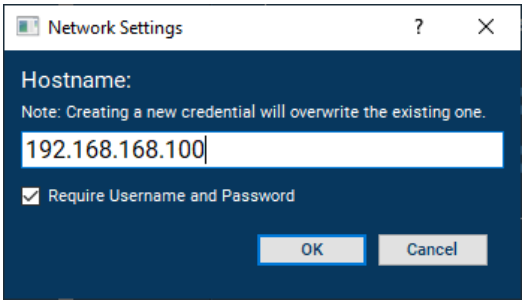
3.1. From the home screen, click the Settings Icon () in the upper right corner

3.2. Under the "Network Settings" section, first click the "Clear Info" button, then select the "Update Info" button.

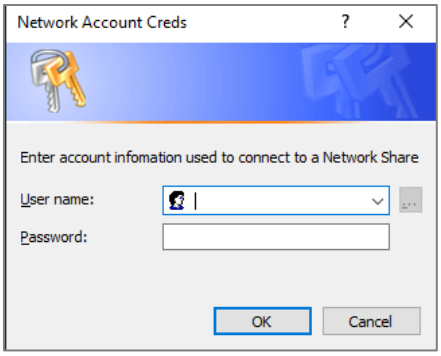


3.3. For Host Name, enter the host name or IP address for the storage destination.

3.4. Make sure that "Require Username and Password" is checked and then click OK:



3.5. A dialog will appear called “Network Account Creds”.



3.6. Enter an approved username with access to the storage destination. This is typically provided by the customers IT Department. If the storage is managed by an Active Directory domain, the username will be in the form of DOMAIN\USERNAME .

3.7. Enter the password.

> Note: Be sure to type the password correctly. The system does not test the username + password combination at this point. Typing either incorrectly will result in a connection failure later.

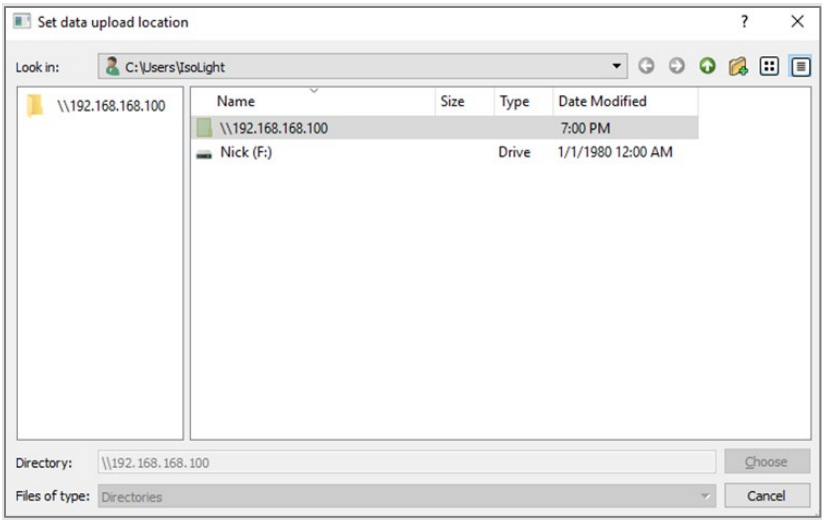
3.8. Click OK to close the Network Credentials dialog.

3.9. Under “Network Settings”, click “Test Credentials”. If the instrument displays “Pass”, move onto the next step. If the instrument displays “Fail”, double check your settings on the laptop and instrument and then retest. If it fails a second time, contact IsoPlexis Technical Support.

3.10. Close the “Network Settings” window.

3.11. Back at Launcher, press Set data upload location

3.12. A file dialog will pop up. The network location should appear on the left sidebar if the network has been configured correctly. If not, try closing and reopening the file dialog (it takes a few seconds to test the network and add it to the sidebar).



3.13. Click the network location in the sidebar and choose the “IsoLight Data” or “IsoSpark Data” folder. Click “Choose”.

3.14. Confirm that the upload location on the bottom left-hand corner of the instrument displays the intended file pathway on your server.

For additional support, please contact IsoPlexis Customer Support at support@isoplexis.com or by dialing:

United States - Toll Free: 844-ISO-PLEX (476-7539) | Local: +1 (475) 221-8402

EMEA - +442045717730

APAC - Toll Free: +864008423244 | Local: +862180246223

Data Management of Your IsoSpeak Laptop

Data Management is one of the most important aspects of the instrument and the IsoSpeak software. Without proper data management, the instruments and IsoSpeak software will not operate as intended and will result in the delay of your data analysis.

At this time, the most amount of data that can be produced from an 8-chip run is 120 GB worth of raw image data via Single Cell and Intracellular Proteome (ICP) chips (refer to the table below). **It should be noted that this 120 GB worth of raw image data should not be stored on the laptop forever.** Space is limited on the laptop, and a buildup of this information will cause the storage on the laptop to become full, preventing new data from being exported from the instrument and analyzed on the laptop via IsoSpeak.

IsoPlexis recommends that after the run data is analyzed in IsoSpeak, the information is backed up to a personal USB drive, a personal solid state hard drive, or an internal server, and then deleted from the IsoSpeak laptop. **Failure to do this will lead to a buildup of information on the IsoSpeak laptop and the inability for the instrument to export data to the laptop.** If the data is unable to be backed up and deleted immediately, IsoPlexis recommends performing a backup and deletion of unnecessary data once a month.

Data Management FAQs

How much data is generated per chip?

Chip Type	Data Produced (per chip)	Max Data Produced Per Run (IsoLight 8 Chip Run)	Max Data Produced per Run (IsoSpark 4 Chip Run)
Single Cell	15 GB	120 GB	60 GB
CodePlex	7 GB	56 GB	28 GB
ICP	15 GB	120 GB	60 GB

How much space is available on the IsoPlexis provided laptop, and do you recommend additional space?

About 1TB is available on the provided laptop. We highly recommend pushing your data specifically to a server for storage and backup as well as for direct access using our IsoSpeak software.

I want to install IsoSpeak on a company or personal PC. What are the system requirements to run the IsoSpeak Software?

Operating System	Windows 10
Processor	Intel Core i3 2.5 GHz or similar (i5 or i7 recommended)
Graphics Card	NVIDIA GeForce GT 620M, ATI Radeon HD 4670, or Intel HD Graphics 4400 or similar
Memory	8 GB Ram (16 GB recommended)
Storage	1 TB available hard drive space

How do I send data for internal review?

The Support team has moved to a new platform. If you need an IsoPlexis Engineer or Scientist to review your instrument logs or run data, please contact support@isoplexis.com. From there, you will be provided with an Aspera Link to transfer your data to the internal team.

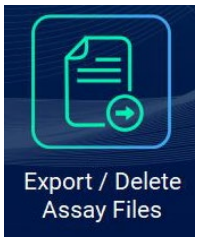
How do I correctly upload zipped instrument logs and other important data to Aspera?

1. Open the Aspera link that was provided to you by customer support
2. Fill out the following information
    a. Your Name
    b. Email Address
    c. Subject
    d. Password Protection
        i. This section allows you to password protect the files you are sending to IsoPlexis. The Engineers and Scientists need to be provided with the password you enter here in order access the transferred data.
    e. File Types
        i. A Check the appropriate boxes for the files that you are sending. You can choose more than one option.
3. Click the “Add Files” button to add the zipped files you wish to transfer
    a. IsoPlexis requires that zipped files are provided for internal analysis to be complete and accurate. Failure to do this may result in result delays and may require the data to be re-transferred with zipped files.
4. Once you have uploaded all the zipped files you need analyzed, click “Send”

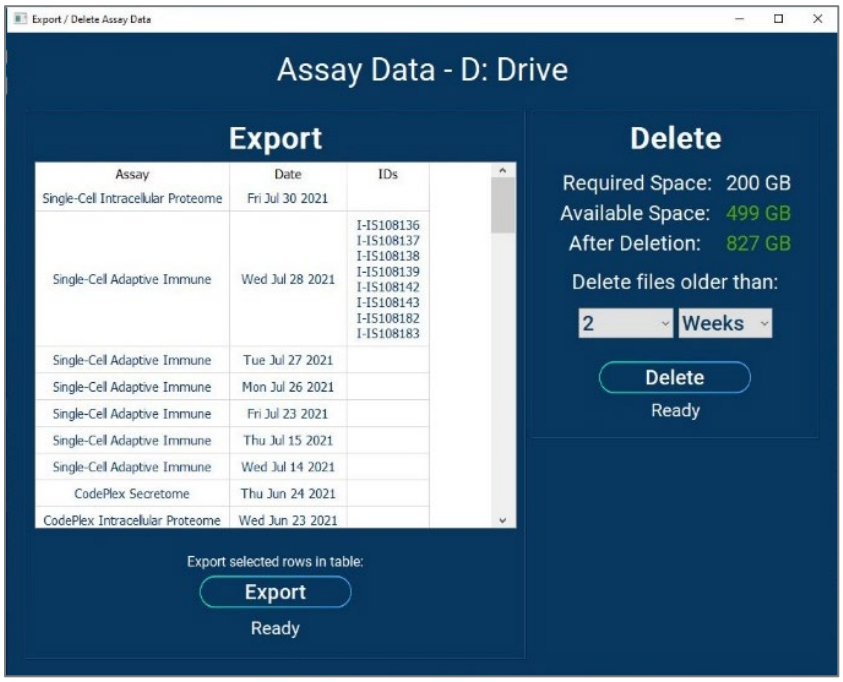
5. Wait for the progress bar to reach 100%
    a. For the transfer to complete Ensure the browser remains open, the computer remains on, and internet must be always connected for the transfer to be complete. Failure to do so will results in an error in data transfer and will require a second attempt.
6. Locate the email received from IsoPlexis Customer Support containing the Aspera link. Reply to this email with the password that was input in step 2d.

How do I correctly export assay data from my instrument to a specific upload location?

1. On the UI, click “Export/Delete Assay Files” button



    a. Doing so will cause the following window to appear



2. Select the run(s) that you wish to export on the left-hand side of the window
    a. Do not select anything on the right-hand side of the window; that section is for deleting files and once they are deleted, they cannot be recovered
3. Once you select the run(s) you want, click the “Export” button

4. Select the location where you want the assay data to be exported to in the popup window and click the "Choose" button; your run(s) will then begin exporting to the location of your choice
    a. Keep an eye of the export progress by looking at the percentage located below the "Export" button
    b. You will know the run(s) completed exporting when the percentage progress goes away and the word "Ready" appears below the "Export" button

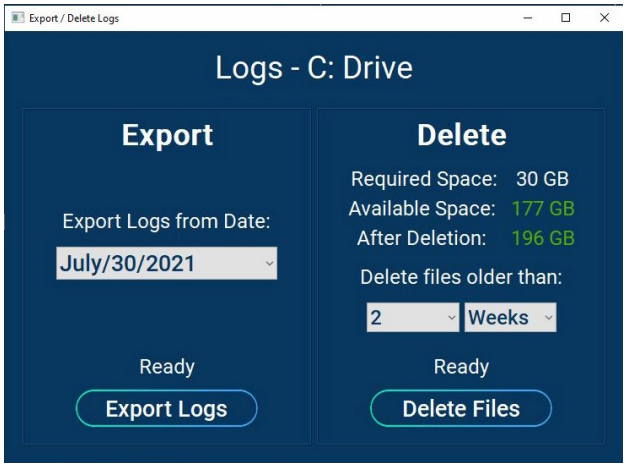
Do I need to clear log data off my instrument(s)? If so, how often does this need to be done and how do I do this?

Yes, you need to clear the space on your instrument(s) for instrument logs to be saved and exported. The internal computer on the instruments can hold a total of 1 TB worth of data, but the instrument requires a minimum of 30 GB of free space for log data specifically to be stored. We recommend that you clear the space on your instrument(s) based off your usage. The following table provides insight on how often a user should clear log space on their instrument(s) based off their usage:

Type of Usage	Amount of Runs per Month	How Often You Should Clear Space
Light	2-4 runs per month	Every 3 months
Medium	5-9 runs per month	Every month
Heavy	10+ runs per month	Every 2 weeks

How to delete old log files off the instrument.

1. Click the Settings Icon () in the upper right corner
2. Click the "Export/Delete Logs" button in the popup window
    a. Doing so will cause the following window to appear



3. Specify on the right-hand side the time frame that you would like to delete logs
    a. The numerical list ranges from numbers 1-30
    b. The time frame list contains the options of days, weeks, or months
4. Once the time frame is specified, click the “Delete Files” button
    a. Keep an eye of the deletion process by looking at the percentage located above the “Delete Files” button
    b. You will know the deletion process is complete when the percentage progress goes away and the word “Ready” appears above the “Delete Files” button
5. Confirm that the “Available Space” value is greater than the “Required Space” value of 30 GB
    a. If it’s not, continue to delete any unnecessary log files

Do I need to clear assay data off the instrument? If so, how often does this need to be done and how do I do this?

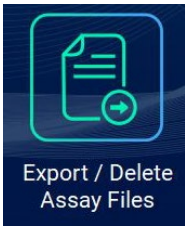
Yes, you need to clear the assay data off your instrument for it to perform and export runs in real time. Failure to clear old assay data will result in the instrument being unable to run and produce assay data for any current chip runs. The instruments require a minimum of 200 GB for assay data to be stored on the instrument. We recommend that you clear the space on your instrument based off your usage. The following table provides insight on how often a user should clear assay space on their instrument based off their usage:

Type of Usage	Amount of Runs per Month	How Often You Should Clear Space
Light	2-4 runs per month	Every 2-4 months
Medium	5-9 runs per month	Every 4-6 weeks
Heavy	10+ runs per month	Every 3 weeks

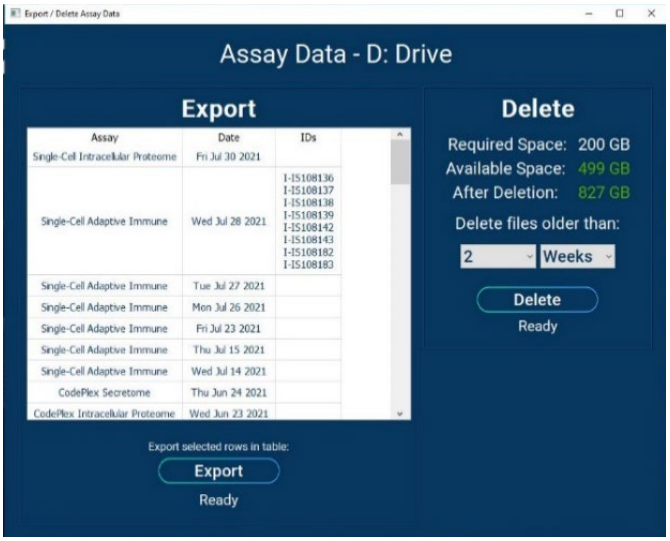
It is important to note that this is also based off chip type and how many chips are used in each run. The chip type determines how much assay data is produced and thus stored on the instrument. **This table assumes an IsoLight 8 chip Single Cell run, which produces 120 GB of raw image data for the entire run.**

How to delete old assay files off the instrument.

1. On the instrument, click “Export/Delete Assay Files” button



   a. Doing so will cause the following window to appear



2. Specify on the right-hand side the time frame that you would like to delete runs
   a. The numerical list ranges from numbers 1-30
   b. The time frame list contains the options of days, weeks, or months
3. Once the time frame is specified, click the “Delete” button
   a. Keep an eye of the deletion process by looking at the percentage located below the “Delete” button
   b. You will know the deletion process is complete when the percentage progress goes away and the word “Ready” appears below the “Delete” button
4. Confirm that the “Available Space” value is greater than the “Required Space” value of 200 GB
   a. If it’s not, continue to delete any unnecessary assay files

What does the error 'Failed to Read From Config' mean, and how do I fix it?

When an assay starts, the instrument attempts to read and parse the init.json. The init.json file is a file unique to each instrument. All the calibrated information for the instruments is in this file. If the instrument cannot read and parse this file, the error message "Failed to Read from Config" appears. When this happens, please contact IsoPlexis support (support@isoplexis.com) with a description of the error for further assistance.

My IT Department would like to access the instrument remotely. Is this possible?

At this time, our instruments are unable to be accessed remotely using any type of remote access software.

During Field Maintenance visits, do the Engineers perform any tasks on the instruments internal PC to improve performance (ex: defragment/optimize disks)?

The Field Service Engineers can answer questions while on site regarding best data management practices of the IsoSpeak laptop and assist with any networking issues our users may experience.

The internal PC of the instruments defrag weekly, by default, based on the type of PC installed. Lenovo PCs perform weekly defrags, but instruments with the Advantech model do not because they are equipped with an SSD. If a user's IT department has any questions on what type of internal PC is installed on their instrument, please have them contact support@isoplexis.com with a description of the request, and a Technical Support Engineer will email them as soon as possible.

Is it possible to install the IsoLight/IsoSpark software on another computer to test the process of restoring the instrument computer from a backup?

This feature is not available at this time.

Can my IT department automate the back up of my data from the instrument to my laptop/intended storage location?

No. The data produced from our instruments (assay files and instrument logs) need to be manually exported from the instrument if they need to be backed up in a separate storage space. The only time this process is automated is when our users complete a run on the instrument and the data automatically exports to the designated Upload Location. However, this can only happen if the Upload Location is networked correctly to the instrument. If not, automatic data transfer will be unsuccessful, and the data will need to be manually pulled via the instructions in this guide.

If your IT department wishes to automate the process of backing up data that has already been transferred to the IsoSpeak laptop, this would be possible. However, this would fall under their jurisdiction and the data security policies set forth by your company. IsoPlexis would not be responsible for the automation of your data back ups from the laptop to your servers or other intended devices/locations.

Do external USB devices need to have a certain data format?

External hard drives should be formatted for NTFS or exFAT file systems. Drives formatted for the FAT32 system will not be able to support the large data files generated by the instrument.

For additional support, please contact IsoPlexis Customer Support at support@isoplexis.com or by dialing:

United States - Toll Free: 844-ISO-PLEX (476-7539) | Local: +1 (475) 221-8402

EMEA - +442045717730

APAC - Toll Free: +864008423244 | Local: +862180246223