Web Hosting 101

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Congratulations! You've made a website!

Now where will it live?

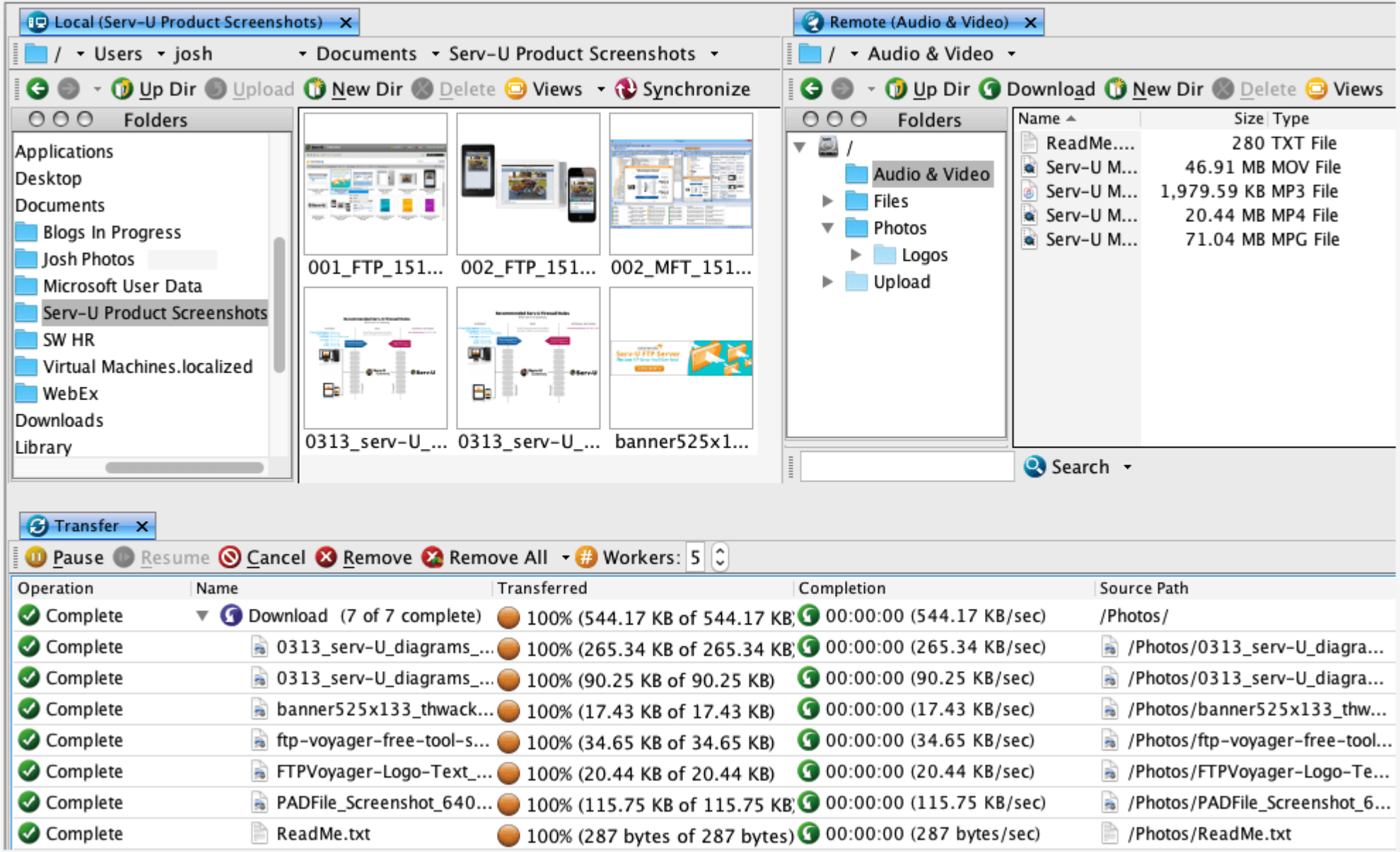
- It will live on a webserver which hosts the website
- You will be able to access the website using the domain name

What will you need to host a website?

- A FTP (File Transfer Protocol) program
  - This software will transfer files from your computer to the server
- A web server
  - Rented file space on a hosting company's web server
- A domain name
  - The address where you content will be served

FTP (File Transfer Protocol)

- An insecure protocol for transferring files from one host to another over the internet
- De facto method of file transfer between hosts
- SFTP (Secure File Transfer Protocol)
- FTP programs: FileZilla, WinSCP, SmartFTP, Cyberduck, and many more . . .
- *a protocol is a system of rules which defines how data is exchanged between computers. The devices need to agree on the format of the data that is being exchanged
- *a host is device that is connected to the internet or a local network



https://www.dnsstuff.com/free-ftp-client

HTTP (Hypertext Transfer Protocol)

- An application layer protocol for transmitting hypermedia documents such as HTML
- Designed for communication between web browsers and web servers
- Follows the client-server model
  - Client opens a connection to make a request, and then waits to receive a response
- *Application layer: abstraction layer that specifies the shared communications protocol and interface methods by hosts on a network (Read more)

What is a web server?

- Can refer to both hardware and software, or both working together
- Hardware: A computer that stores webserver software and a website's component files (HTML docs, CSS sheets, JS files)
  - Connects to the internet and supports physical data interchange with other devices connected to the web
- Software: controls how web users access hosted file.
  - HTTP server which understands URL and HTTP (the protocol your browser uses to view webpages)
  - Can be accessed via the domain name of the website it hosts. Delivers the content of the website to the user's end device

What is a domain name?

- Human readable address for any webserver on the internet
- Any internet connected device has an IP address, ie 173.194.121.32, but domain names provide a more memorable and informative means of accessing the webserver
- Top level domain, sub domain, label
  - (www).(mysite).(com)

Where can you get a domain name?

- How to buy a domain name
  - Pay for the right to use a domain for one or more years
  - Registrars register and keep track of technical information related to domain names
    - Domain.com, Bluehost, GoDaddy, Network Solutions, DreamHost, etc.

DNS Refreshing

- Domain Name System
  - Turns domain names into IP addresses
  - Allows browsers to access websites
- DNS Servers store DNS databases of every domain name world wide
- All DNS servers refer to a few special servers called “authoritative name servers”, “top-level DNS servers”
  - Each DNS Server that knows about a given domain name stores that info for some time before it is refreshed
  - May take some time for DNS Servers to get up to date changes in domain names
  - Some web hosting services may need you to enter the name server for your domain name in order to update it

Hosting Options

- Hosting services: Network Solutions, Pair Networks, Bluehost
- Github Pages
  - Host your website on git
- Heroku
  - Requires Github proficiency, good for applications built usingNode.js

Website Emulators

- Emulate a web development environment
- Let you enter HTML, CSS, and JavaScript, and then display the result of that code as a website
- JSFiddle, JS Bin, CodePen
- Good for sharing code and learning