



# FastX Desktop Client

For FastX 3.2

|  |          |
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## Introduction

The FastX desktop client can connect to the FastX server via https (SSL) or SSH.

## System Requirements

- FastX Server installation on the host is required in order to use the Desktop Client.
- 200MB install
- 110BM RAM
- 64-bit x86 processor

## Operating System

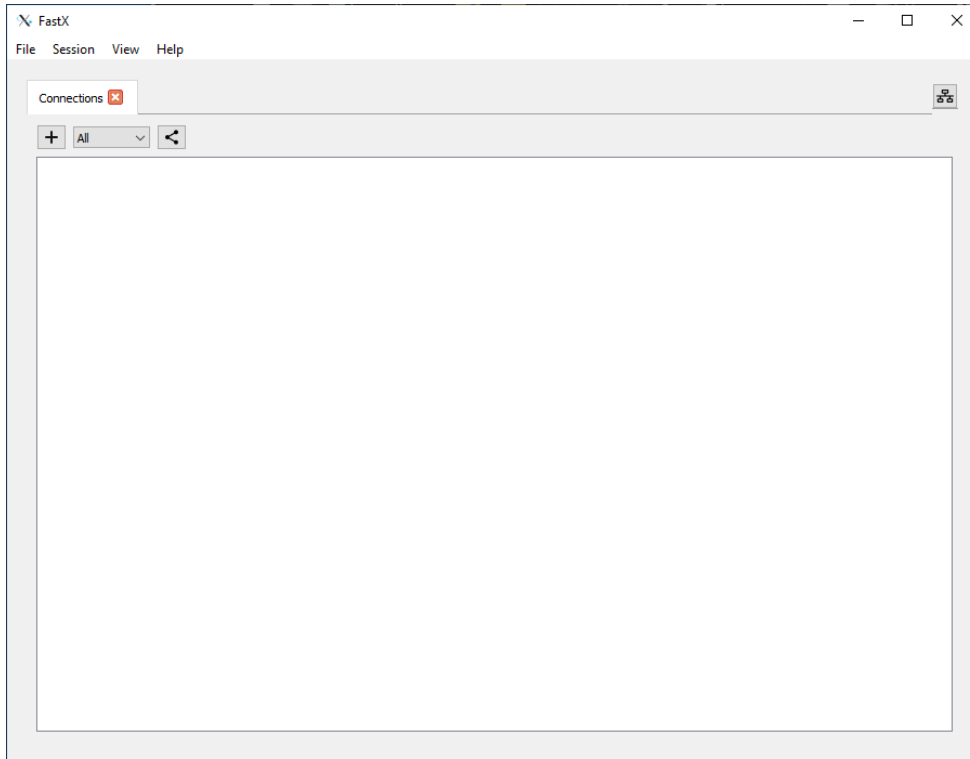
- Windows 7 or later
- Mac OS 10.14 or later
- Linux RHEL 7 (or equivalent) 64 bit

## Ports

- 3300 (https)
- 22 (SSH)

## Connections

Launching the FastX desktop client prompts the Connections window. Here you can add new Linux connections.

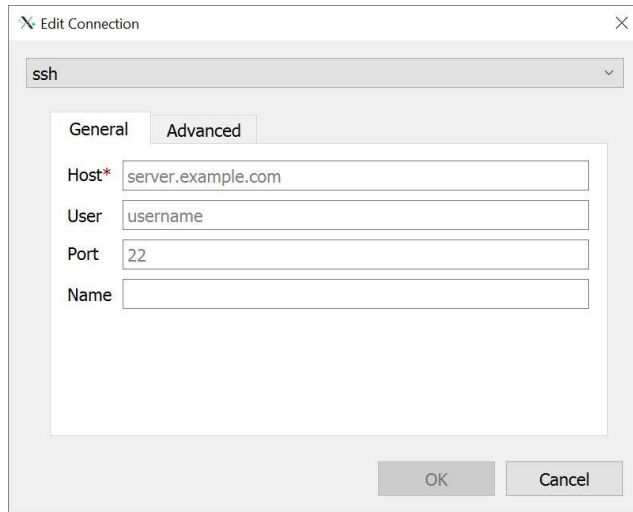


## Add Connection

Select the add icon **+** to add a Linux connection.

# SSH

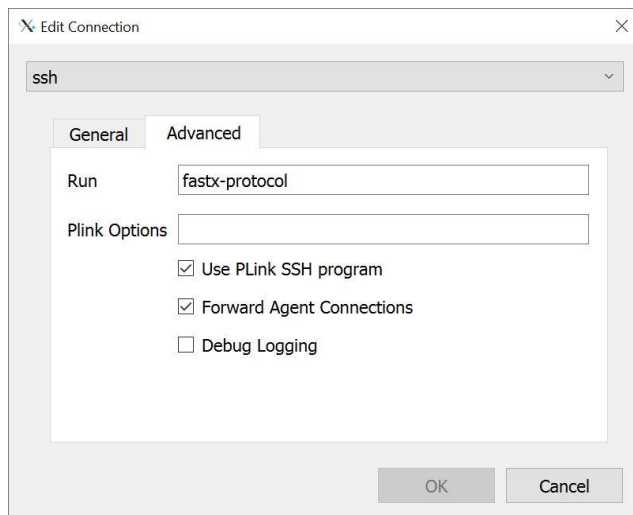
## General



The screenshot shows the 'Edit Connection' dialog box with the 'General' tab selected. The connection type is 'ssh'. The fields are: Host\* (server.example.com), User (username), Port (22), and Name (empty). There are 'OK' and 'Cancel' buttons at the bottom.

- **Host** - Enter the URL or IP of the host.
- **User** - Enter username that will be logging into the Linux host
- **Port** - Port number for connection (default 22)
- **Name** - Name of connection

## Advanced

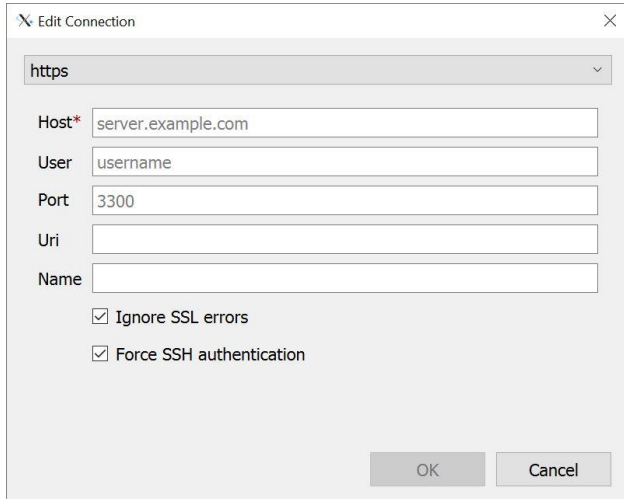


The screenshot shows the 'Edit Connection' dialog box with the 'Advanced' tab selected. The connection type is 'ssh'. The fields are: Run (fastx-protocol), Plink Options (empty), and checkboxes for Use PLINK SSH program (checked), Forward Agent Connections (checked), and Debug Logging (unchecked). There are 'OK' and 'Cancel' buttons at the bottom.

- **Run** - Protocol used by connect (DO NOT CHANGE UNLESS YOU KNOW WHAT YOU ARE DOING)
- **Plink Options** - Options for PLINK
- **Use PLINK SSH program** - Check box to use PLINK SSH program

- **Forward Agent Connections** - Check box to forward agent connections
- **Debug Logging** - Check box to enable logging debug.

## Https Connection

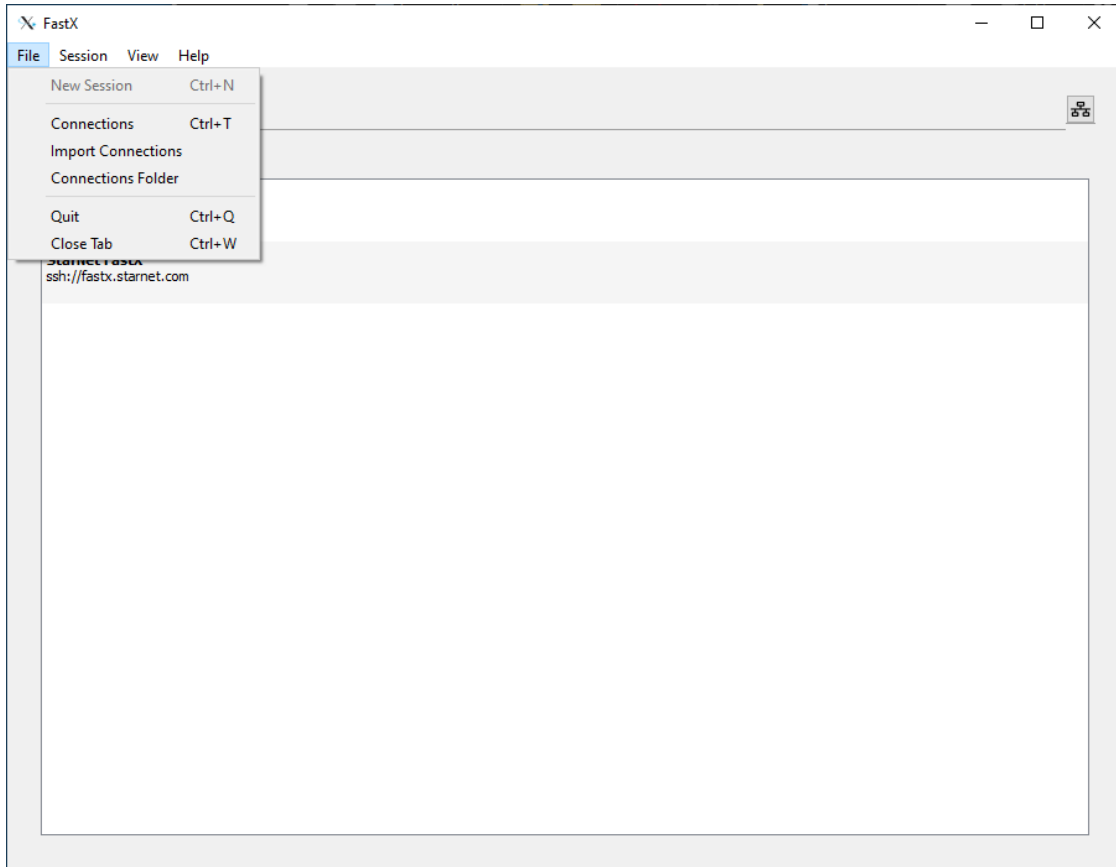


The screenshot shows a dialog box titled "Edit Connection" with a close button (X) in the top right corner. At the top, there is a dropdown menu currently showing "https". Below this are five input fields: "Host\*" containing "server.example.com", "User" containing "username", "Port" containing "3300", "Uri" (empty), and "Name" (empty). Under the input fields, there are two checked checkboxes: "Ignore SSL errors" and "Force SSH authentication". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

- **Host** - Enter the URL or IP of the host.
- **User** - Enter username that will be logging into the Linux host
- **Port** - Port number for connection (default 3300)
- **Uri** - Uniform Resource Identifier
- **Name** - Name of connection
- **Ignore SSL errors** - Check box to ignore SSL errors
- **Force SSH authentication** - Check box to login using SSH authentication

## Import

Click on the File drop down on the top left of FastX.



## Import Connections

Import an existing FastX connection. File extension must be .fastx.

## Connections Folder

Opens connections folder location

## Connections Options



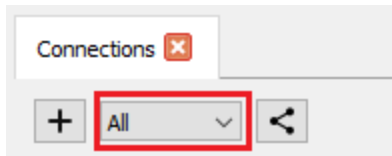
## Edit

Click the pencil icon to edit and rename the connection details.

## Favorites

Users can add connections to their favorite's group by clicking on the heart icon. A filled heart indicates that the connection is in the favorite's group.

Click on the drop down on to the right of adding a connection icon to display the favorite's group in a list.

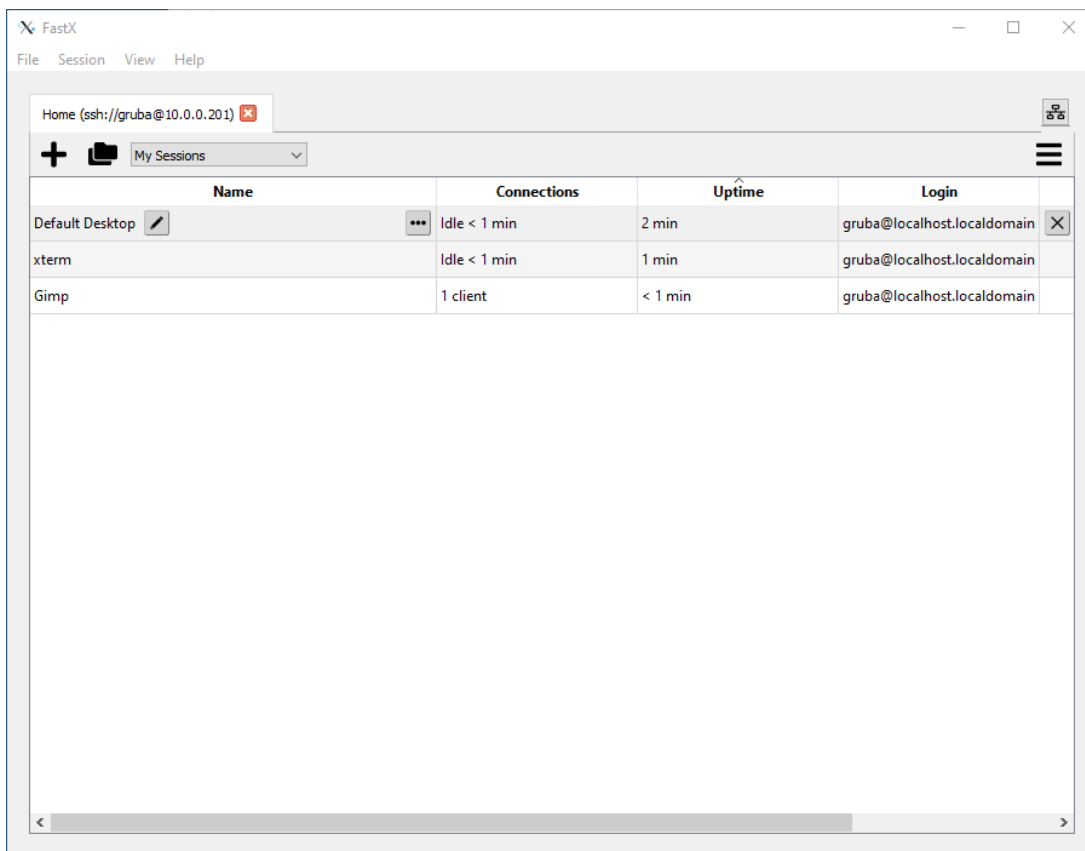


## Delete


Click the x icon to delete the connection.

## After Connecting

The connection window will disappear and the FastX window will populate with current running sessions.

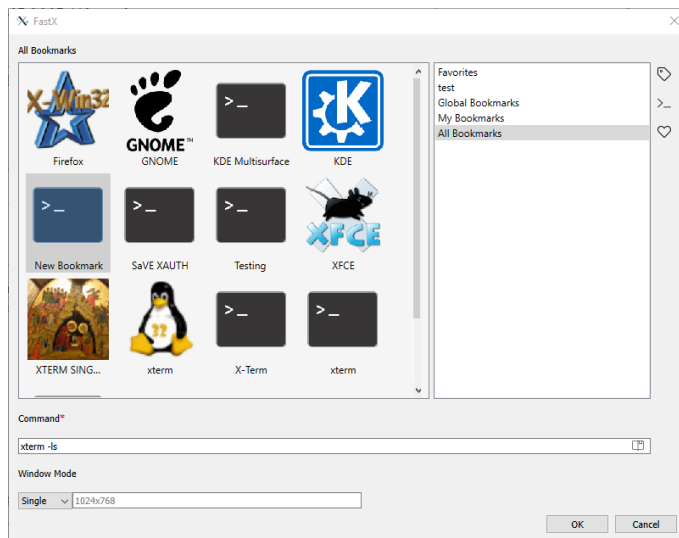


## Connections Window

Click on the connection icon  on the right to bring up the Connections Window. When making additional connections, a new tab will be created with the new connection details.





## Launch Session

Select the add icon  to launch a new session.



## Bookmarks

List of bookmarks from selected bookmark groupings. Double click on a bookmark icon to launch the session. Single click on a bookmark icon to display the details on the bottom.

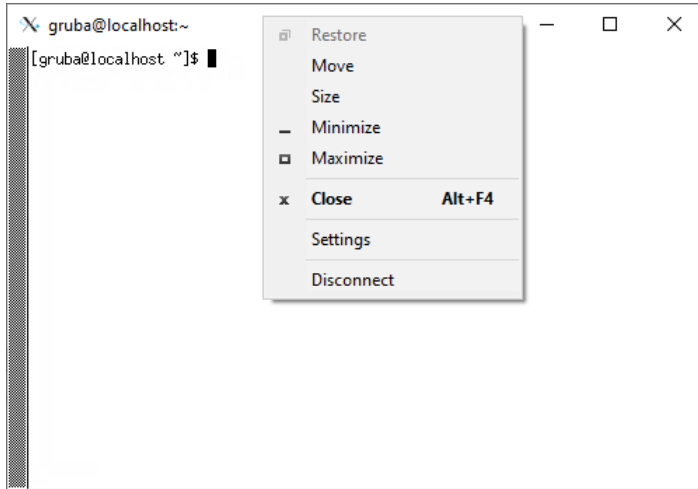
- **Display/Hide Bookmark Groups** - Click the group icon  to hide or display bookmark groups.
- **Display/Hide Bookmark Details** - Click the display icon  to hide or display bookmark details.
- **Favorites** - Single click a bookmark, then click the heart icon  to add as a favorite. This will also add a favorite group to the bookmark group listing.
- **Bookmark Details** - The bottom of the Bookmark window will display the details of the selected bookmark.
  - **Command** - Command used for the bookmark
  - **Command History** - Click on the history icon  on the right on the command field. This will list recently launched sessions.
  - **Window Mode**
    - **Multiple** - Session will launch in multiple window mode.
    - **Single** - Session will launch in single window mode. Custom dimensions of the single window can be entered. By default the dimensions are 1024x768.







## Launched Session Options (Scaling & Rendering Quality)

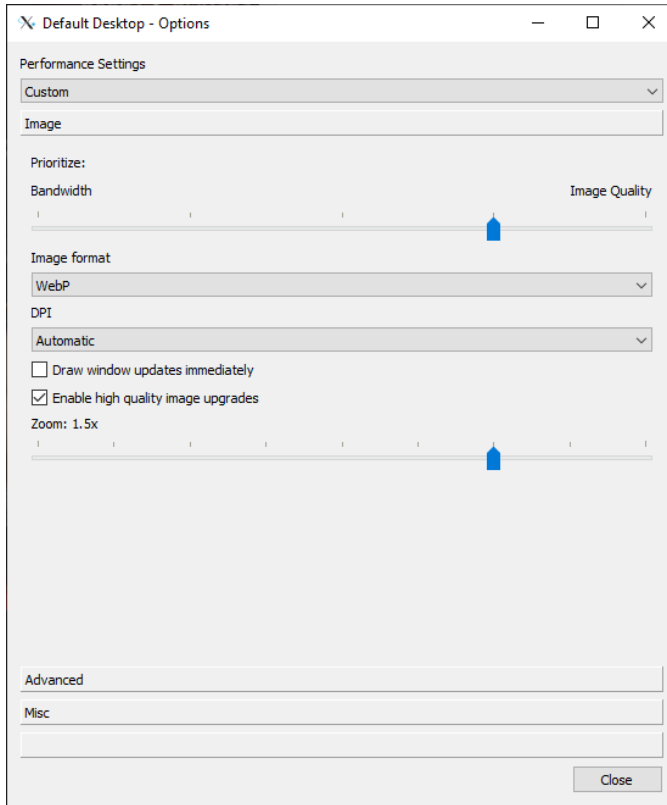
(Multiple Window Mode) Right click on the title bar of the session window to access options.

**Note: Session Sharing is not available when using multiple window mode**



- (Single Window Mode) After launching a session, the session option will be available. Move your mouse cursor to the top middle of the window running the session.

-  - Disconnect from the session. The session will still be running on the host and can be reconnected to.
-  - A highlighted resize icon will dynamically resize the session based upon the session window size.
-  - Click to full screen the session window.
-  - Click to bring up additional options including scaling and resolution settings.



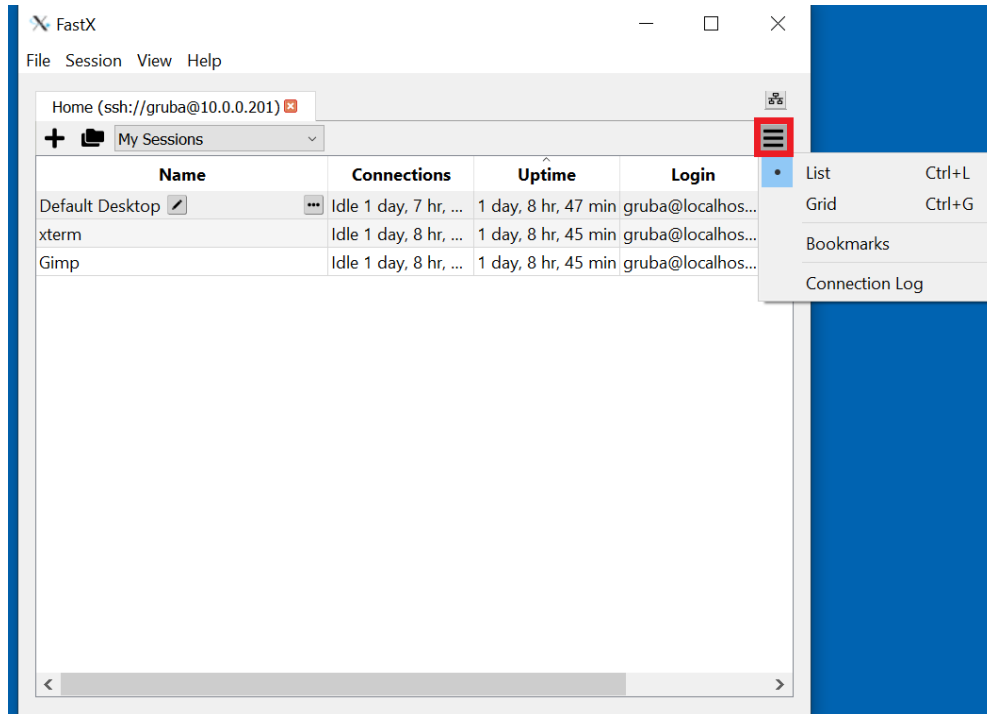
- **Performance Settings** are preconfigured settings that are created by admins. admins.
- **Image (button)**
  - **Bandwidth/Image Quality** are adjusted by a slider. The slider toward Bandwidth will use less bandwidth however Image Quality will decrease. The slider to the Image Quality will increase the image quality of the session but will use more bandwidth.
  - **Image Format** is the image format that FastX will render.
    - **PNG** - Lossless Image Quality at any level, High BW requirements, Medium Server Work -- **Best for LAN and High Speed Networks**
    - **WebP** - Lowest Bandwidth Requirements, Highest Server Work, Artifacts if lower than level 5 - **Best for low bandwidth needs with powerful server**
    - **JPEG** - Lowest Server Work, Medium Bandwidth, Artifacts if Lower than level 5 - **Best Balance, Can often be the fastest because of the speed to compress**
    - **RFX** - Server work comparable to JPEG, Medium Bandwidth, Artifacts if lower than level 4 - **Offers better image quality than JPEG for the same amount of work. However, RFX requires images be divided up into 64x64 pixel tiles. At very large**

**screen updates, the amount of tiles needed to render an image slows down the update**

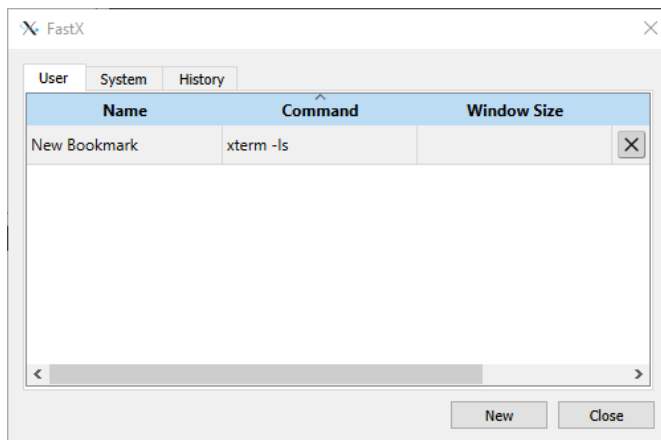
- **DPI** - Dots per inch controls the size of the text, apps, and icons. A lower DPI setting will make them appear smaller and a higher setting will make them appear bigger.
- **Draw window updates immediately** will immediately update the image when changed. (Generally used for debugging purposes)
- **Enable high quality image upgrades** will update with a high image when bandwidth is available. May slow down session performance.
- **Zoom** can be adjusted with the slider. Moving the slider to the right increases the zoom. (1.5 = 150% zoom)
- **Advanced (button)**
  - **Automatically adjust network settings** will have FastX adjust network settings automatically. Provides a more snapper session experience.
  - **Frame Rates** sets the maximum frames per second
  - **Frame Window Size** sets the number of window size frames that are sent.
  - **Hi Res image format** - High resolution image that is sent to the render session. Choose from image format RFX7, JPEG, PNG, WEBP.
  - **Hi Res maximum Size** - Size of image being sent with high resolution image for big block codecs. Choose from 64x64, 128x128, 192x192, 256x256, 512x512.
- **Misc (button)**
  - **Full Screen To Current Monitor** to full screen to current monitor when full screen is selected. Uncheck to span all monitors when full screen is selected.
  - **Capture All Keystrokes** - Capture all keystrokes from the server. (Recommended to be checked)
  - **Handle primary clipboard selection** - Uses primary clipboard when box is checked.

-  Session Sharing

## Session Manager Settings / New Bookmark



- **List** - This will display all running sessions in a list which can be sorted by Name, Connections, Uptime, and Login. Single click the running sessions to bring up options.
- **Grid** - Will display a grid of your active sessions with a screenshot of the session.
- **Bookmarks** - Will bring up a Bookmarks window where users can create bookmarks.



Creating a new user bookmark. (only Single Window Mode) The bookmark will be placed in a "My Bookmarks" group.

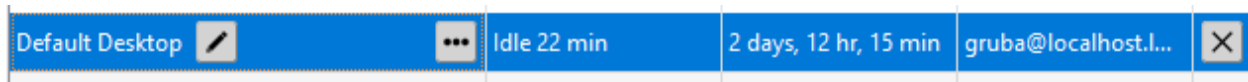
- Click the "New" button to create a new bookmark.
- Name - Double click on the name (New Bookmark) to edit the name
- Command - Double click on the command (xterm -ls) to edit the command



- Window Size - Double click on the Window Size to edit the dimensions of the single window mode session.
  - Delete - Single click the bookmark and hit the x icon on the right.
- **Connection Log** - Will prompt the Connection log window. Logs connection and session logs.

## Session Manager Options

### List View

Single click on the active session.



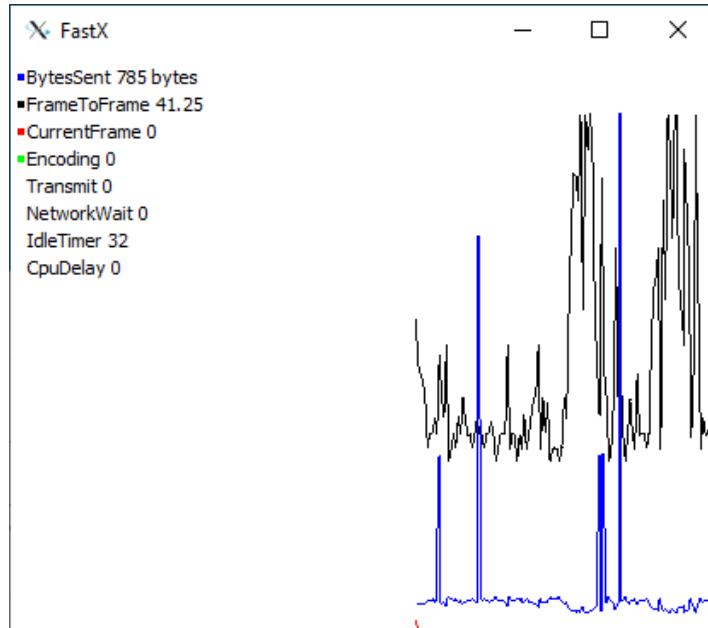
-  - Click to edit the running session name.
-  - Click to access the active session options:
  - Info - Prompts the Session Info Window

| Key               | Value                             |
|-------------------|-----------------------------------|
| Session Id        | 077b17e759634db77337073a4fbf33f0  |
| Login             | gruba                             |
| Hostname          | localhost.localdomain             |
| Server Version    | 3.2.68                            |
| Command           | /etc/X11/xinit/xinitrc            |
| Window Mode       | desktop                           |
| Geometry          | 1961x1459                         |
| Started           | Thu May 12 08:41:02 2022 GMT-0700 |
| Last Connected    | Sat May 14 20:18:17 2022 GMT-0700 |
| Last Disconnected | Sat May 14 20:33:35 2022 GMT-0700 |
| Sharing           | true                              |


Close

- Sharing
- Parameters - Prompts a Dialog window where users can add parameters to active sessions.
- Disconnect - Disconnects a launched session.
- Purge - Purges the session from the active session manager. Used if a session cannot be terminated.
- View Logs - Prompts Session Logs for monitor, server, stderr, stdout, and xorg.
- Fullscreen on Connect - Set the session to full screen when reconnected.

- Setting - Prompts the session options window. Only active when session is launched
- Restore Windows - Restores session when minimized or behind other windows. Only available when the session is launched.
- Diagnostics - Prompts a diagnostic window for the session.

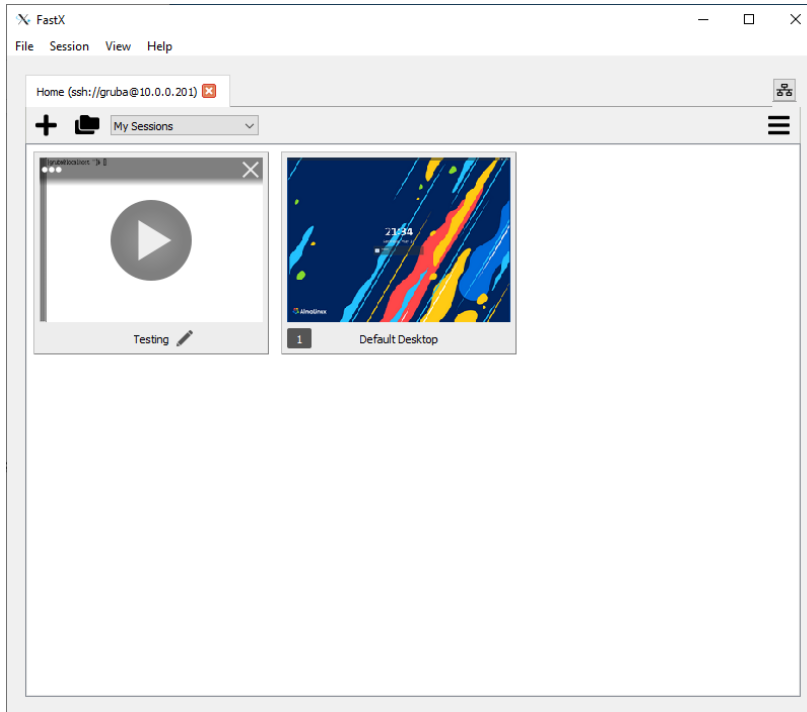




- Terminate - Terminates session

-  Click to terminate the running session.

### Grid View

This will display all running sessions in a grid format as a screen shot of the session. Single click the running sessions to bring up options.

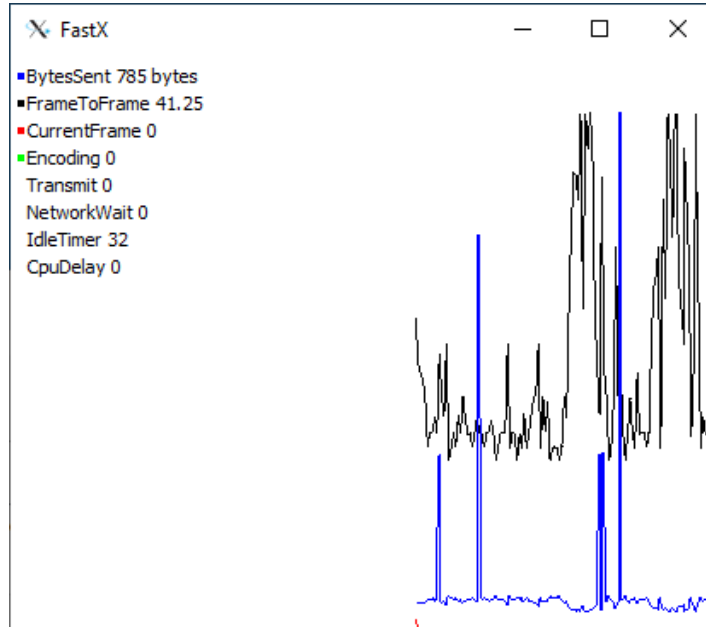


-  Click to edit the name of the running session name.
-  - Click to bring up active session options
  - Info - Prompts the Session Info Window

| Key               | Value                             |
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| Login             | gruba                             |
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- Sharing
- Parameters - Prompts a Dialog window where users can add parameters to active sessions.
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- Restore Windows - Restores session when minimized or behind other windows. Only available when the session is launched.
- Diagnostics - Prompts a diagnostic window for the session.



- Terminate - Terminates session

-  - Click to terminate the running session.

-  Click to launch running session.

## Debugging Options

The FastX client has a few debugging options available by settings environment variables

### FASTX\_ENABLE\_SESSION\_LOGGING

Setting this environment variable to 1 will enable session logging. This will log all input as well as log the multiple window mode surface operations.



## FX\_DIAGNOSTICS

Setting this environment variable to 1 will enable the diagnostics dialog to appear in single window mode. Click on the button to bring up a diagnostics window that will show the recorded speeds of rendering and transfer of frames

## Command Line Client

Advanced scripts can use the FastX command line client to show a FastX session on a workstation. An example is a custom user interface that interacts directly with the [FastX API](#). The FastX session/start and session/connect APIs return an object that includes the following members:

- *windowMode* ("desktop" or "rootless")
- *geometry*
- *id*
- *login*
- *uri*
- *password*

The command line client can be found in the same folder as the FastX3 executable. It is named "fastxcli" ("fastxcli.exe" on Windows). It takes the following arguments, which should be supplied using information from the API call above, as in this description:

- --sessionId : *id* from API
- --user : *login* from API
- --password : *password* from API
- --tport : To be used only with SSH client tunneling.
- --geometry : If *windowMode* from API is "rootless", use "rootless". Otherwise use *geometry* from API.
- --url : Take *host* and *port* (usually 3300) from the URL used to make the API call, and *uri* from the API. Build this argument substituting those parameters: *wss://host:porturi*

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