A COMPARISON OF CLOUD STORAGE SERVICES

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SUMMARY

You can use free cloud storage to protect yourself from the losing data files and to synchronize data files between a server farm and multiple computers, cell phones, and tablets.

SUMMARY (continued)

This comparison of "OneDrive", "Google Drive", "Box", and "iCloud" will help you decide which cloud storage service is best for you.

TOPICS

- Cloud Storage Services In General
- Four Cloud Storage Services With Free Entry-Level Storage
- Differences Between the Four Cloud Storage Services

TOPICS (continued)

- "OneDrive" Details
- "Google Drive" Details
- "Box" Details
- "iCloud" Details

TOPICS (continued)

- Downloading the Files and Folders That You Have Stored At The Server Farm
- Display of File Extensions?
- Uploads of Same-Named Files and Folders
- "Windows XP" Issues
- Online Viewing and Editing of Stored Files

TOPICS (continued)

- Sharing / Publishing Stored Files and Folders
- More Details About The Four Cloud Storage Services
- Pricing for Additional Storage
- Additional Advice and Recommendations

CLOUD STORAGE SERVICES IN GENERAL:

FOUR CLOUD STORAGE SERVICES WITH FREE ENTRY-LEVEL STORAGE

- Microsoft's "**OneDrive**" (7 GB)
- "**Google Drive**" (15 GB)
- "**Box**" (10 GB)
- Apple's "**iCloud**" (5 GB)

FOUR CLOUD STORAGE SERVICES WITH FREE ENTRY-LEVEL STORAGE (continued)

- You probably already have a cloud storage account, if you use Gmail or any of Microsoft's online e-mail services:

Office
Windows Phone
Surface
Xbox
Bing
OneDrive
Outlook.com
Skype
Microsoft Store

+F

Search

YouTube

Maps

Play

News

Gmail

Drive

Calendar

A cluster of interconnected server farms provided by the cloud storage service connects to the Internet which connects to your computer:

Server Farms Operated by a Web-based Cloud Storage Service

Internet Connection

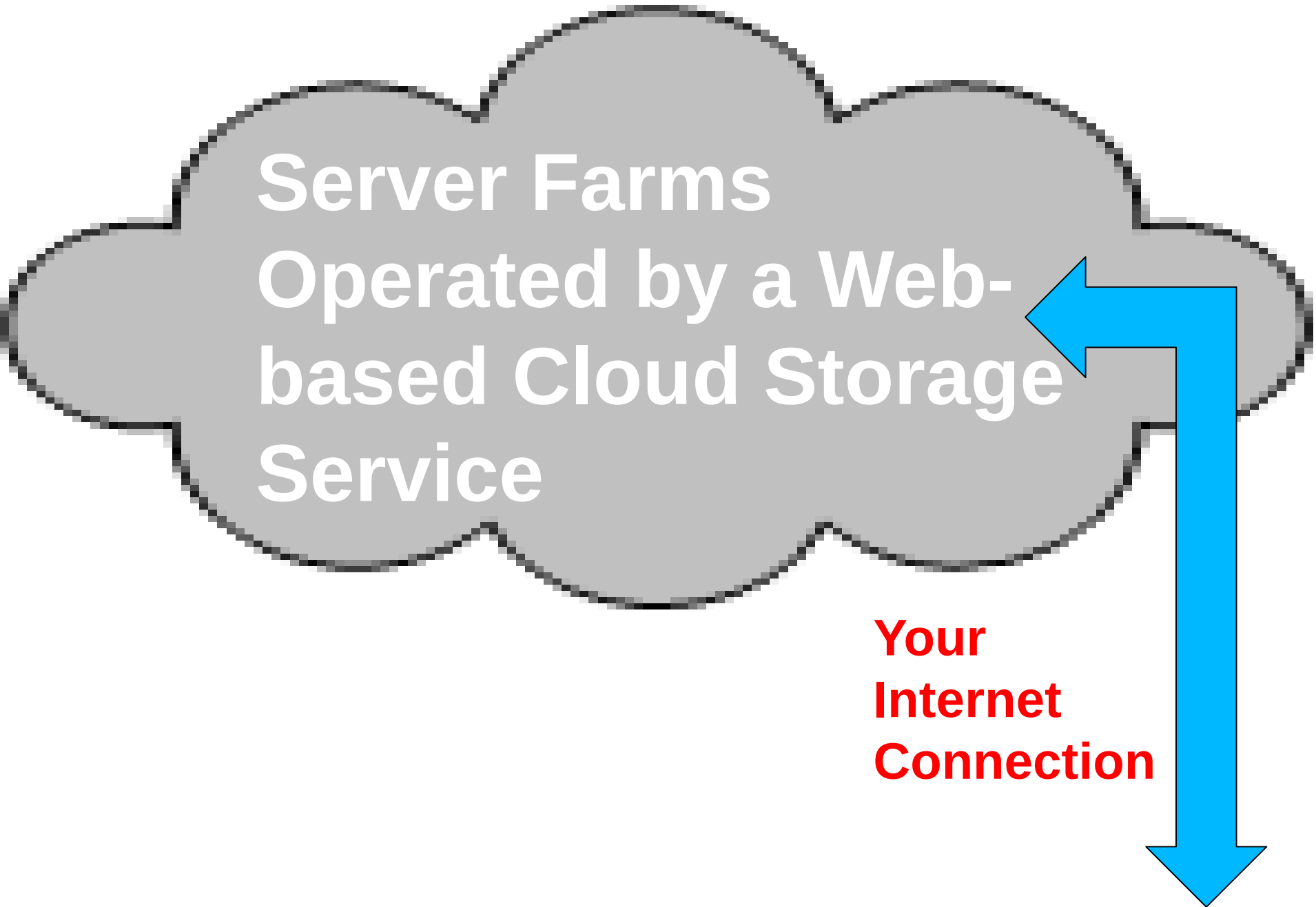
Your Computer, Tablet, PDA, or Cell Phone

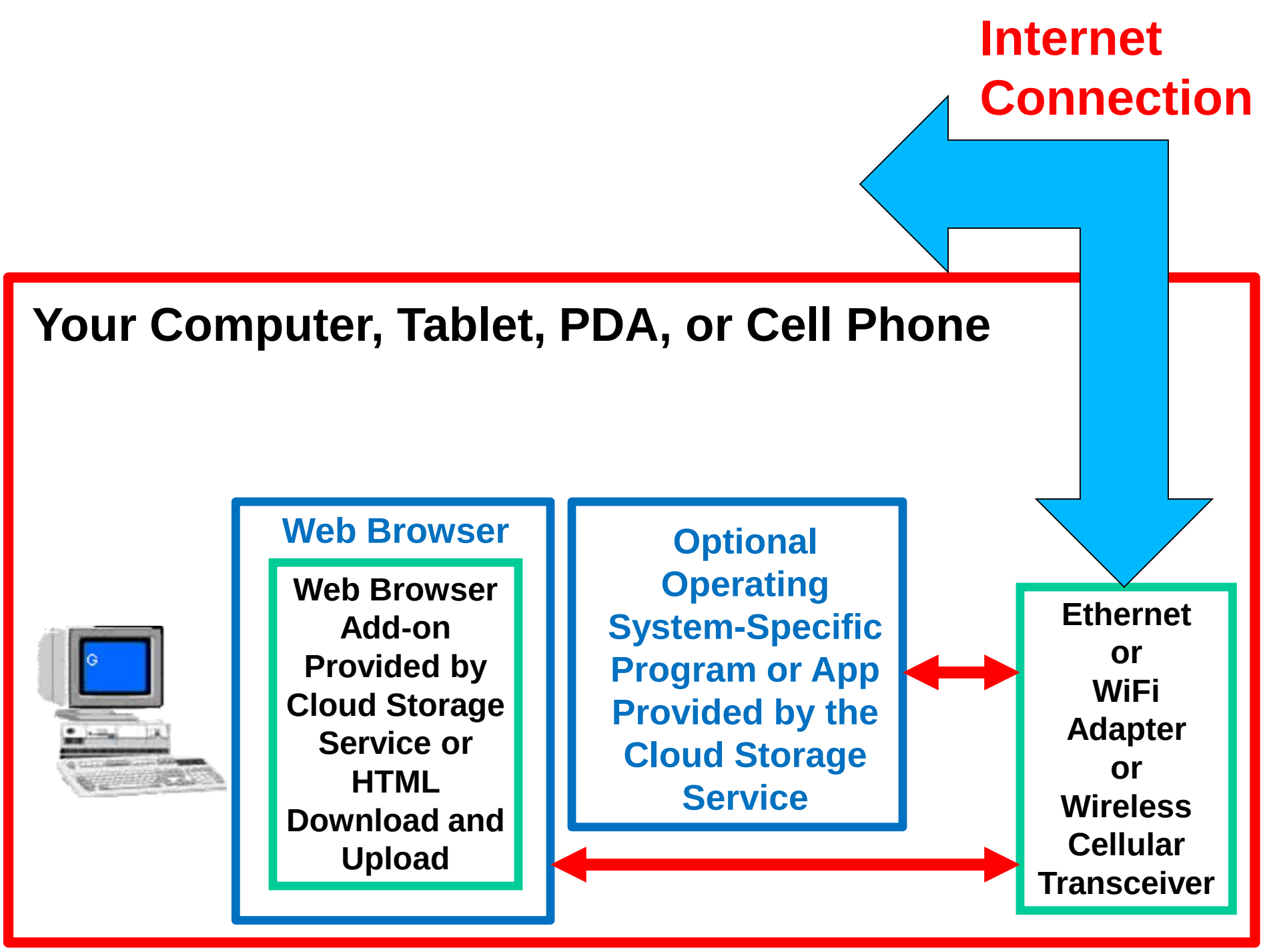
Web Browser

Web Browser Add-on Provided by Cloud Storage Service or HTML Download and Upload

Optional Operating System-Specific App Provided by the Cloud Storage Service

Ethernet or WiFi Adapter or Wireless Cellular Transceiver


Server Farms
Operated by a Web-based Cloud Storage Service
Your Internet Connection


Internet Connection
Your Computer, Tablet, PDA, or Cell Phone
Web Browser
Web Browser Add-on Provided by Cloud Storage Service or HTML Download and Upload
Optional Operating System-Specific Program or App Provided by the Cloud Storage Service
Ethernet or WiFi Adapter or Wireless Cellular Transceiver

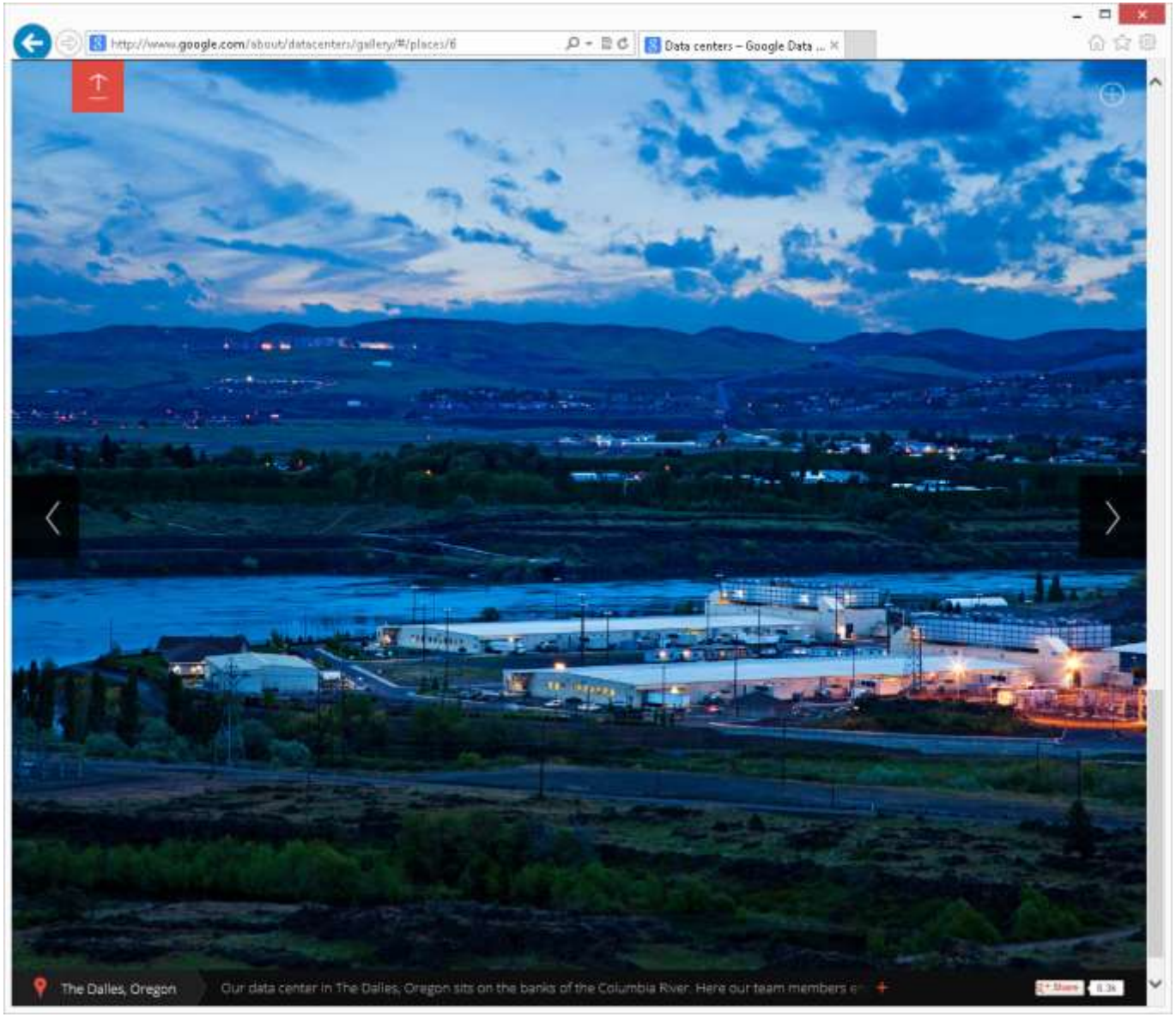
An example of a cluster of interconnected server farms: "Google Drive" server farms

"Google Drive" Server Farms

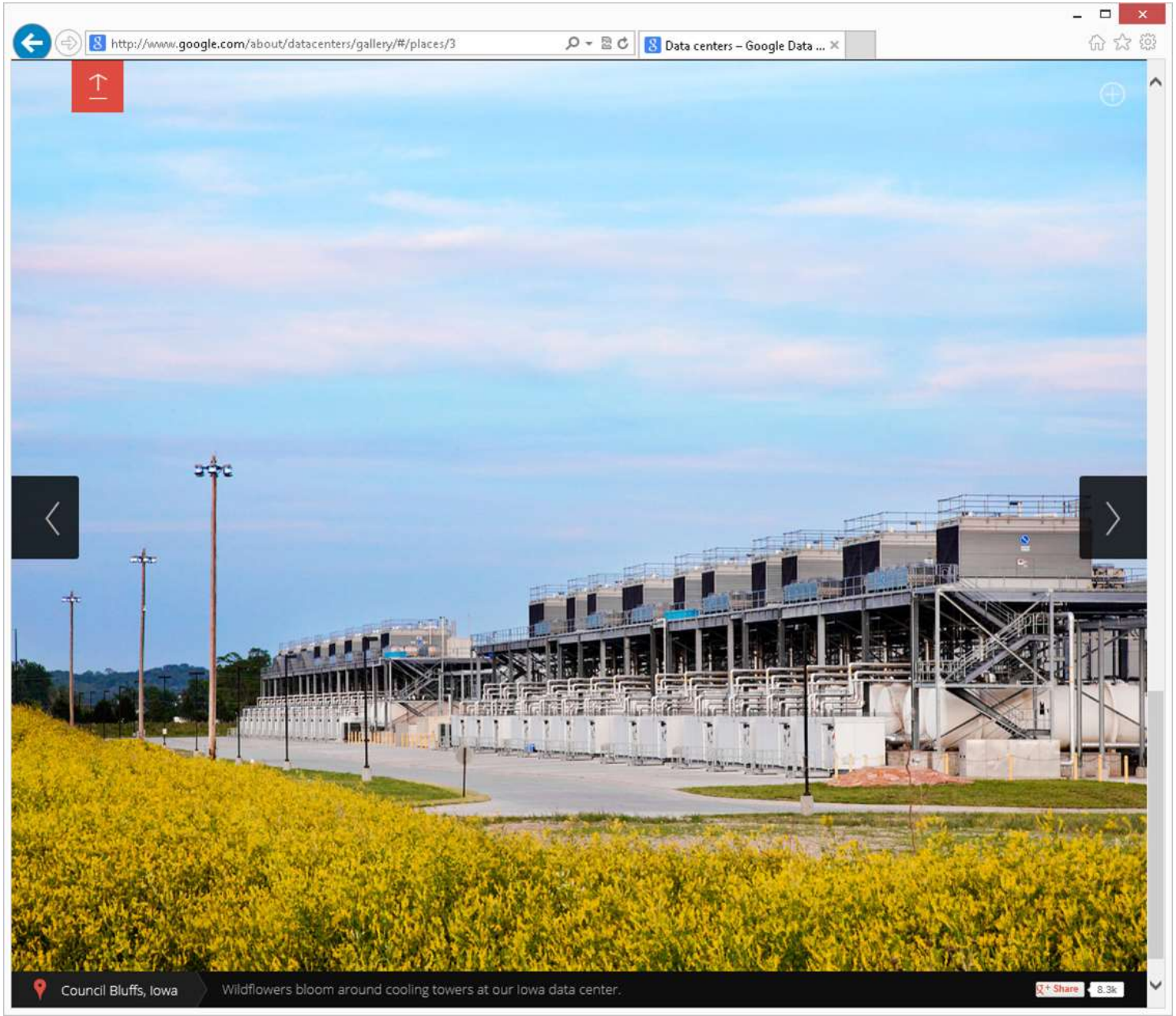
- Approximately 2 million servers for Google services such as "Google Drive", "Gmail", "Google Site", "Google Voice", "Google+", etc.
- Server farms are located in 12 places:
  1. Council Bluffs, Iowa
  2. The Dalles, Oregon
  3. Douglas County, Georgia
  4. Lenoir, North Carolina
  5. Pryor in Mayes County, Oklahoma
  6. Berkeley County, South Carolina
  7. Quilicure, Chile
  8. Hamina, Finland
  9. St. Ghislain, Belgium
  10. Dublin, Ireland
  11. Singapore
  12. Changhua County, Taiwan

The map in the previous page was found at http://www.google.com/about/datacenters/inside/locations/index.html

Server Farm at The Dalles, Oregon

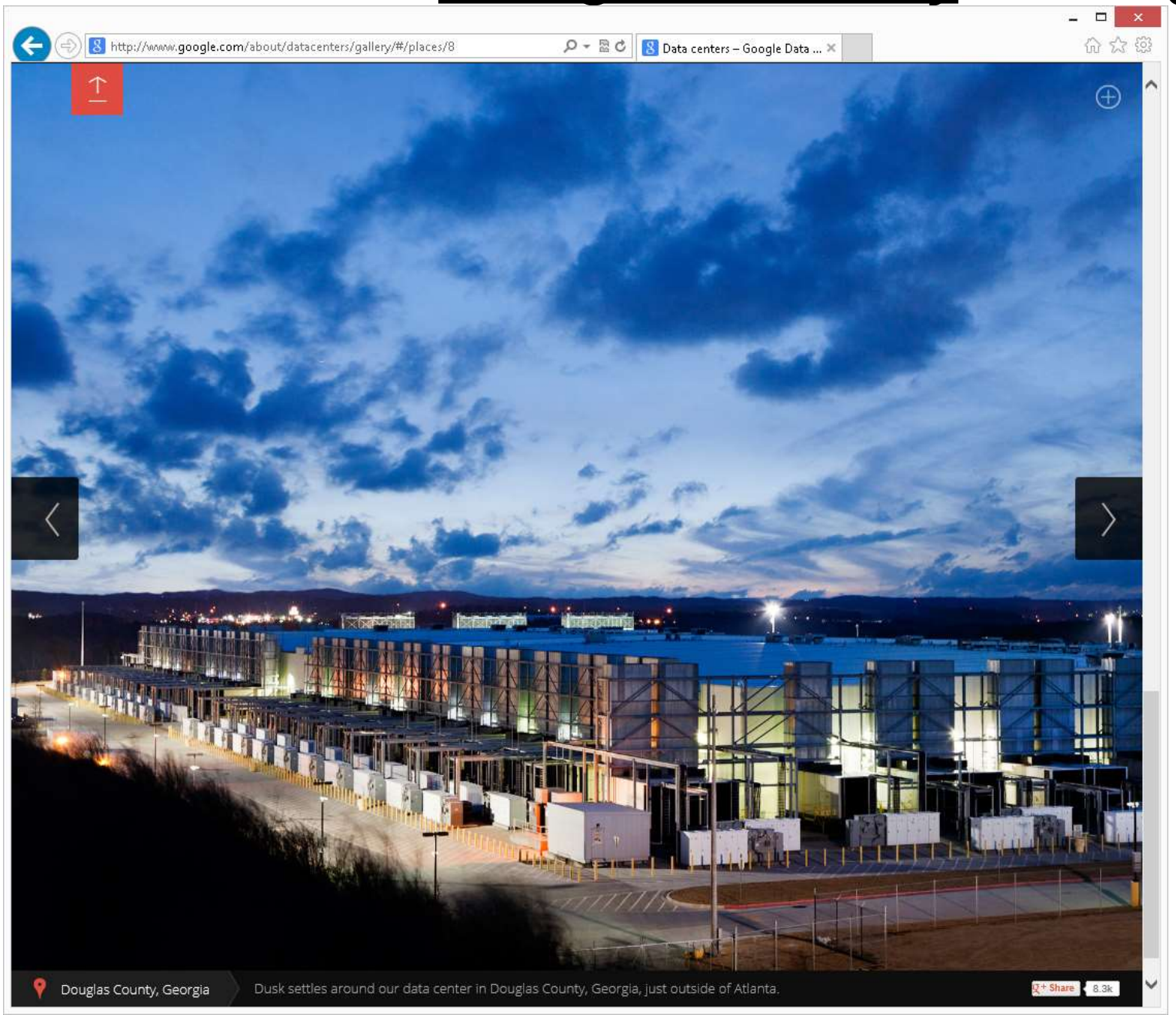


Server Farm at Council Bluffs, Iowa

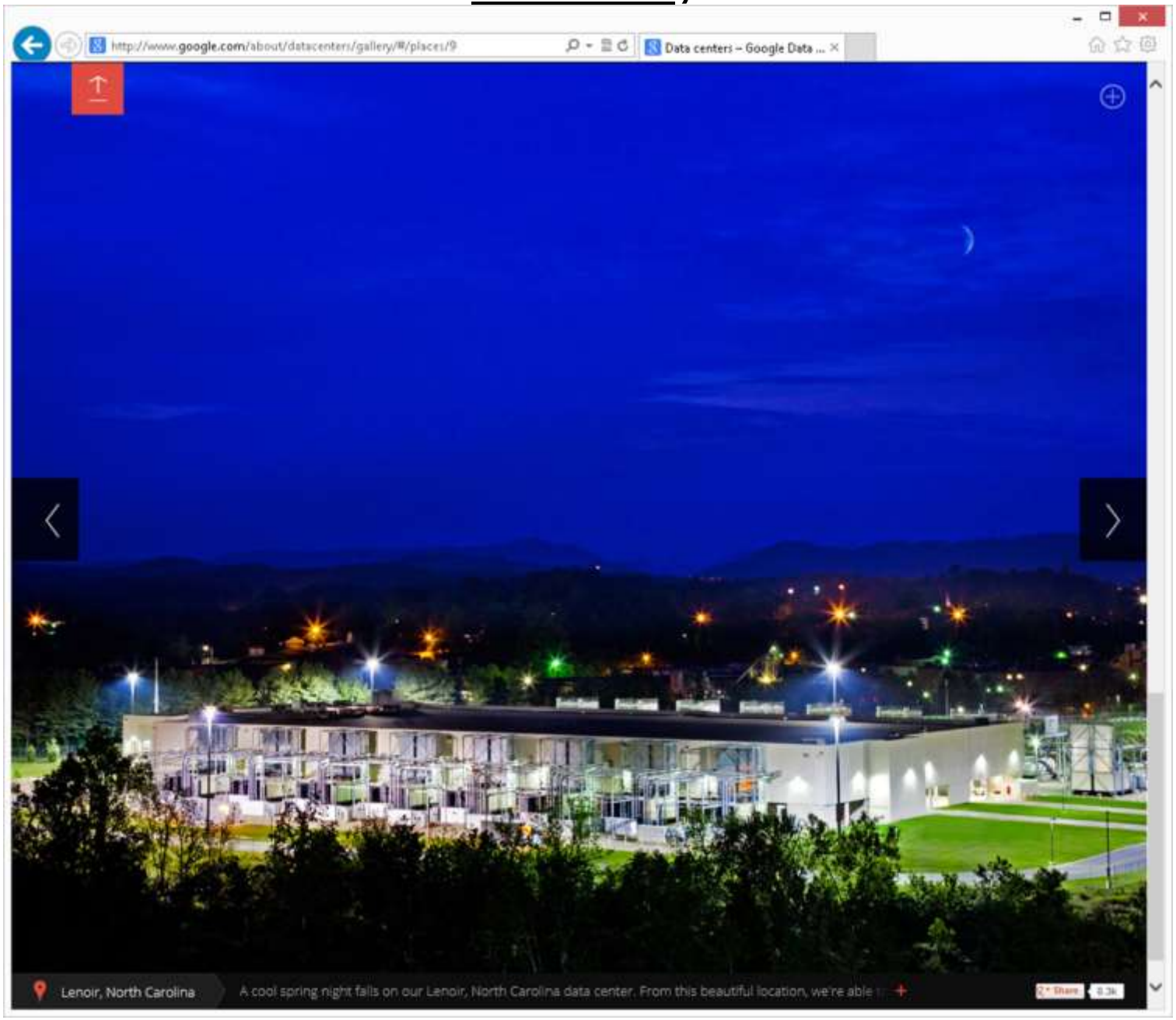


The Iowa server farm cost $1.5 billion to build according to http://www.datacenterknowledge.com/archives/2013/12/02/in-iowa-a-field-becomes-a-huge-google-server-farm/

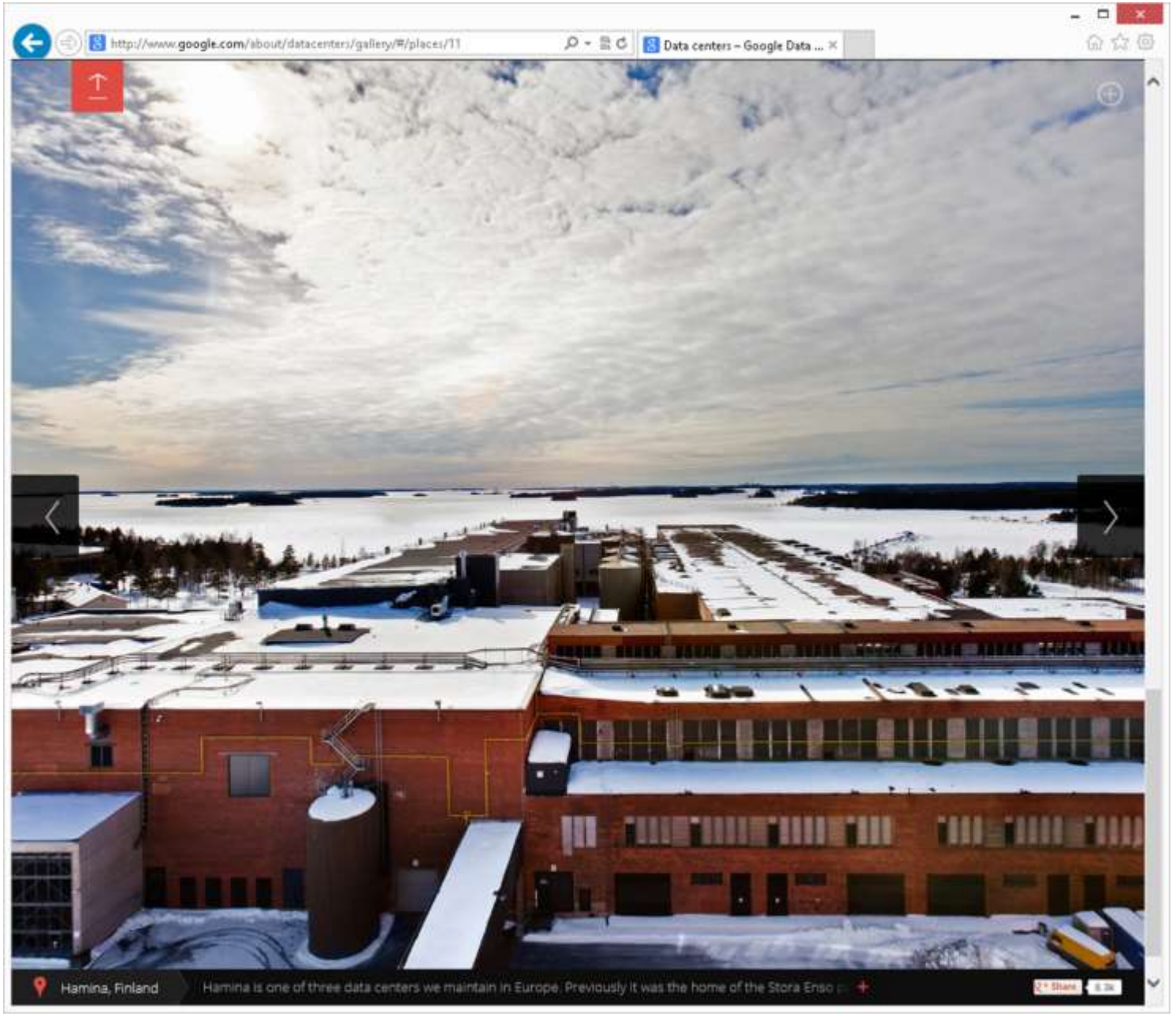
Server Farm at Douglas County, Georgia



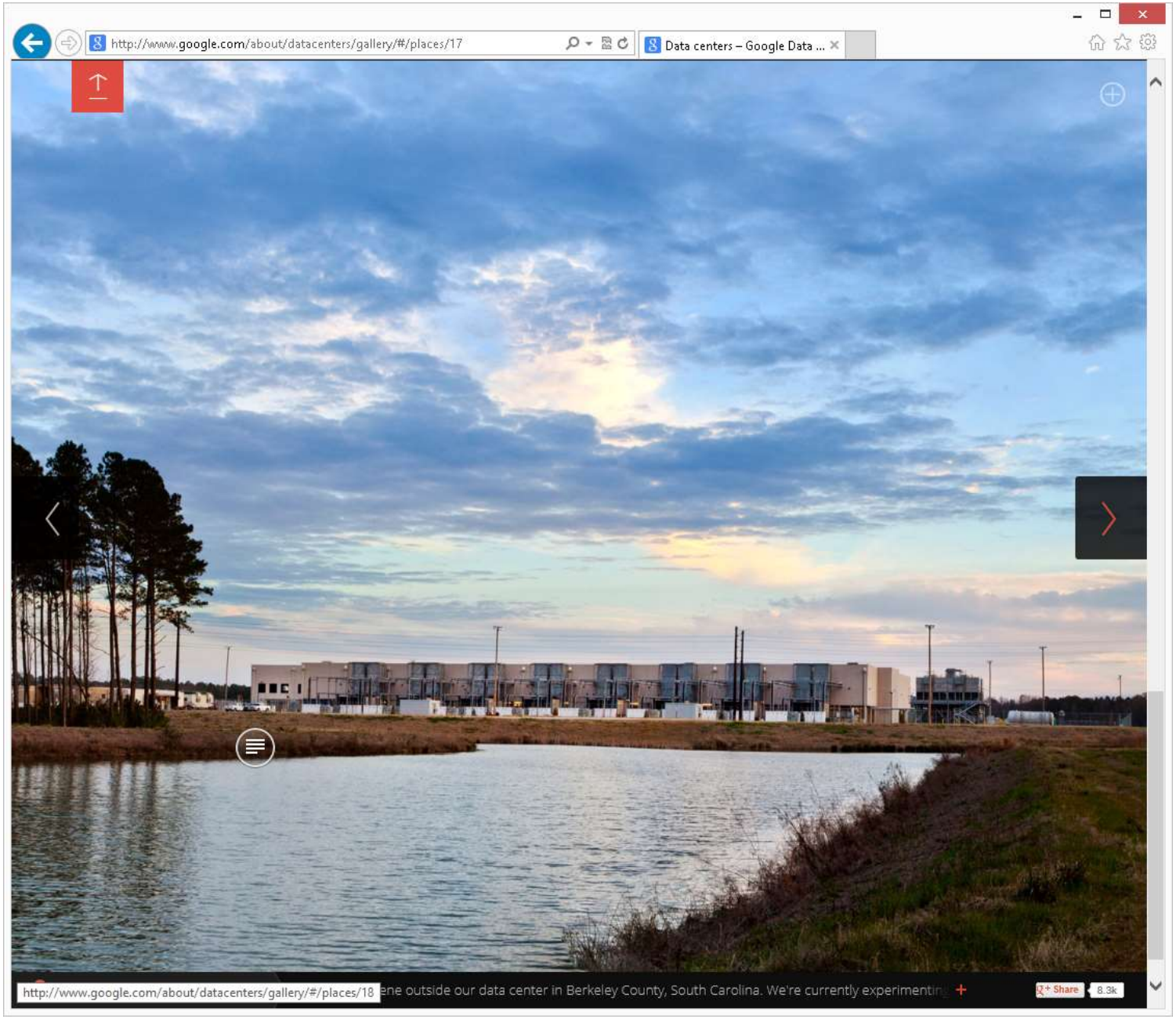
Server Farm at Lenoir, North Carolina



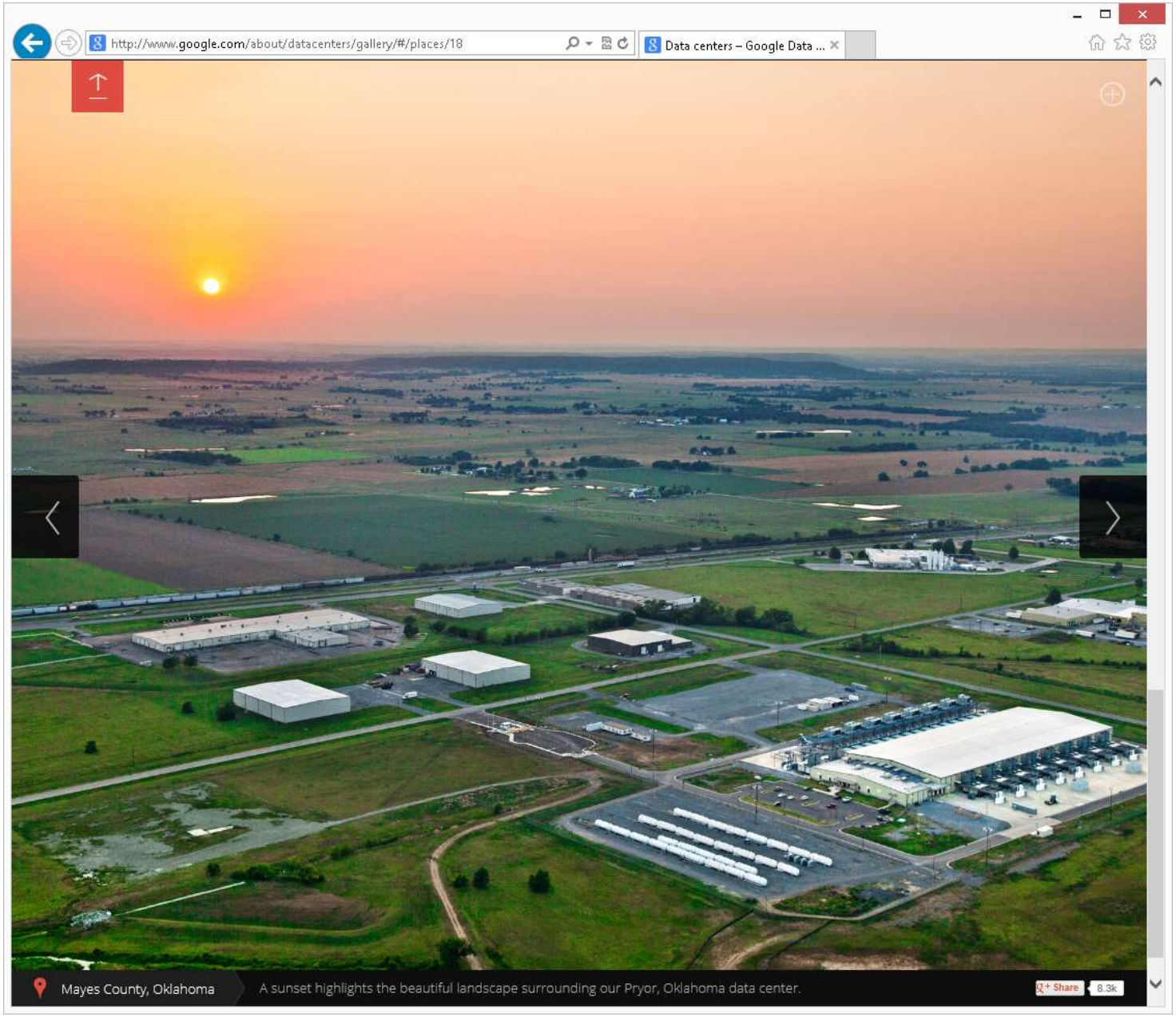
Server Farm at Hamina, Finland



Server Farm at Berkeley County, South Carolina



Server Farm at Mayes County, Oklahoma

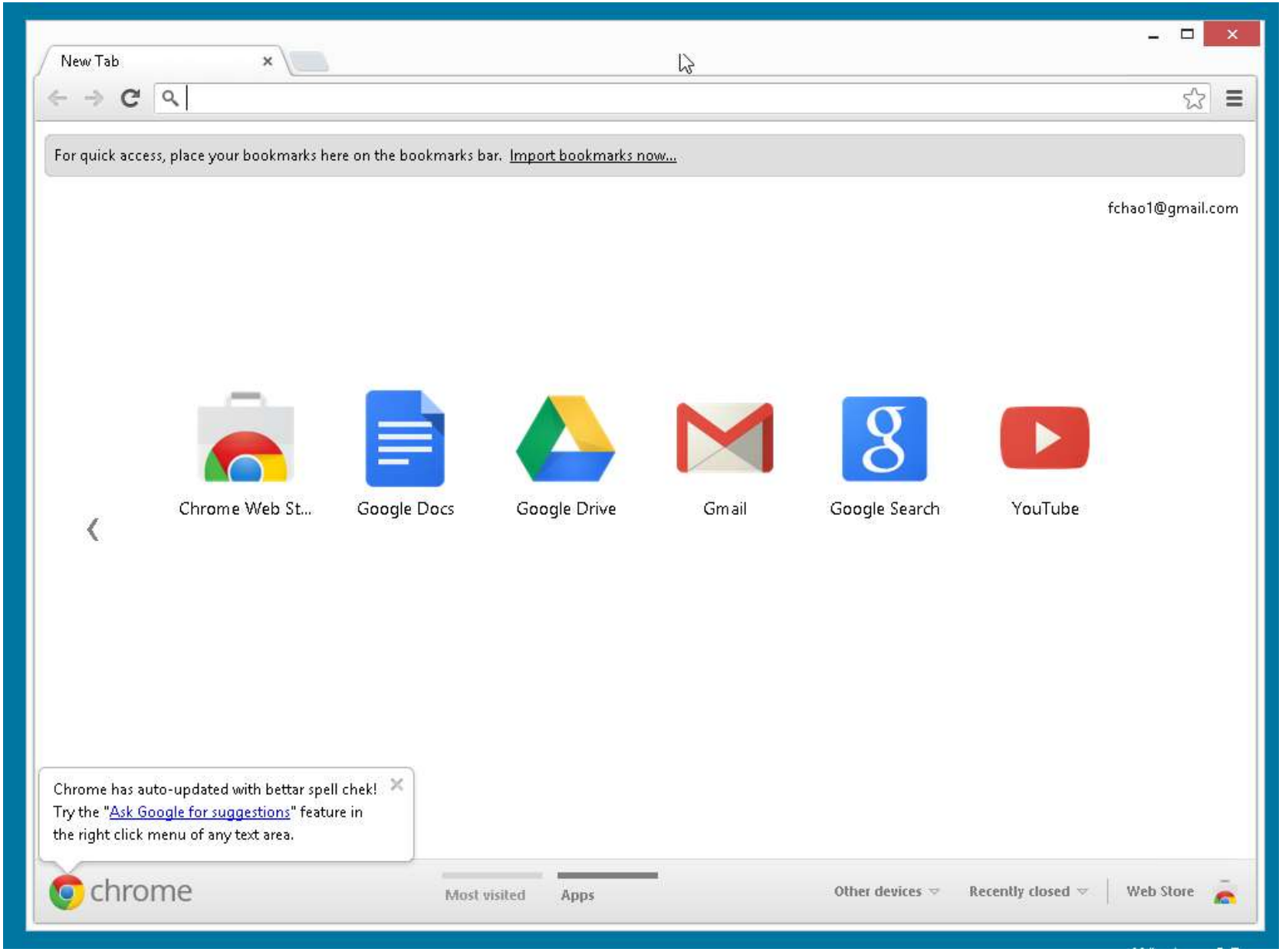


CLOUD STORAGE SERVICES IN GENERAL (continued)

- Two ways to upload and download data files and folders to the cluster of server farms
  1. Using a Web browser such as "Internet Explorer", "Mozilla Firefox", or "Chrome" (required) and
  2. Using a software program or app provided by the cloud storage service (optional)

An example of using a Web browser to upload and download files and folders from your computer's local hard drive up to a server farm:

You can use built-in capability of the "Google Chrome" Web browser to easily upload and download files and folders from your computer's local hard drive up to the "Google Drive" server farm(s):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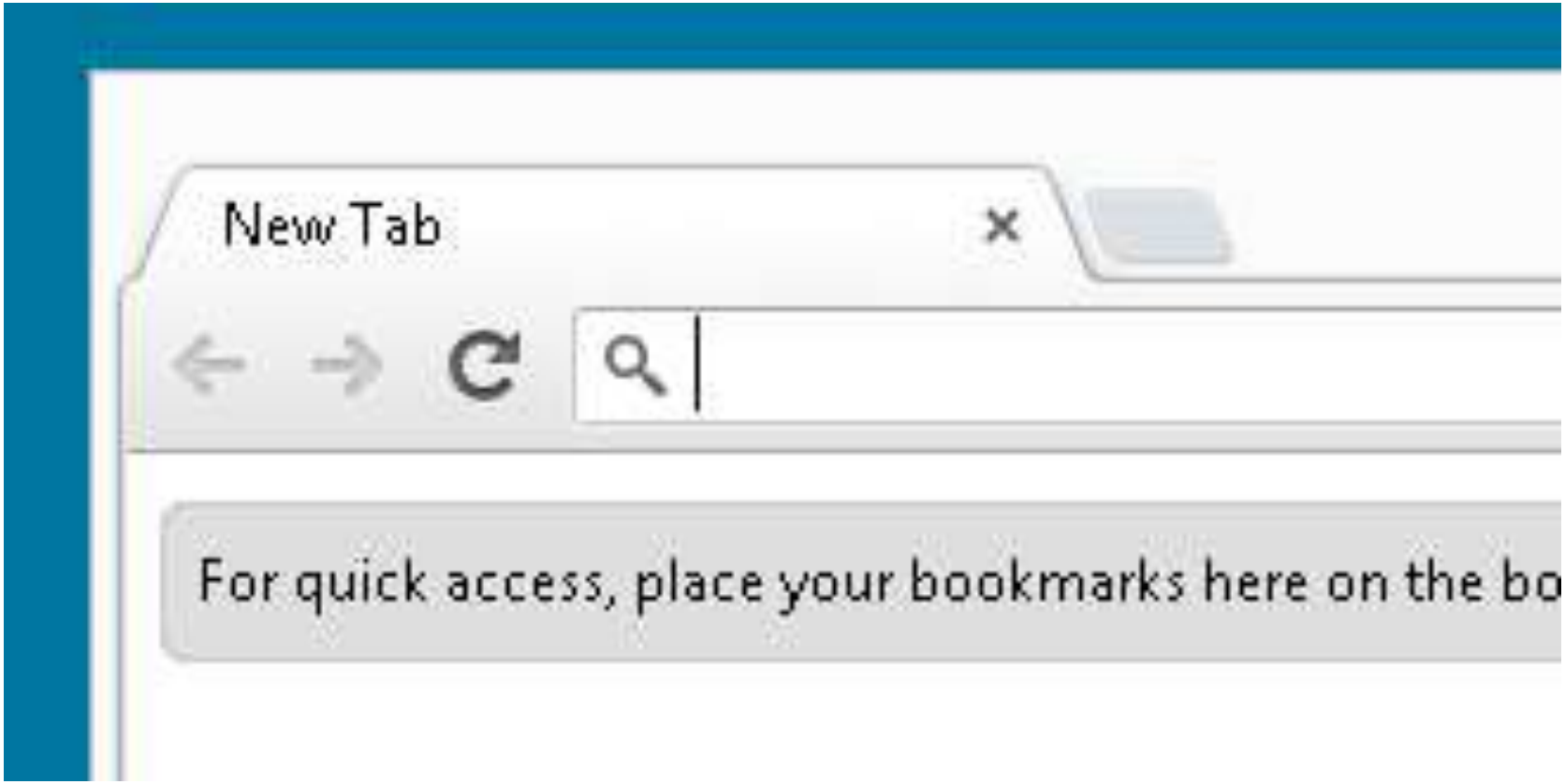
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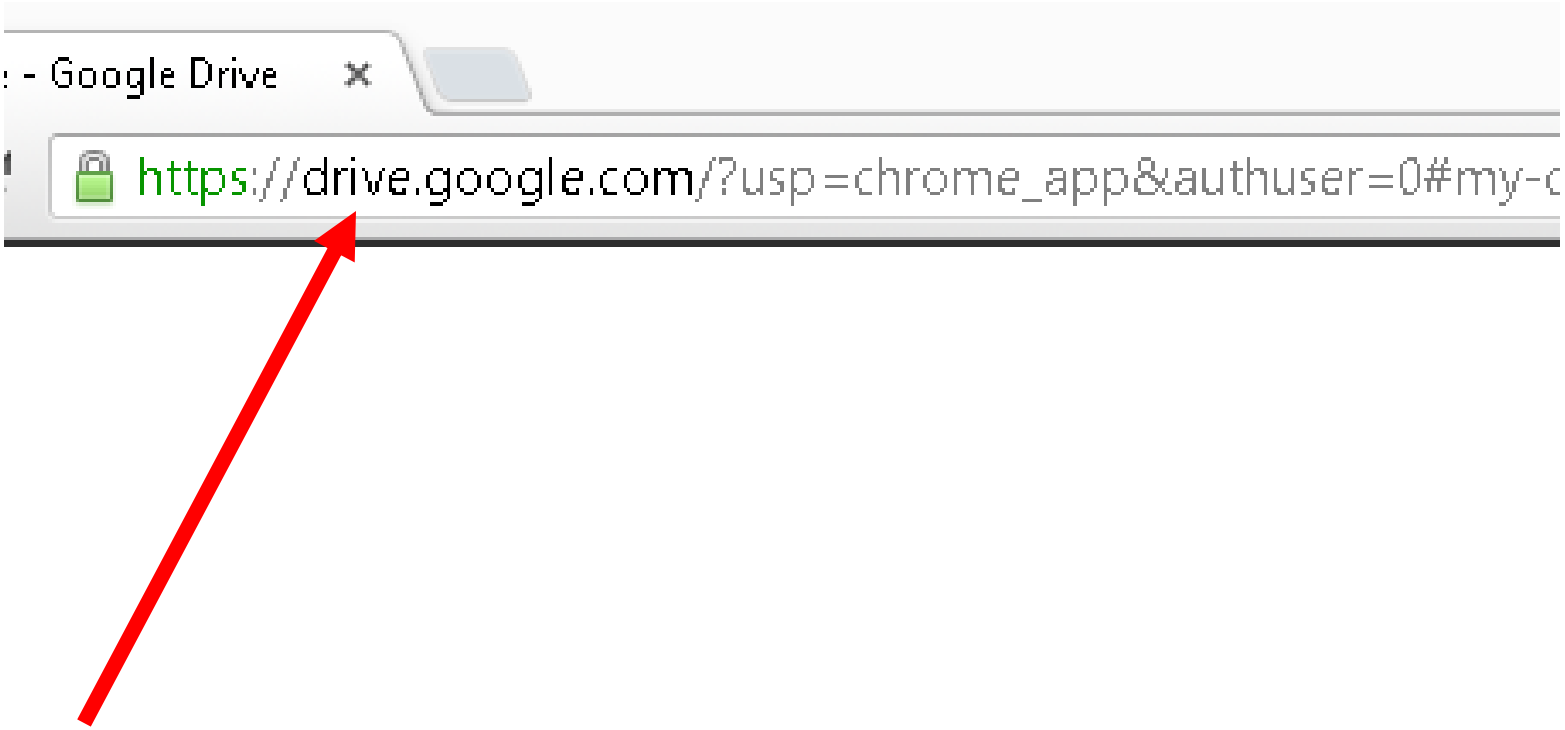
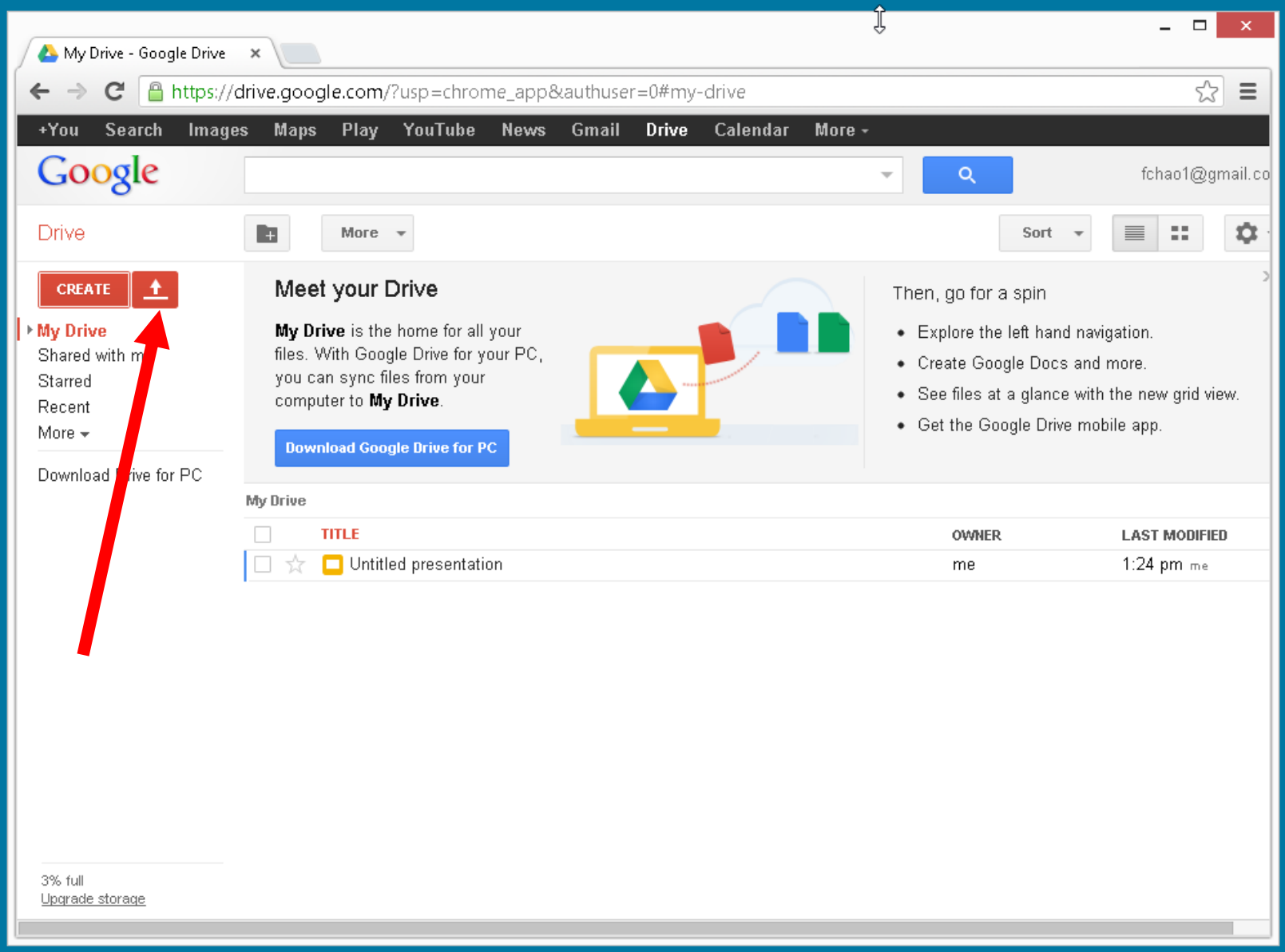
Google Drive


- Google Drive
https://drive.google.com/?usp=chrome_app&authuser=0#my-



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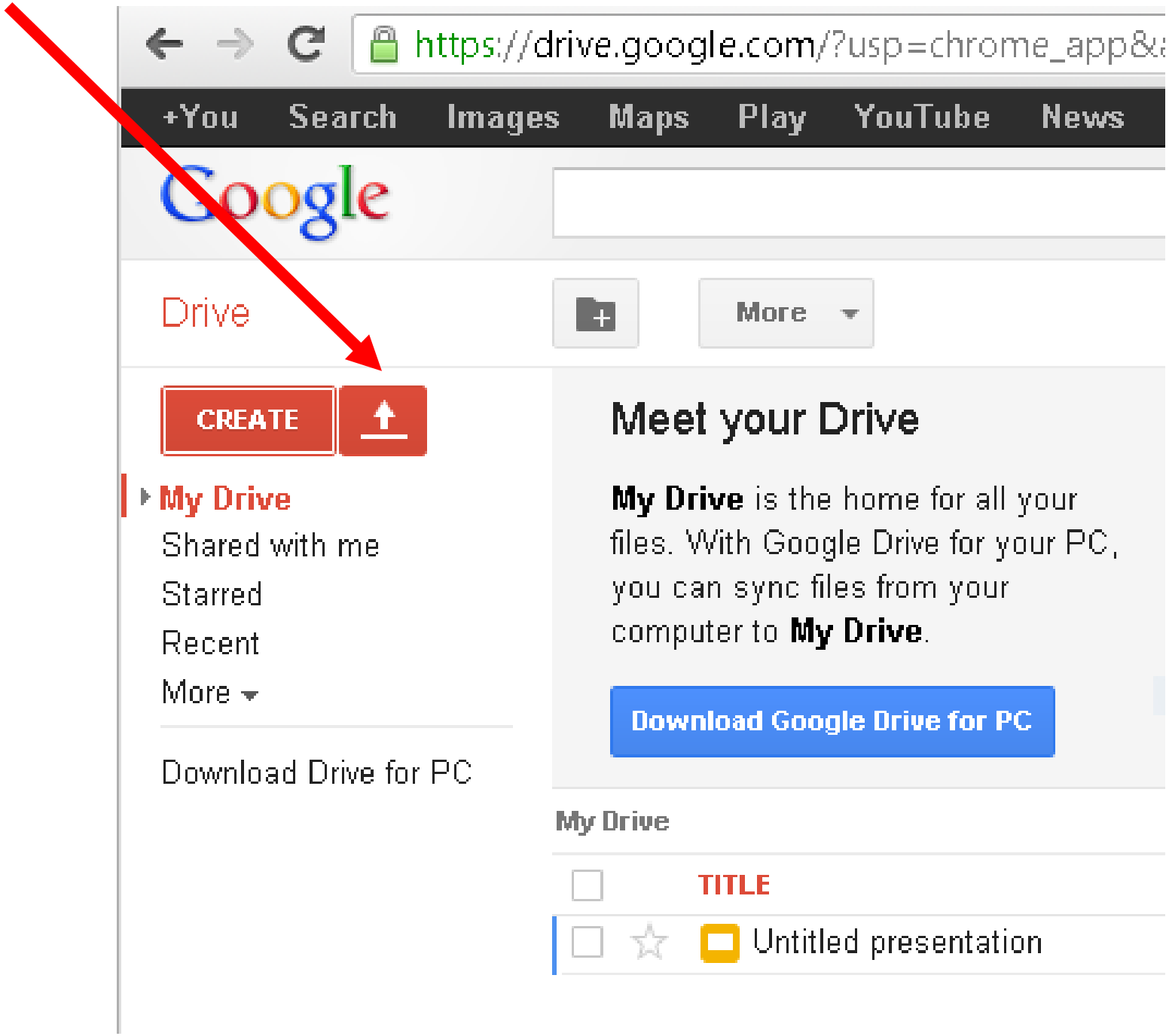
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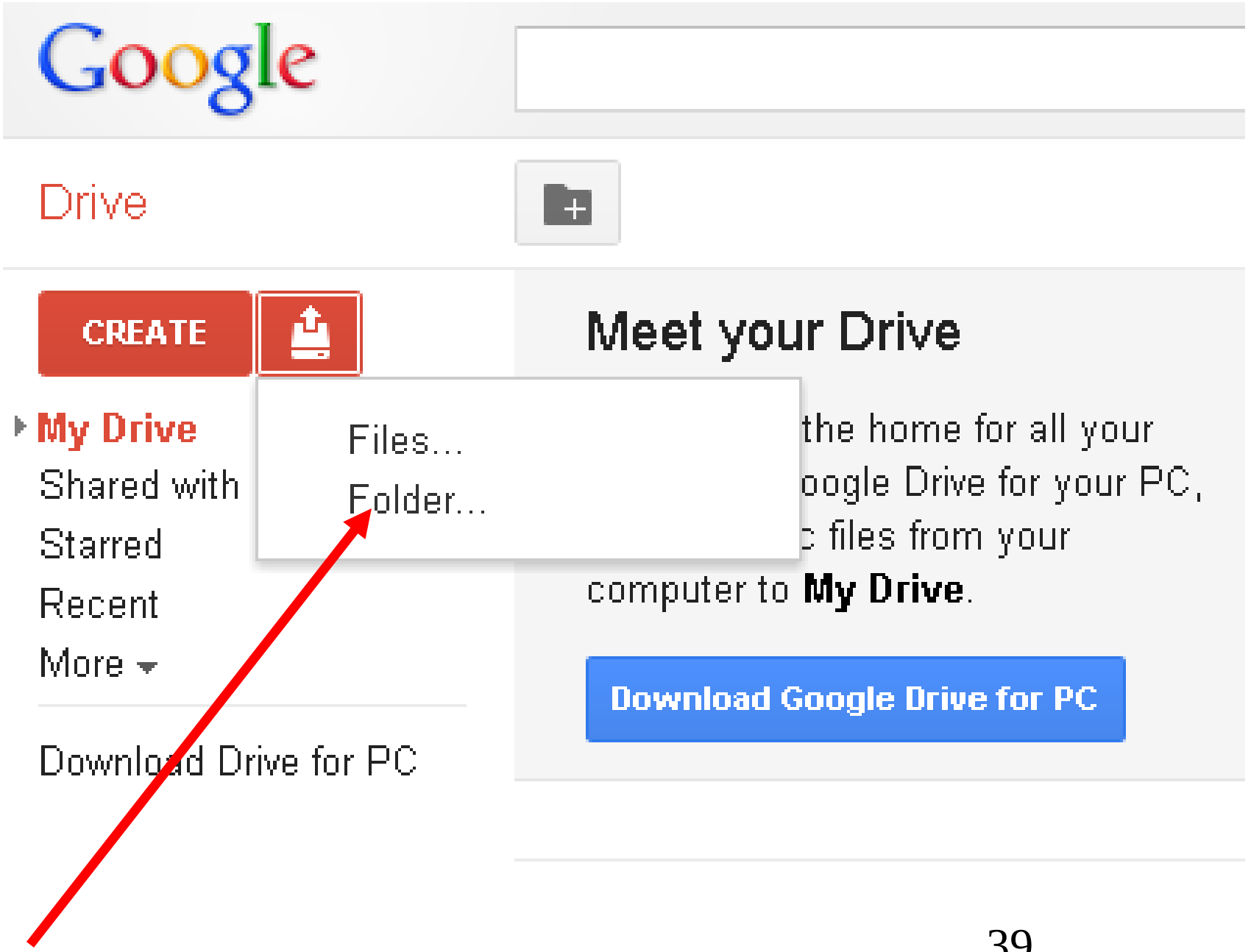
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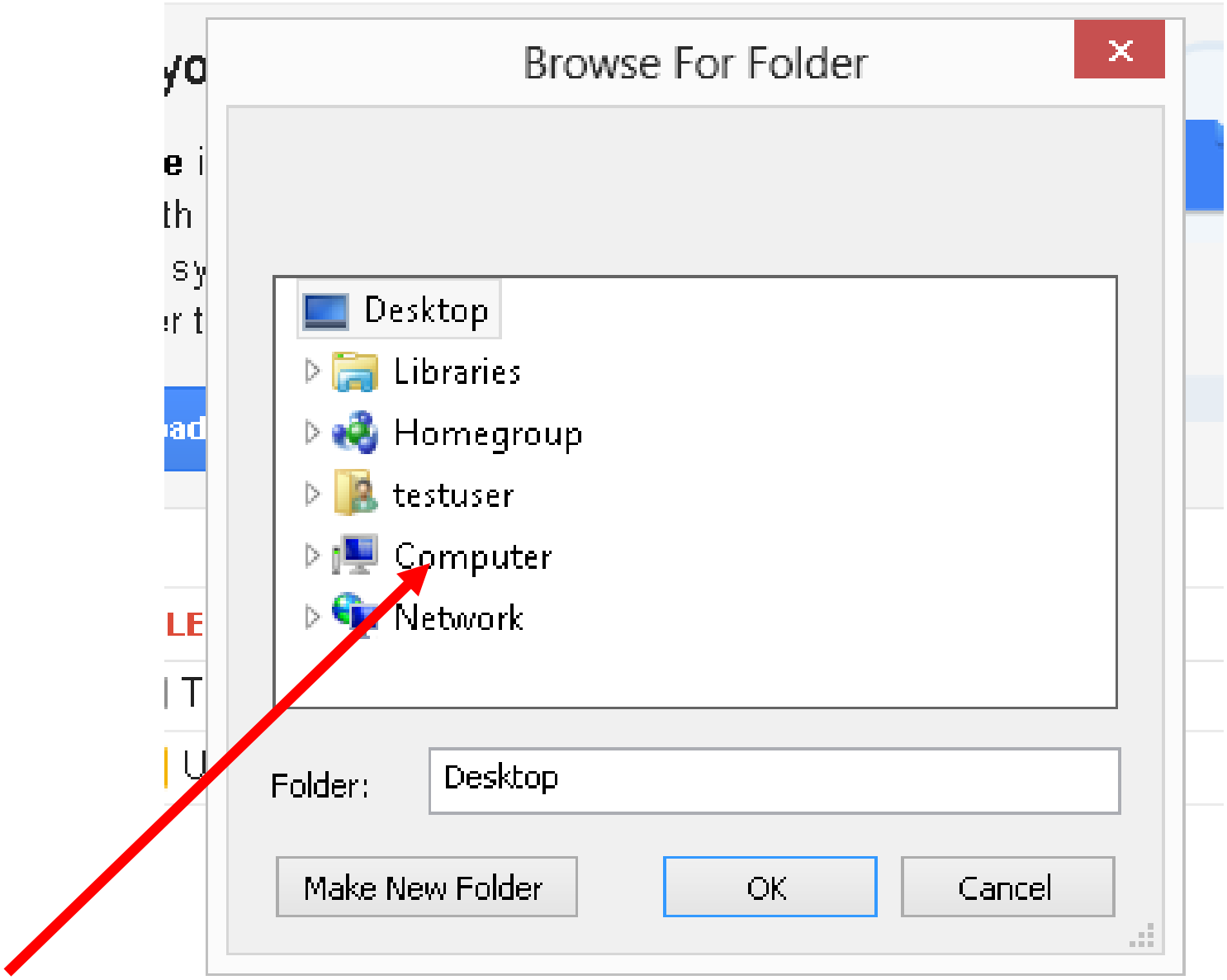
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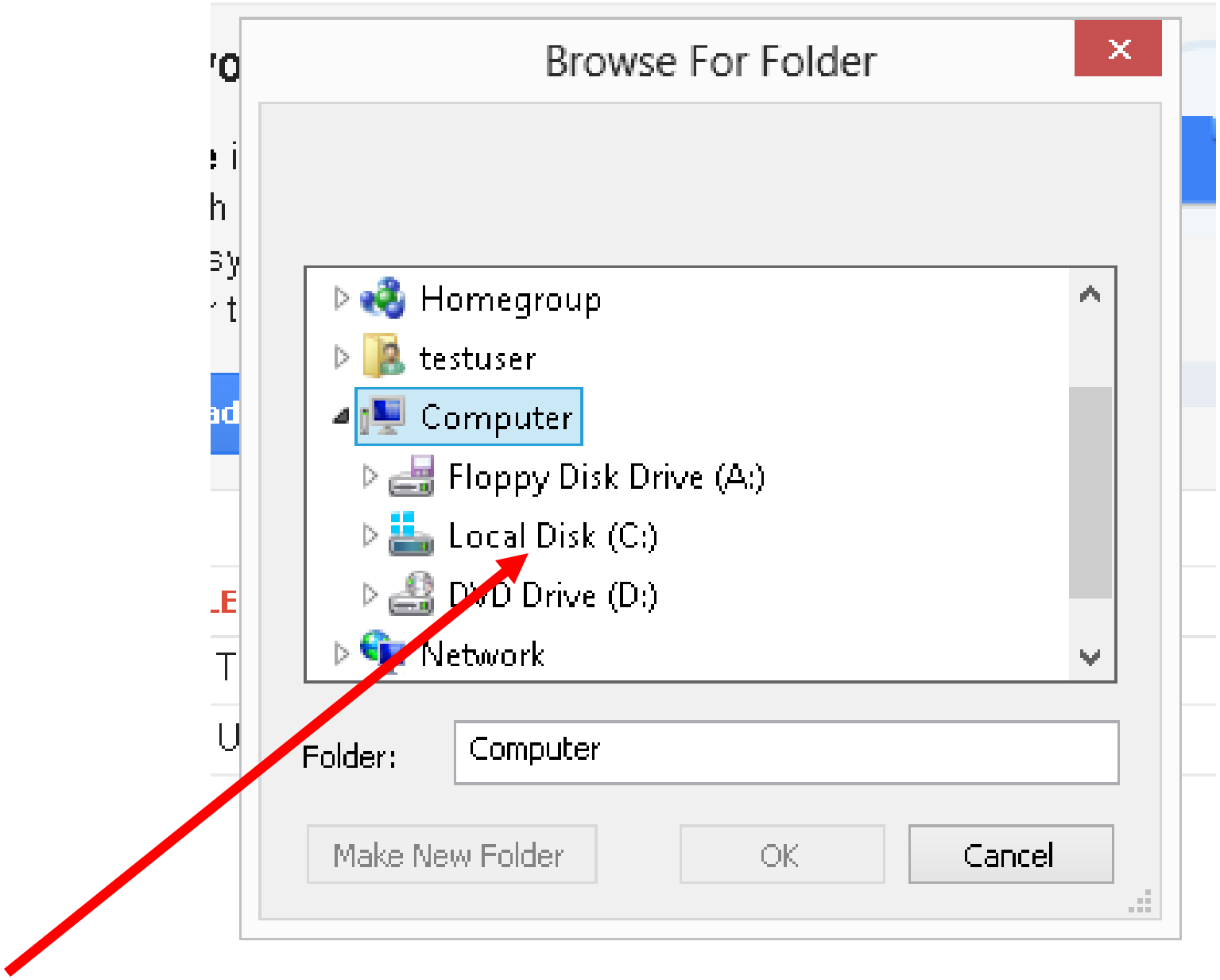
Desktop
Libraries
Homegroup
testuser
Computer
Network
Folder:
Desktop
Make New Folder
OK
Cancel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Homegroup
testuser
Computer
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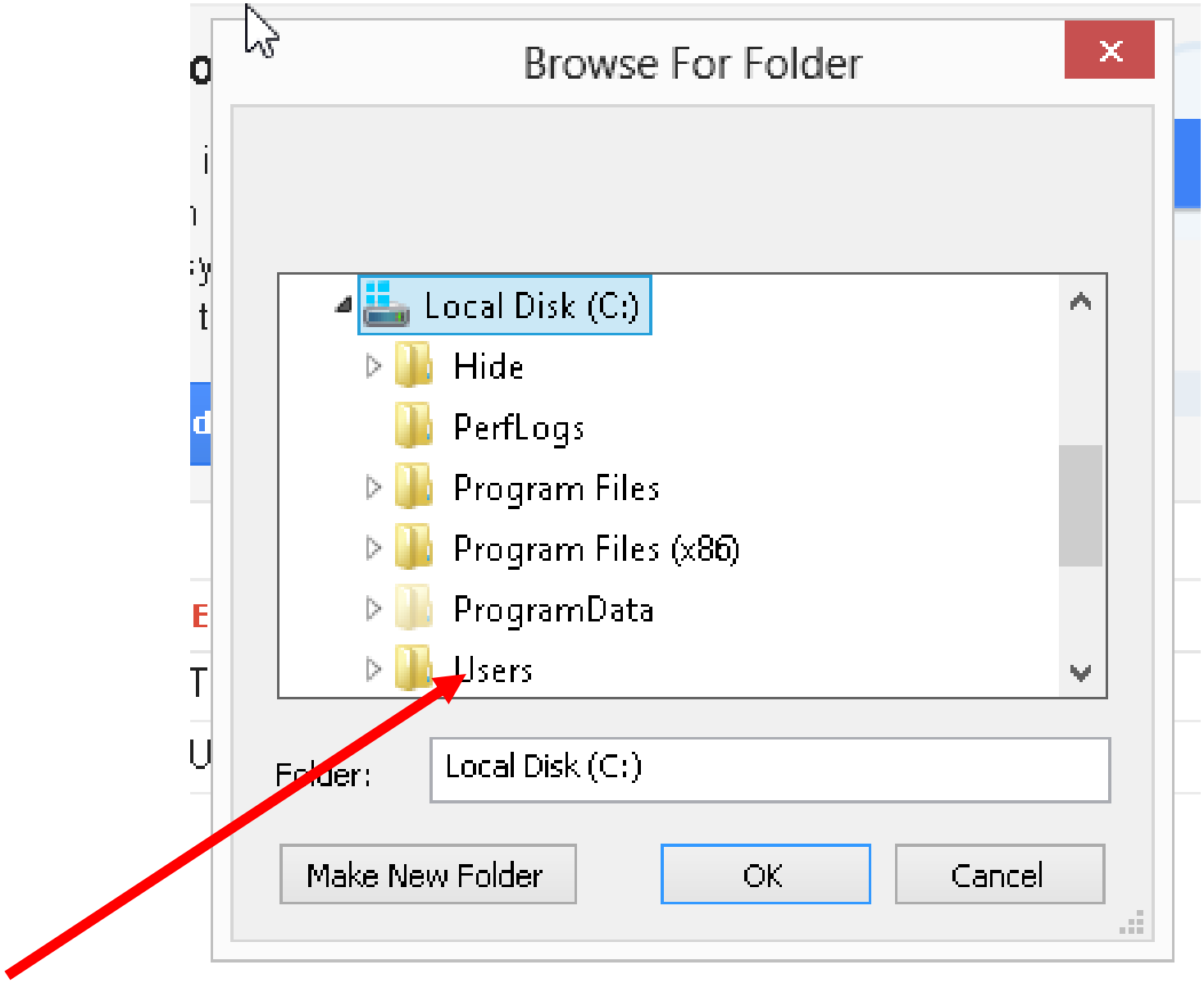
Local Disk (C:)
DVD Drive (D:)
Network
Folder:
Computer
Make New Folder
OK
Cancel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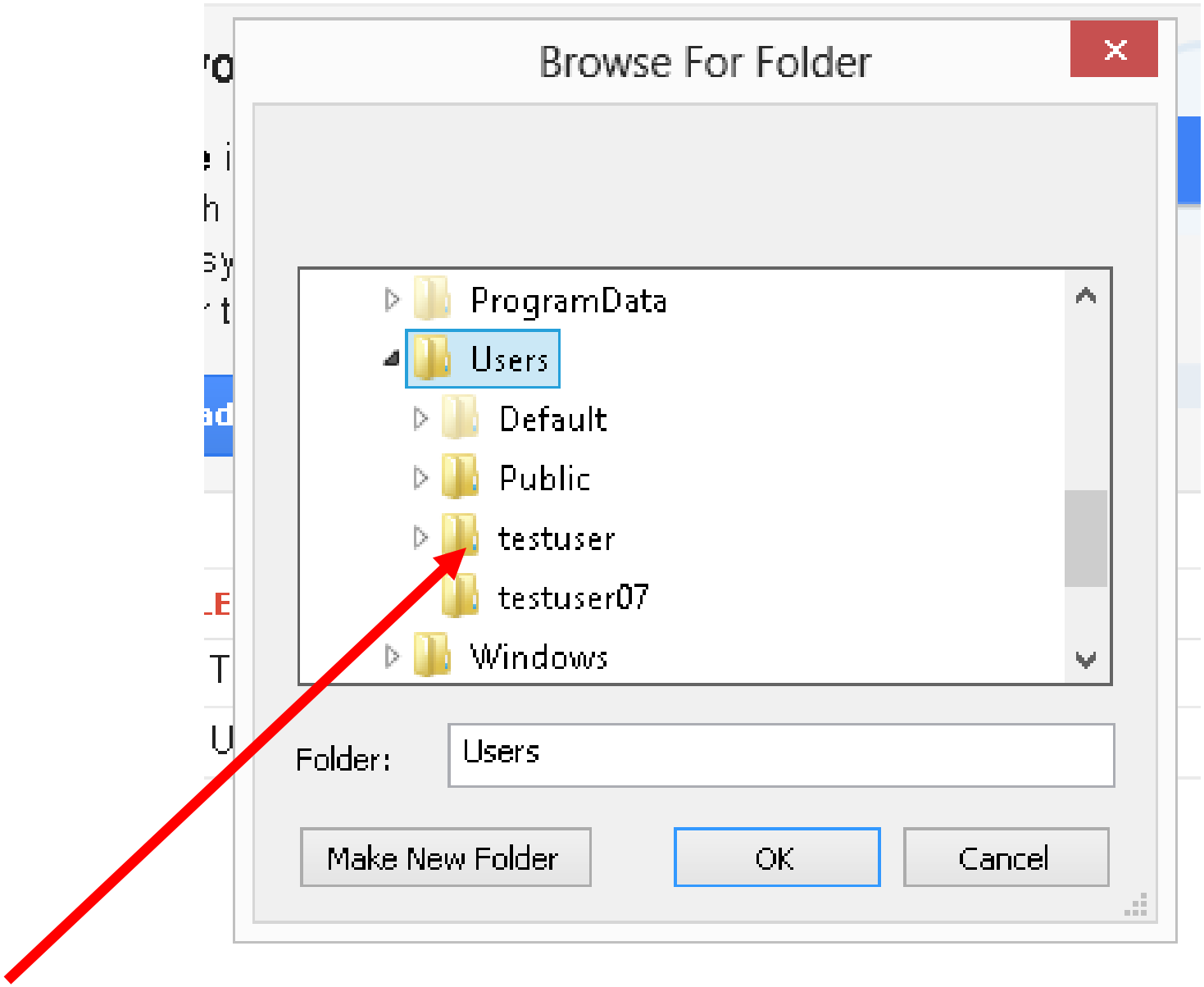
Browse For Folder
ProgramData
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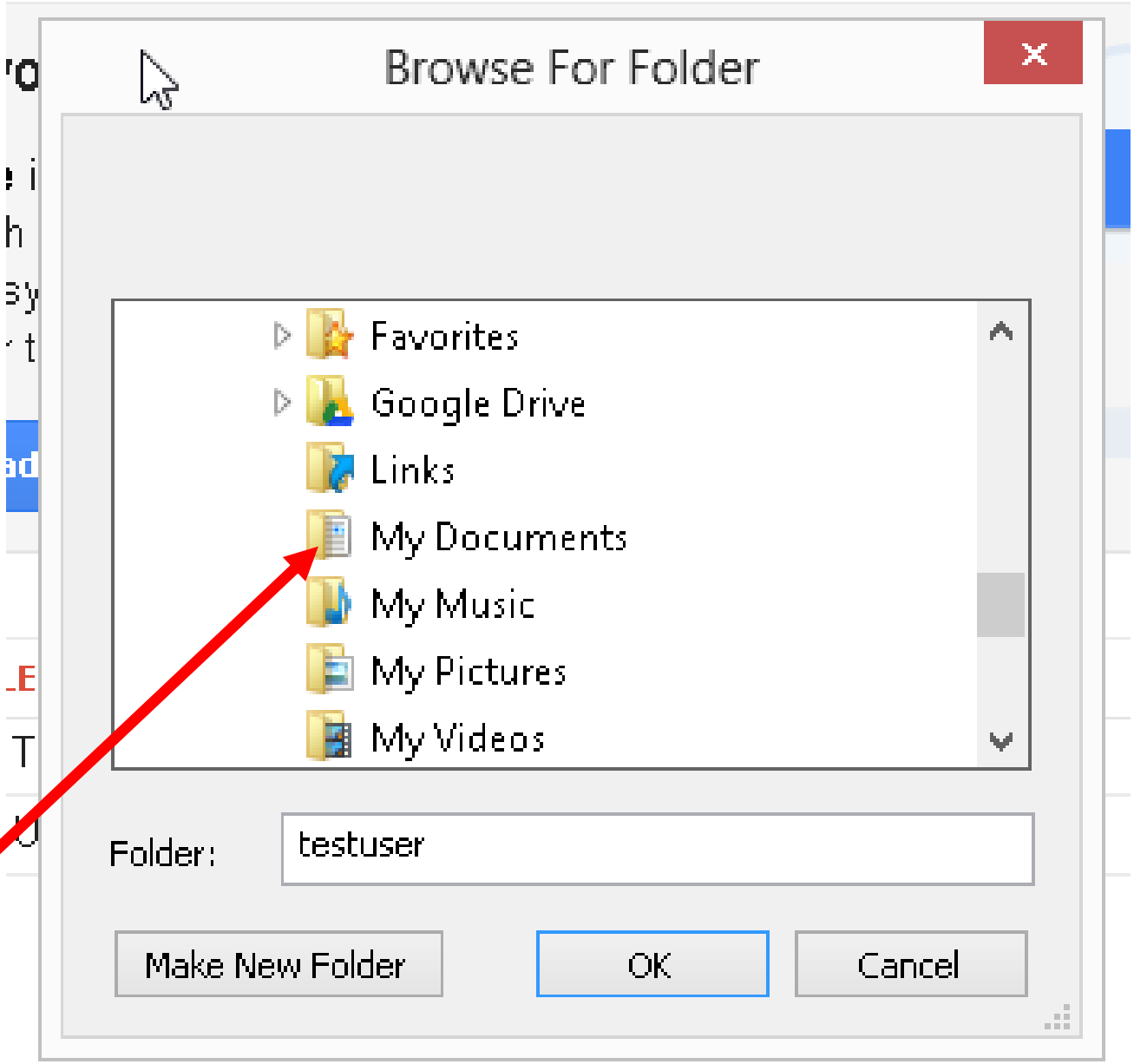
Users
Make New Folder
OK
Cancel


Browse For Folder
Favorites
Google Drive
Links
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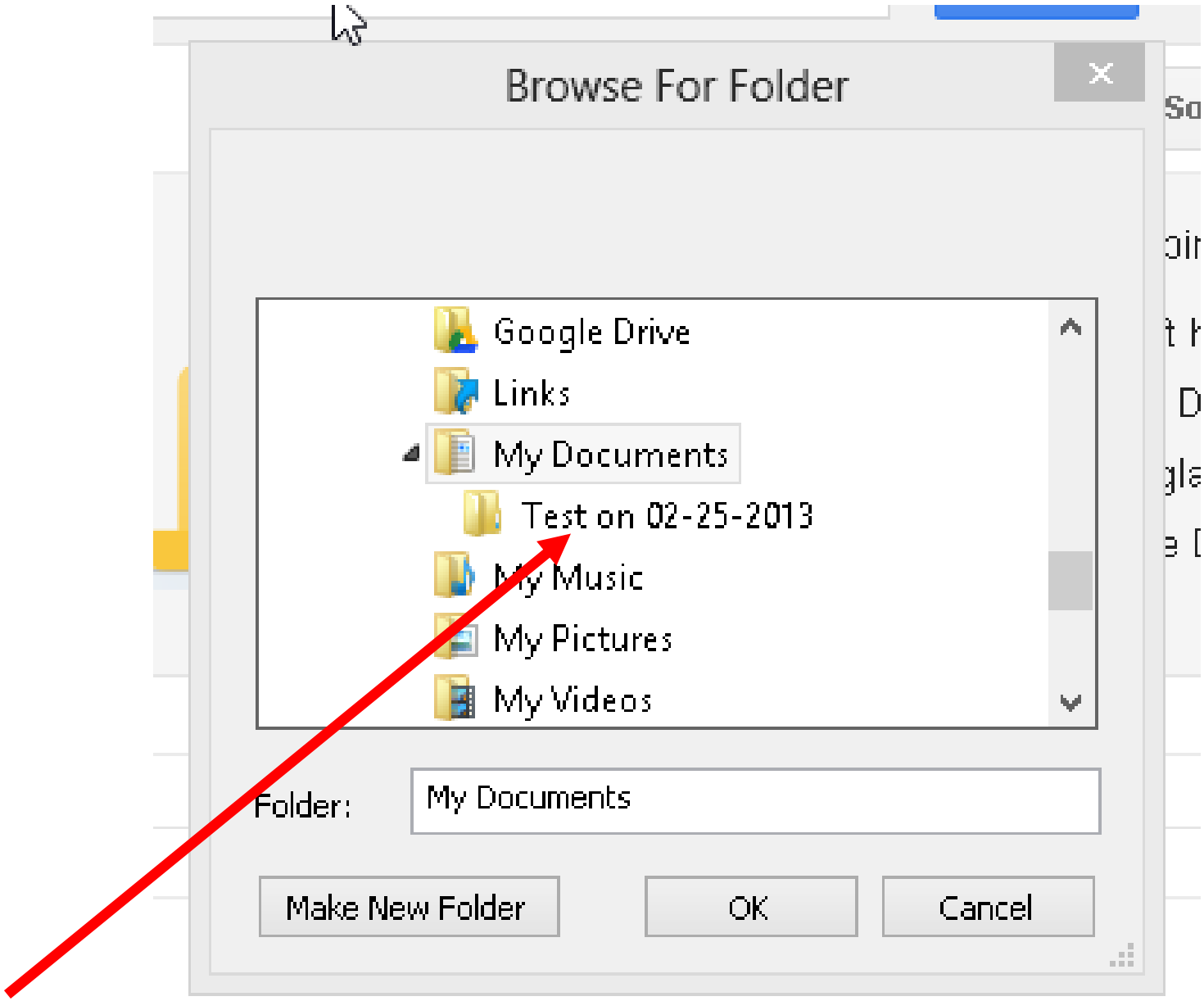
My Music
My Pictures
My Videos
Folder:
testuser
Make New Folder
OK
Cancel


Browse For Folder
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My Music
My Pictures
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My Documents
Make New Folder
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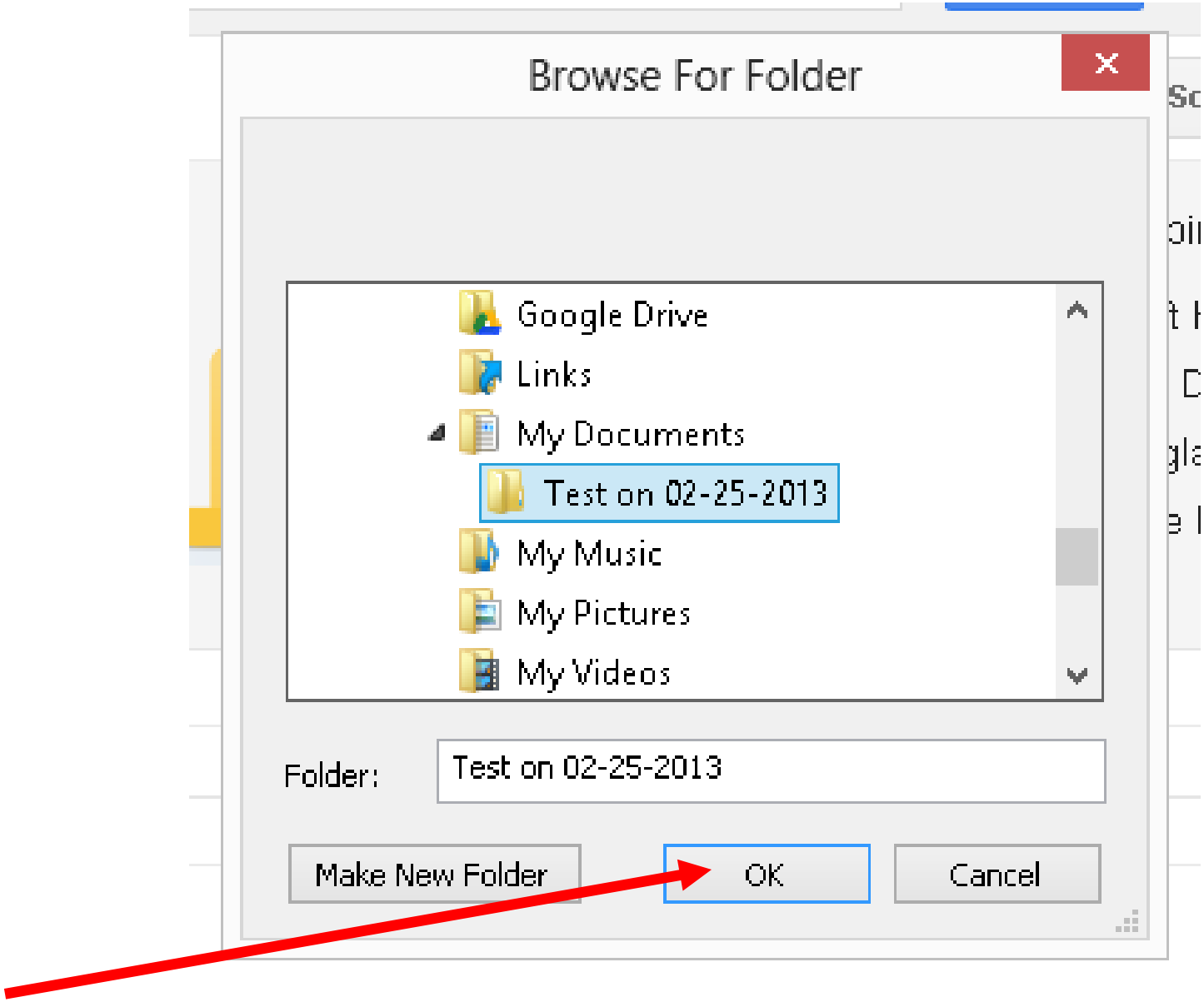
Cancel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My Pictures
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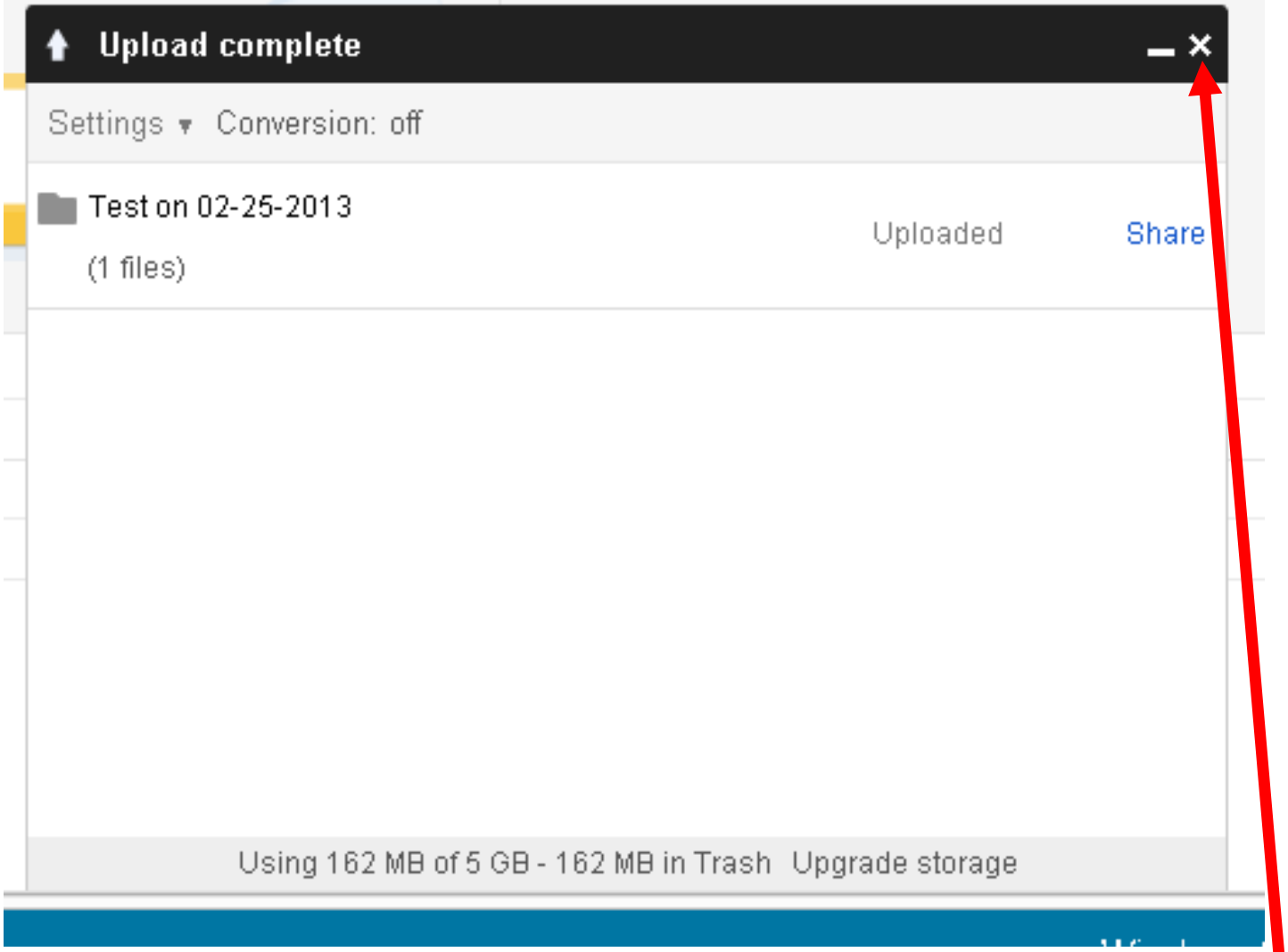
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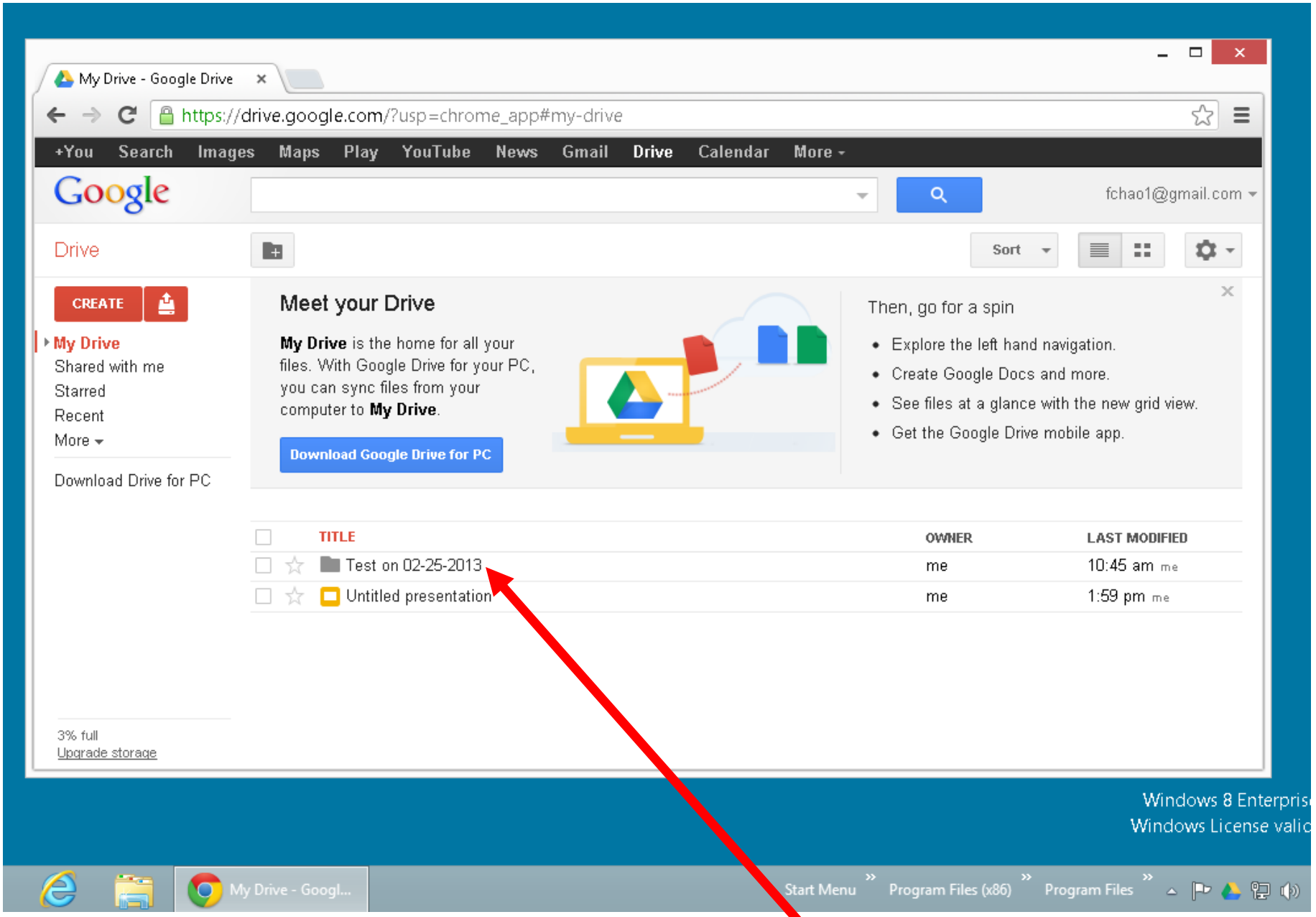
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My Drive
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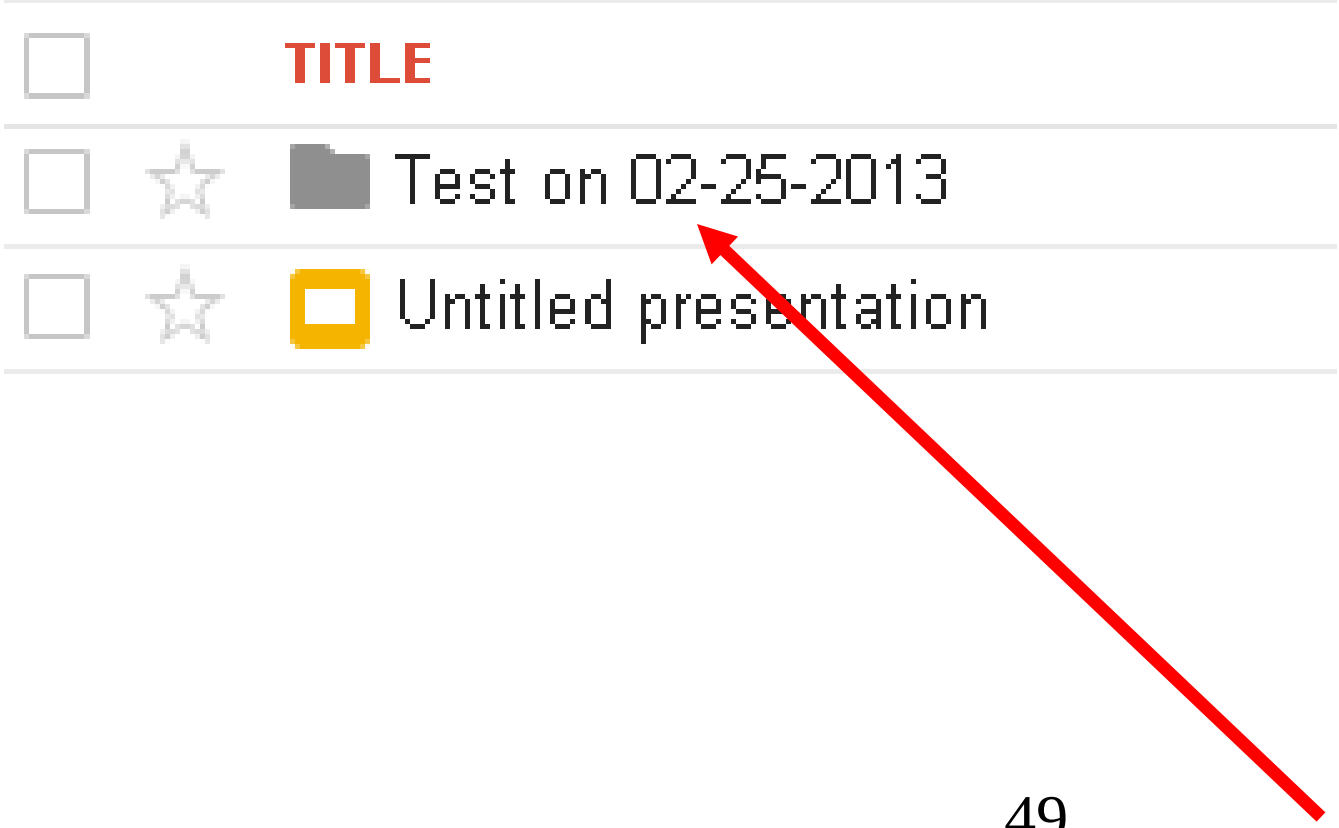
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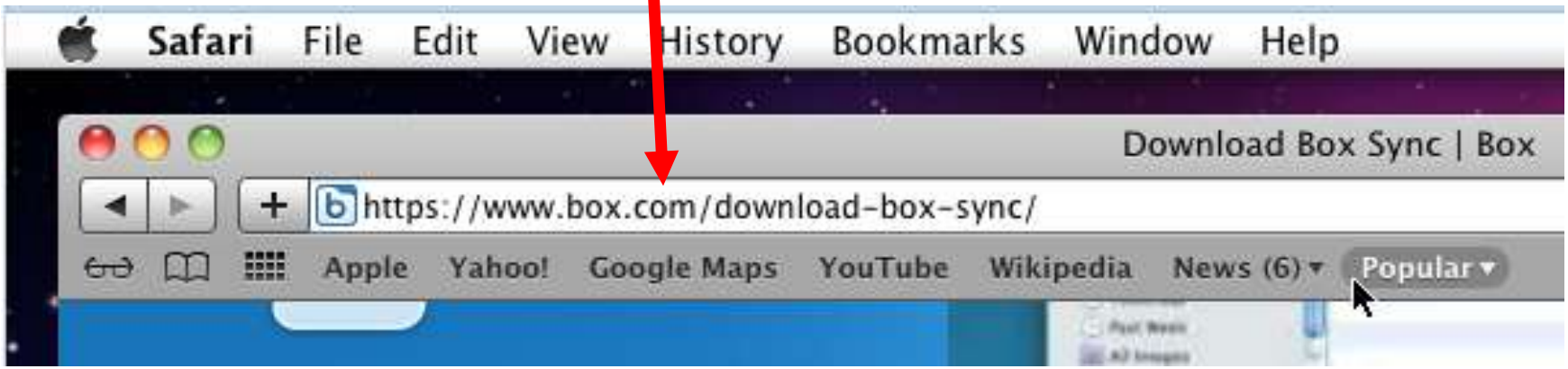
An example of using a program or app provided by a cloud service provider to upload and download files and folders from your computer's local hard drive up to a server farm:

You can use any Web browser go to http://www.box.com/download-box-sync to download and install the "Box Sync" software which will help you upload and and download files and folders from your local computer to your "Box" cloud storage account: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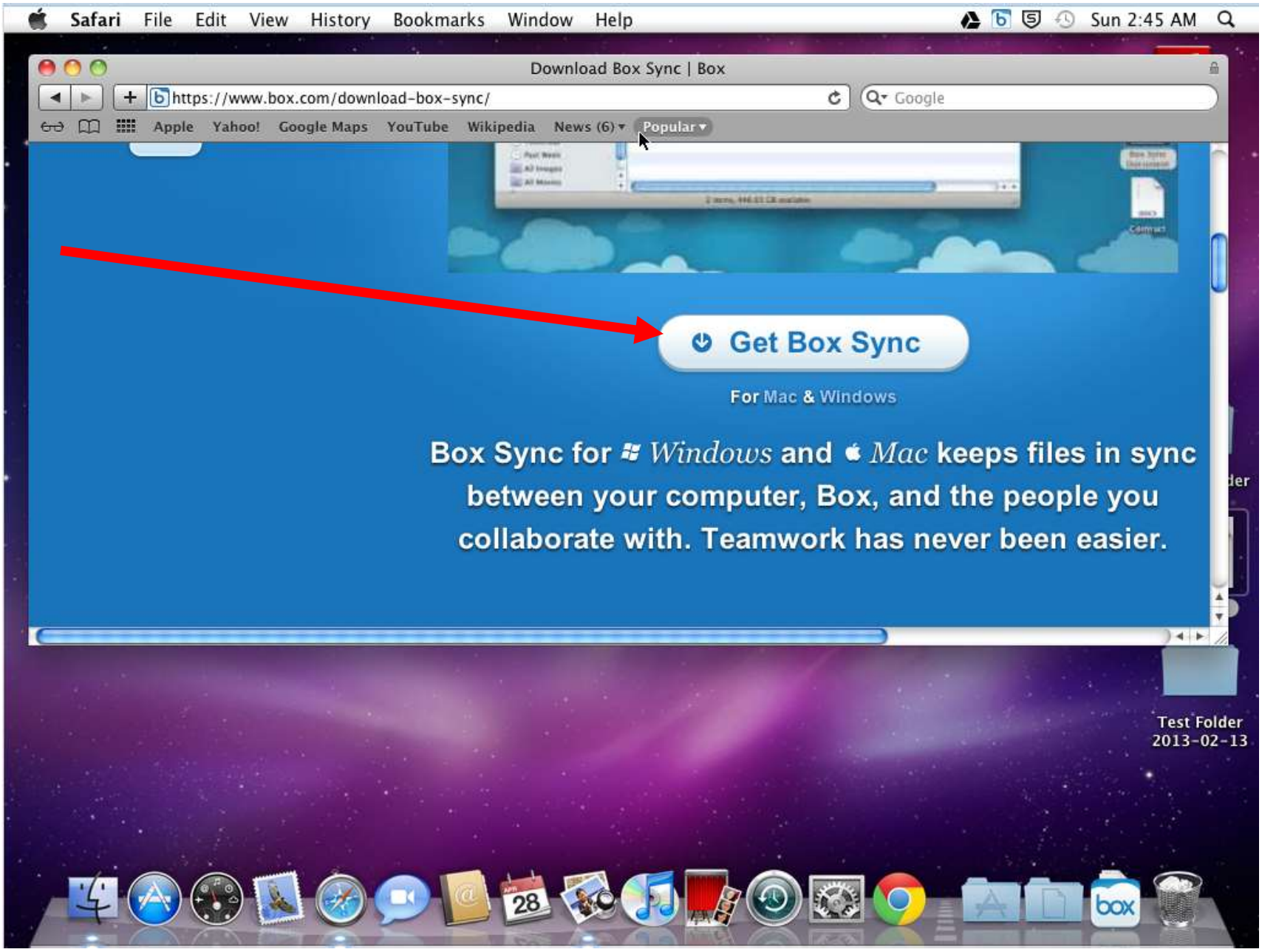
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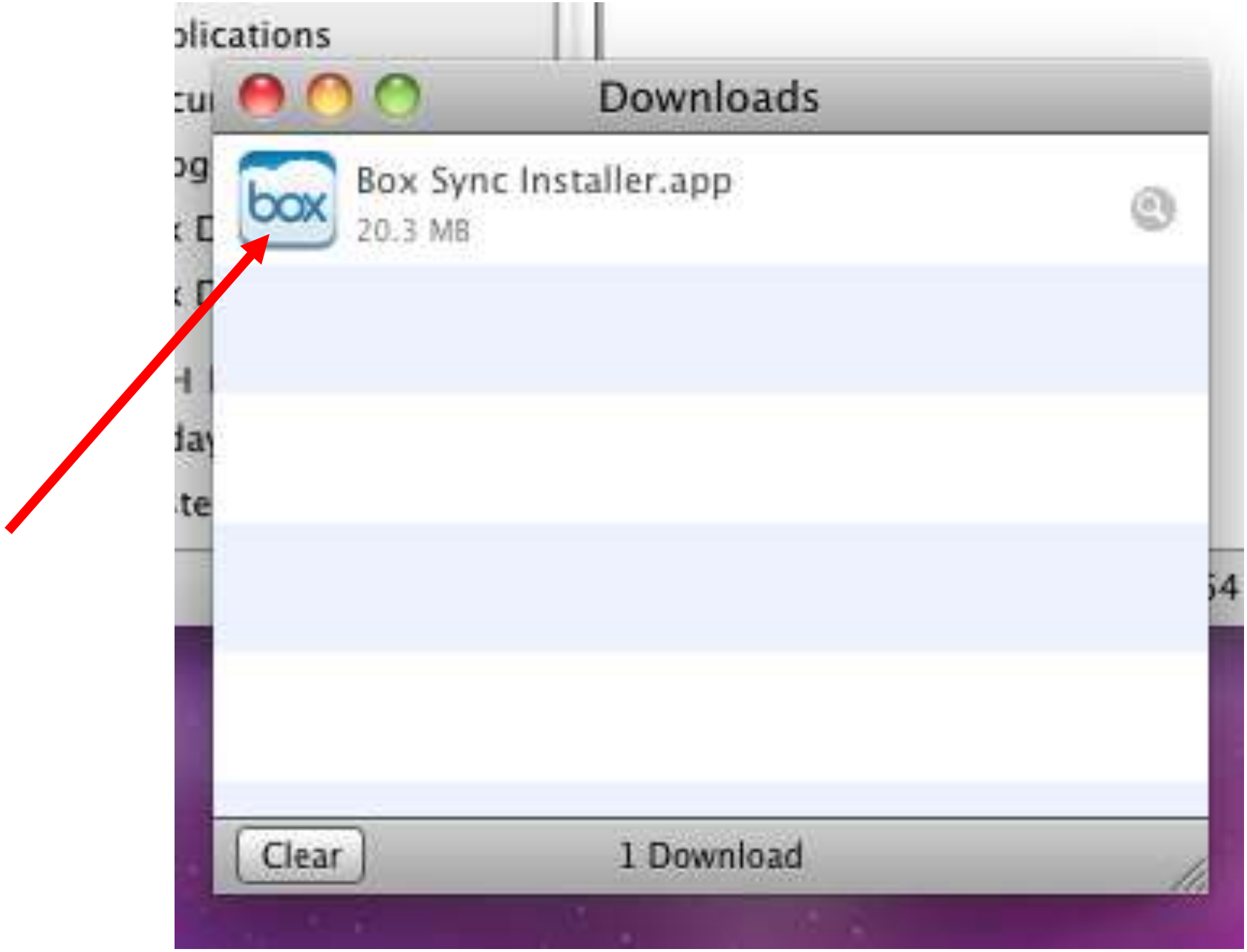
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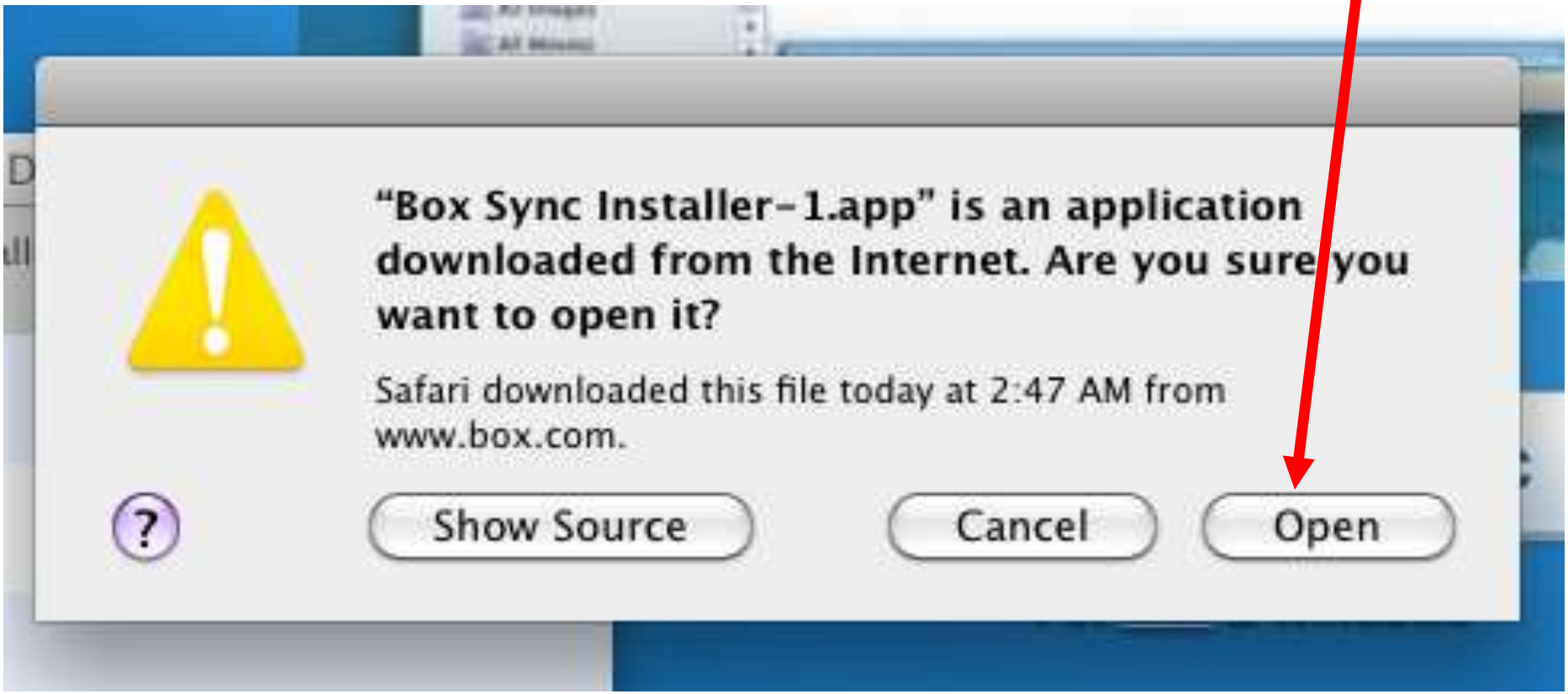
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Safari downloaded this file today at 2:47 AM from www.box.com.
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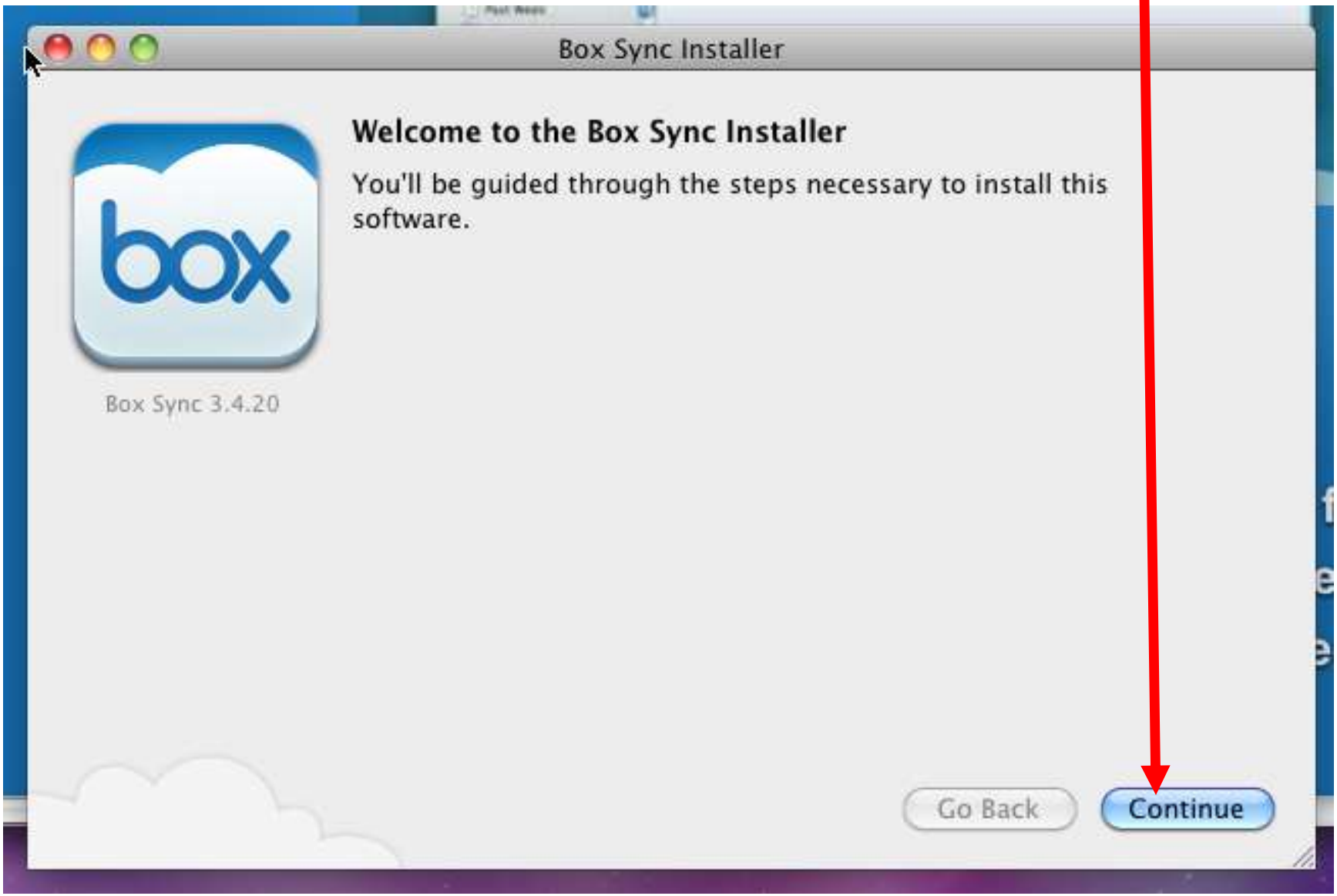
Box Sync Installer
Welcome to the Box Sync Installer
You'll be guided through the steps necessary to install this software.
box
Box Sync 3.4.20
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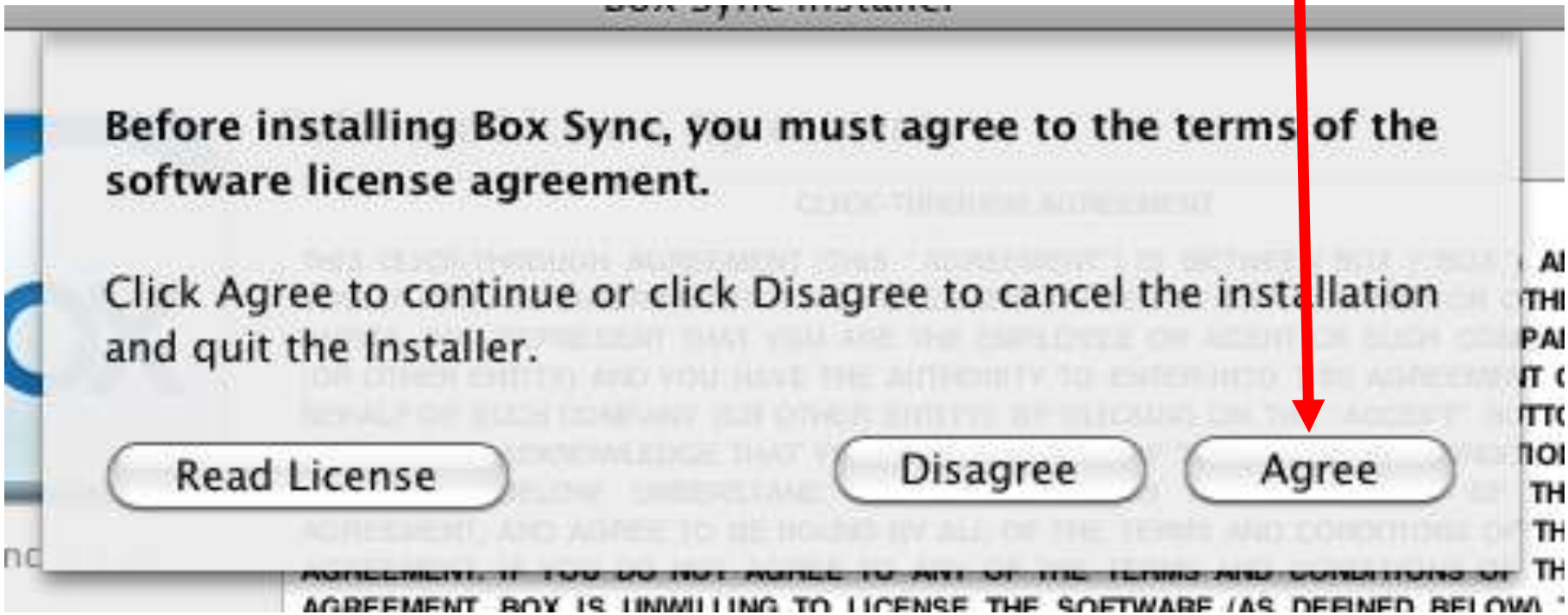
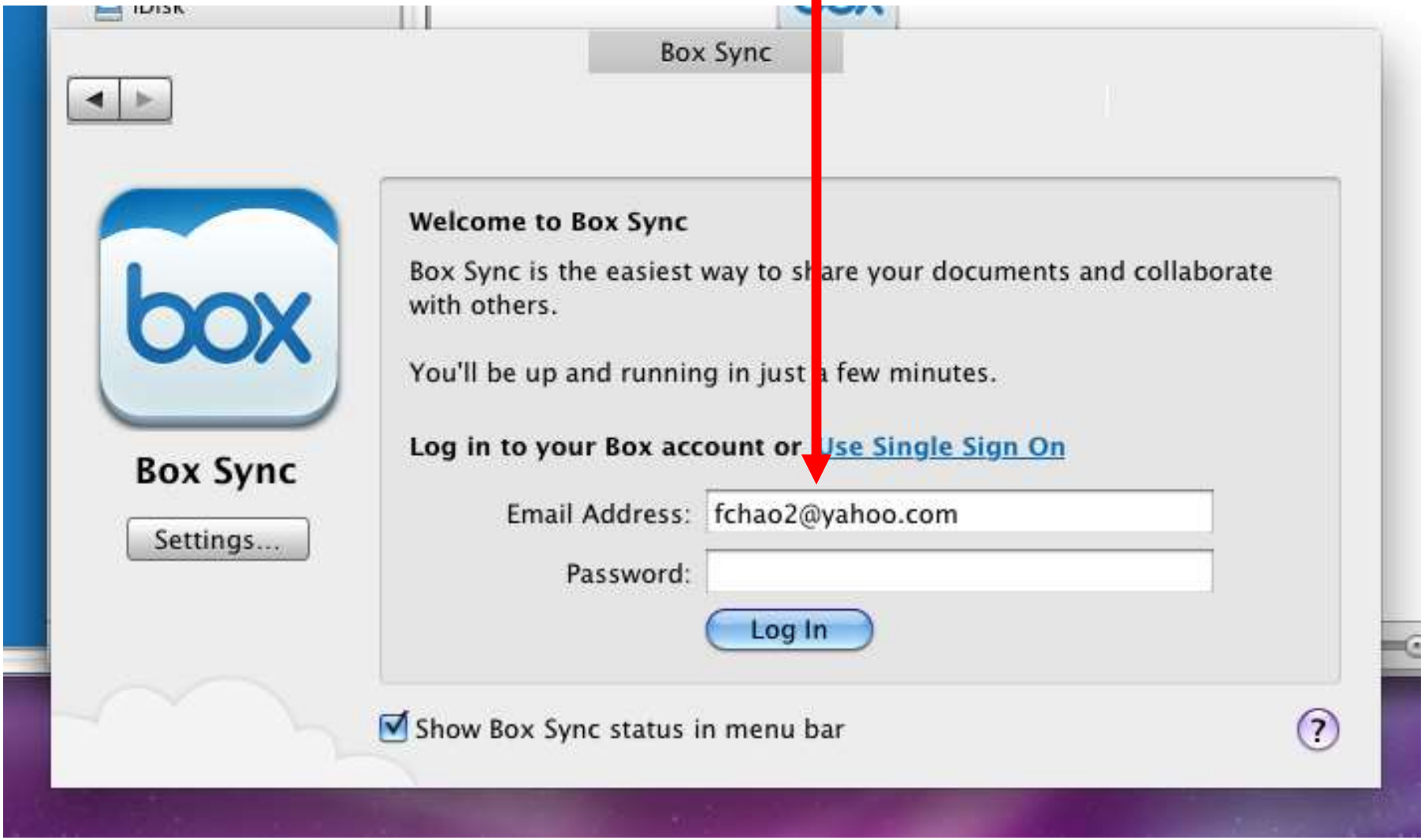
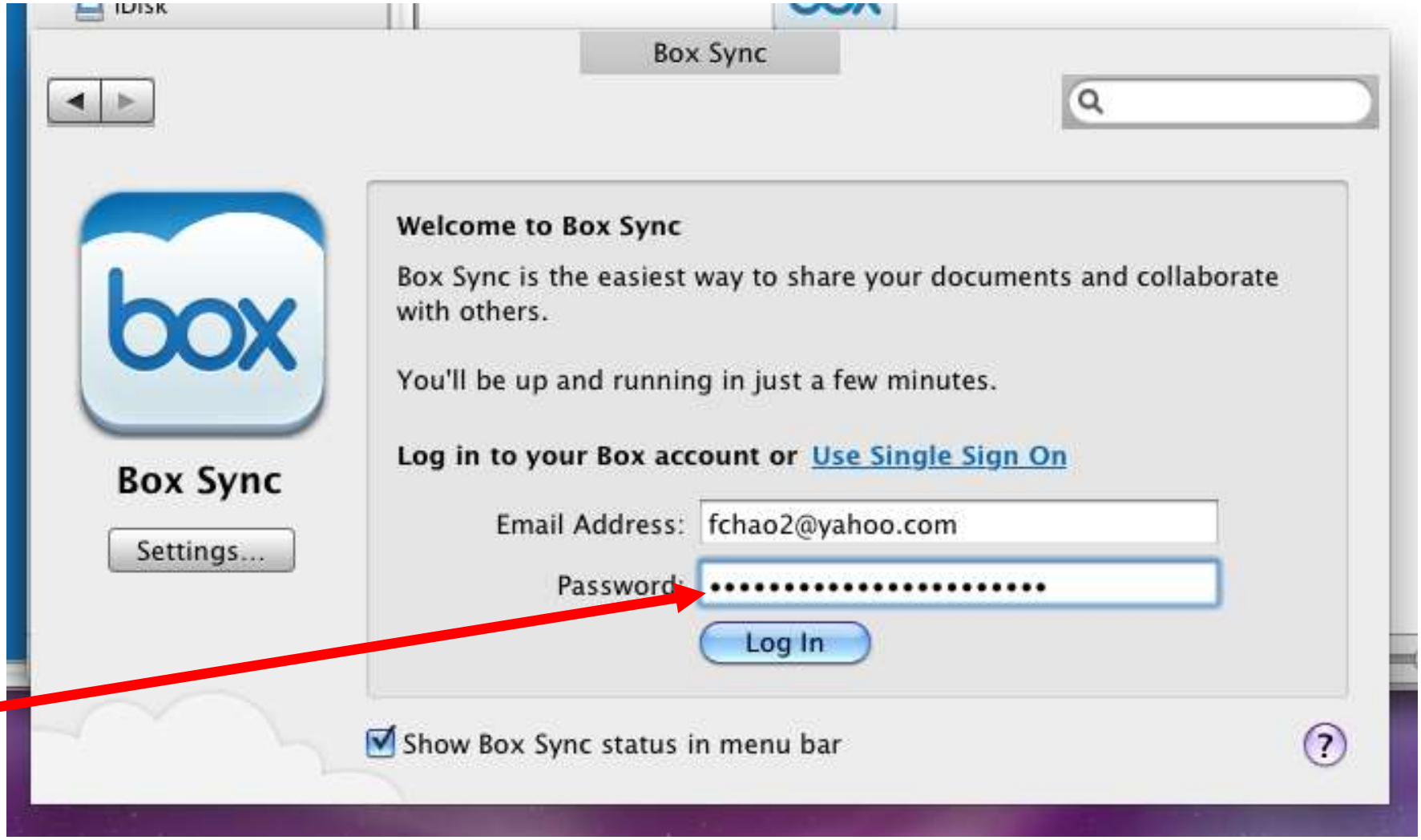
1. Background; Terms of Service. Box develops, maintains and provides access to a certain software solution (the "Software") that allows Customer to access, use and synchronize the services available at Box's site identified by the URL http://www.box.com ("Website") on such Customer's desktop. Customer wishes to use the Software. In addition to this Agreement, all use of the Software is governed by the Website's terms of service located at http://www.box.com/static/html/terms.html ("Terms of Service"), which Terms of Service are hereby incorporated into this Agreement by this reference.
Go Back
Continue

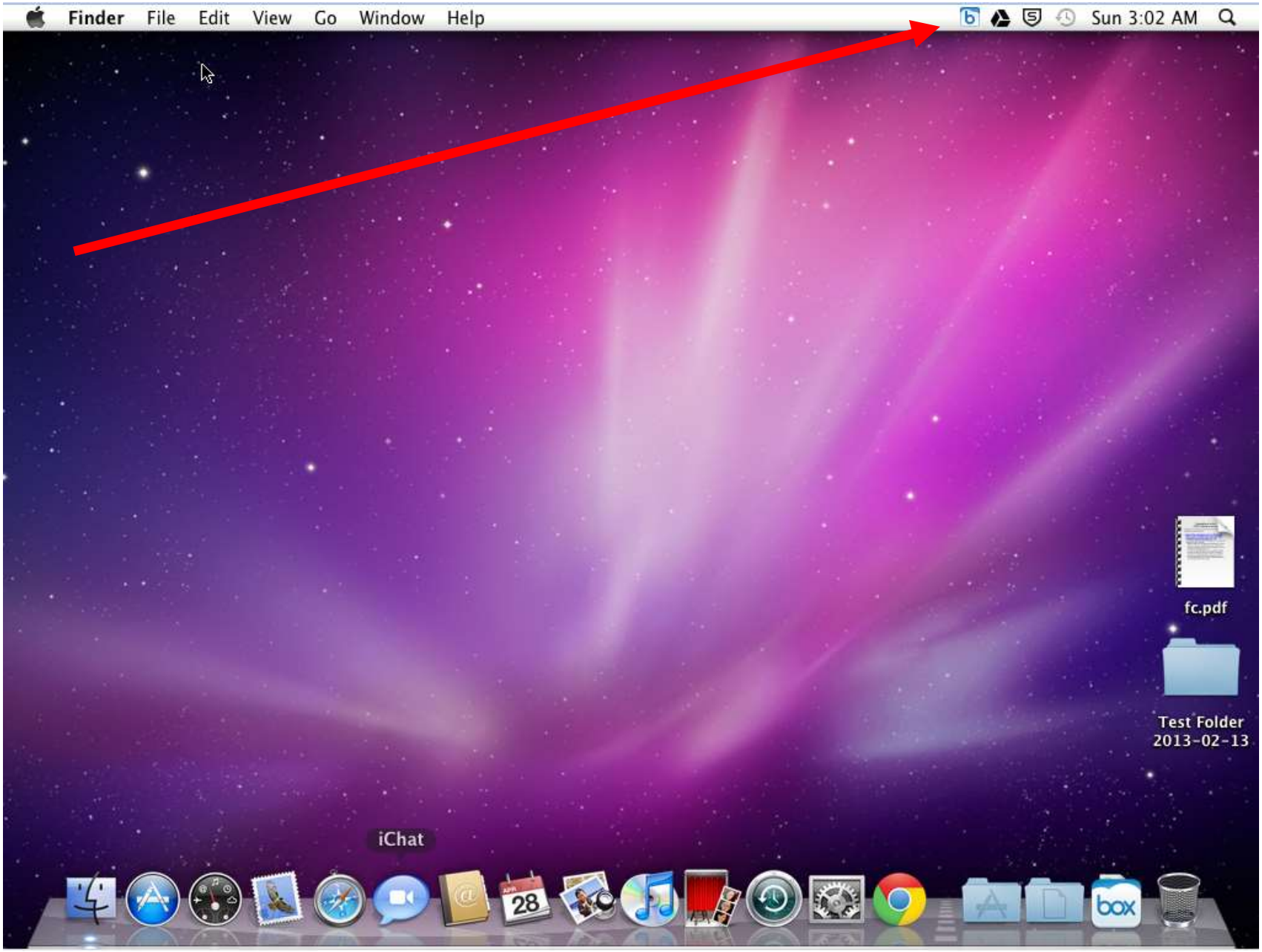

Before installing Box Sync, you must agree to the terms of the software license agreement.
Click Agree to continue or click Disagree to cancel the installation and quit the Installer.
Read License
Disagree
Agree

Box Sync Installer
Standard Installation
Click Install to perform a standard installation of Box Sync 3.4.20 on the disk "Macintosh HD".
This will take 34.5 MB of space on your computer.
Box Sync 3.4.20
Go Back
Install

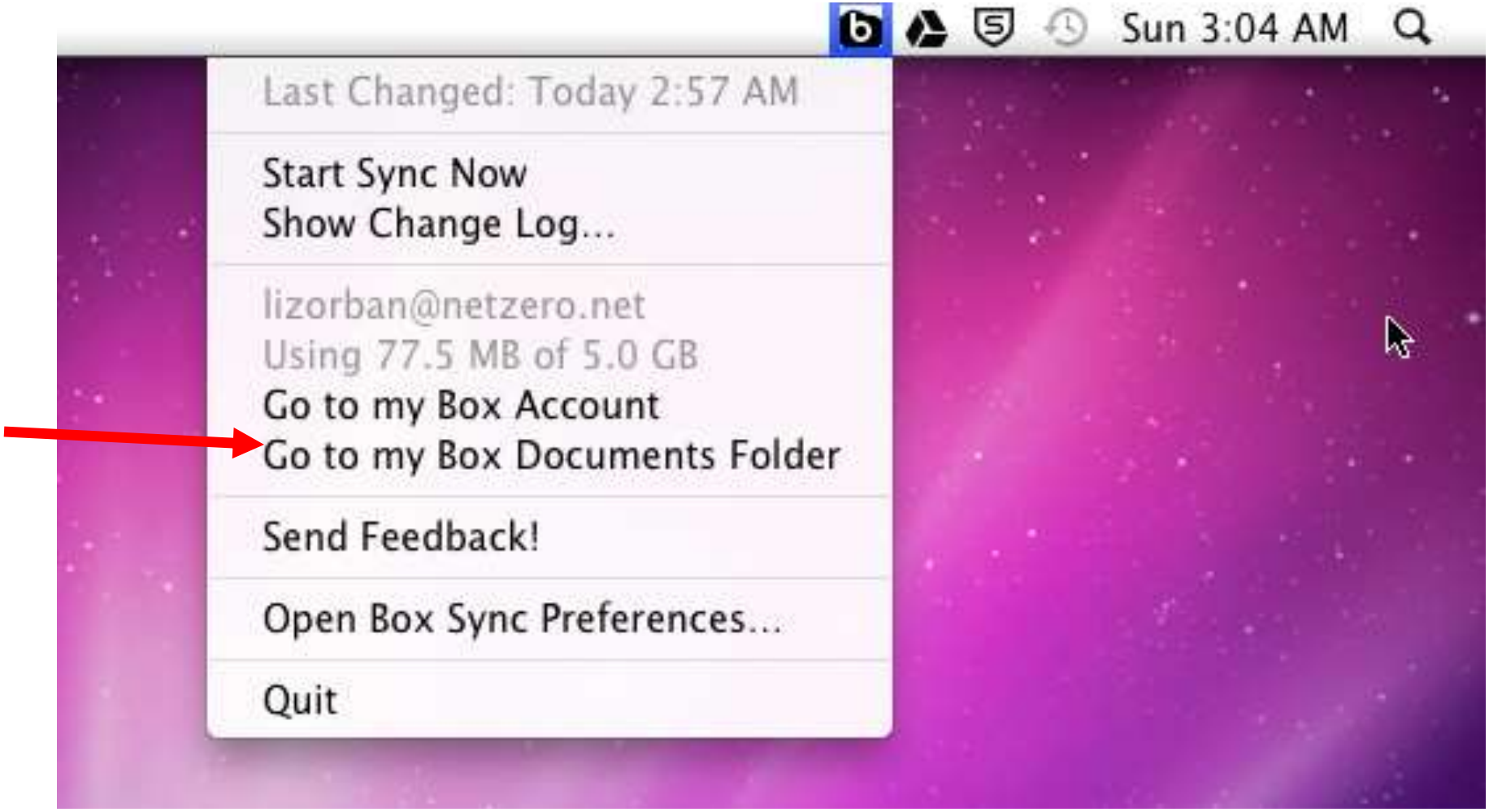

Box Sync
Box Sync
Settings...
Welcome to Box Sync
Box Sync is the easiest way to share your documents and collaborate with others.
You'll be up and running in just a few minutes.
Log in to your Box account or Use Single Sign On
Email Address:
fchao2@yahoo.com
Password:
Log In
Show Box Sync status in menu bar

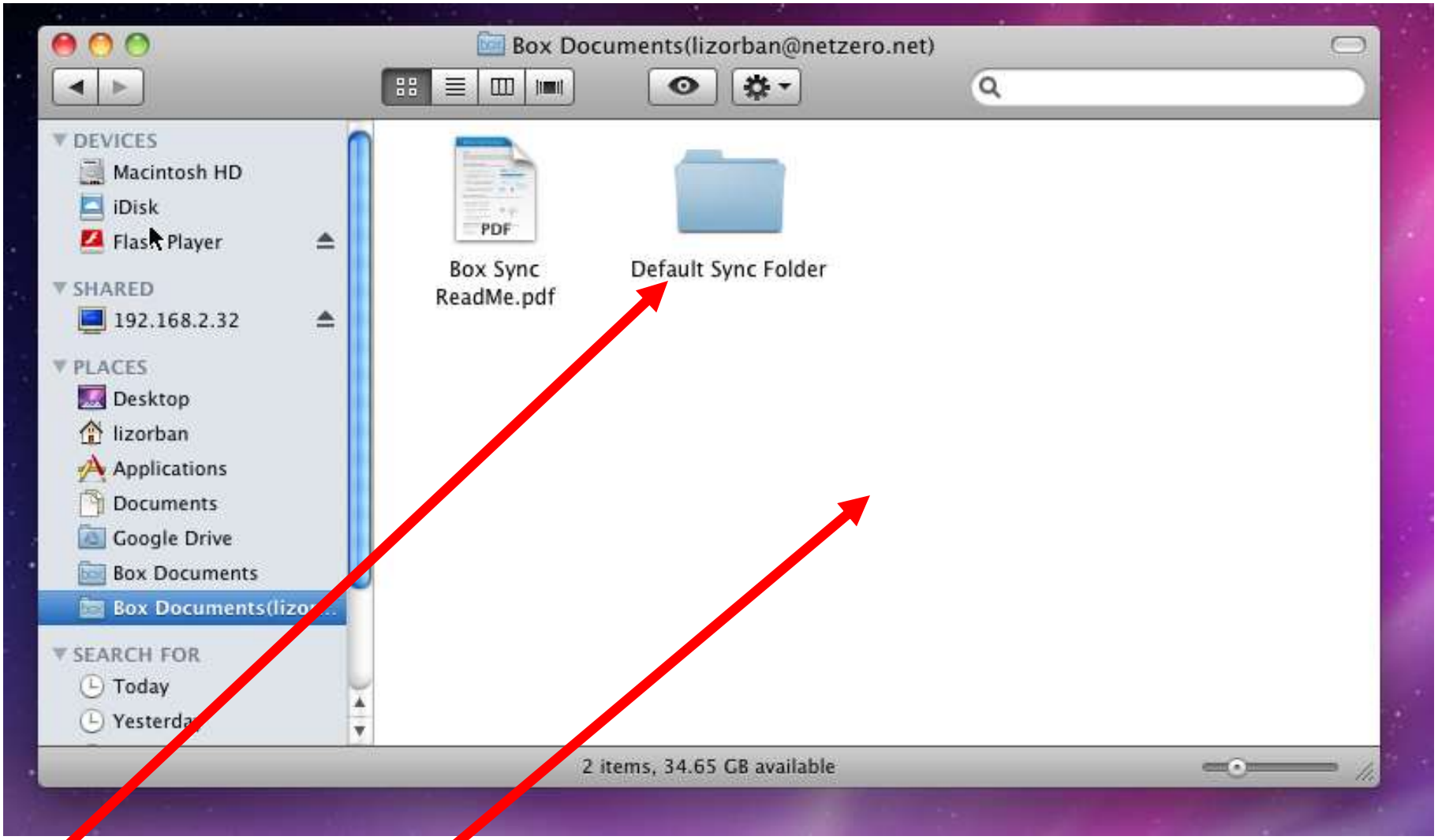

iDisk
Box Sync
Box Sync
Settings...
Welcome to Box Sync
Box Sync is the easiest way to share your documents and collaborate with others.
You'll be up and running in just a few minutes.
Log in to your Box account or Use Single Sign On
Email Address: fchao2@yahoo.com
Password:
Log In
Show Box Sync status in menu bar

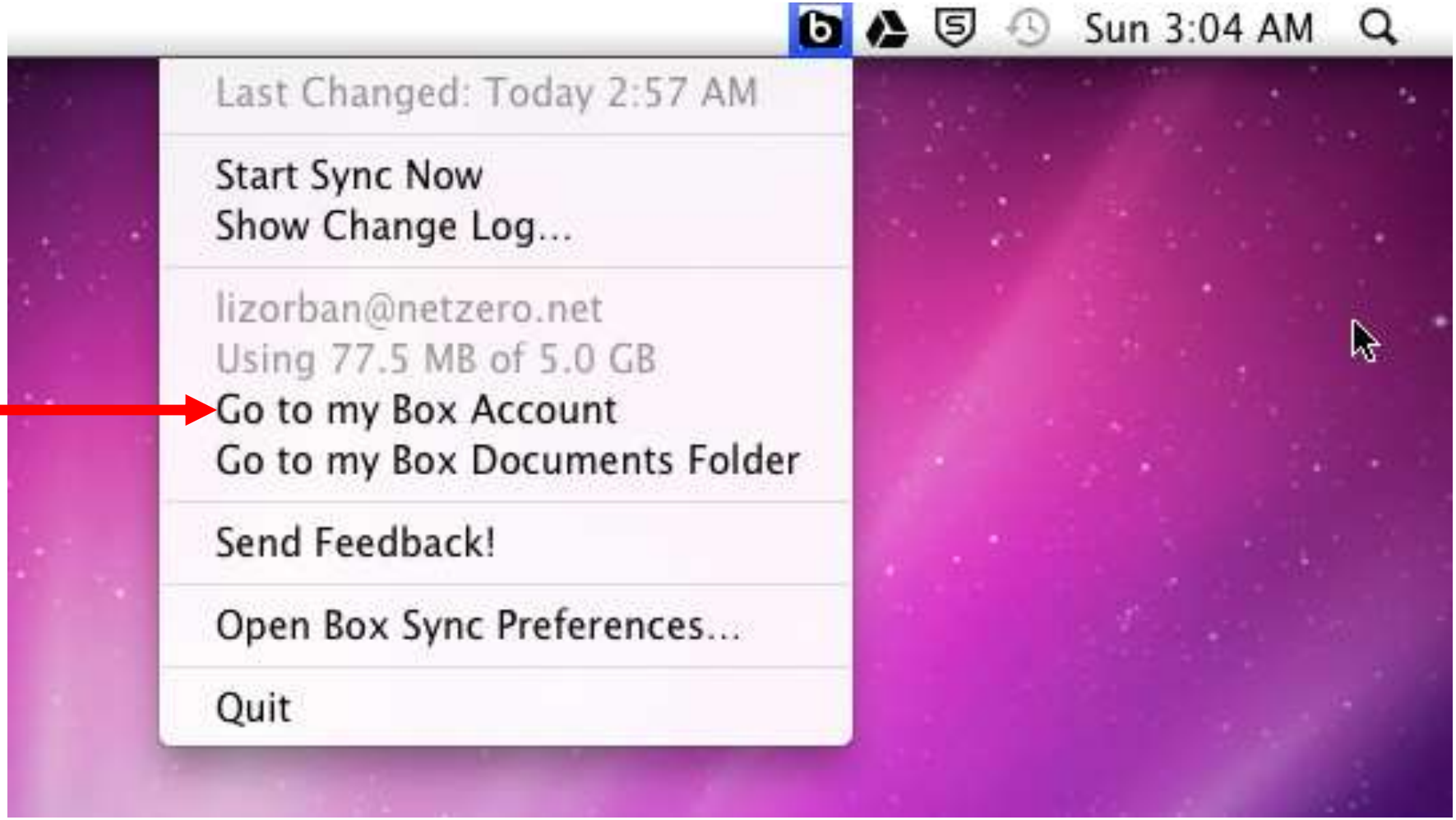
Box Sync
Show All
Box Sync
Settings...
Box Documents(lizorban@netze...
99%
Cancel Sync
lizorban@netzero.net
Using 77.5 MB of 5.0 GB
Log Out
Show Box Sync status in menu bar

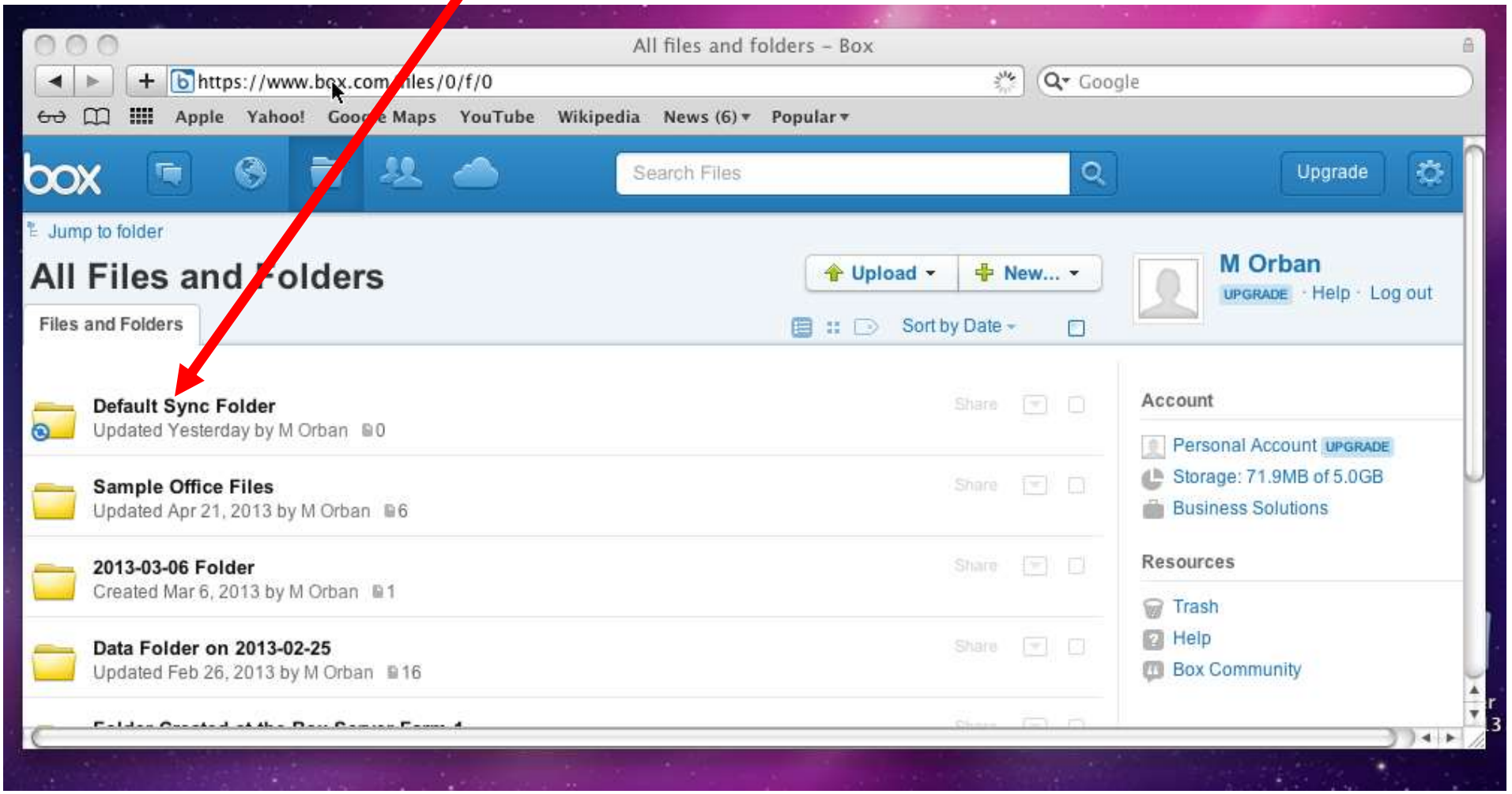

Finder File Edit View Go Window Help
Sun 3:02 AM
fc.pdf
Test Folder
2013-02-13
iChat

Sun 3:02 AM


Sun 3:04 AM
Last Changed: Today 2:57 AM
Start Sync Now
Show Change Log...
lizorban@netzero.net
Using 77.5 MB of 5.0 GB
Go to my Box Account
Go to my Box Documents Folder
Send Feedback!
Open Box Sync Preferences...
Quit


Box Documents(lizorban@netzero.net)
DEVICES
Macintosh HD
iDisk
Flash Player
SHARED
192.168.2.32
PLACES
Desktop
lizorban
Applications
Documents
Google Drive
Box Documents
Box Documents(lizo...
SEARCH FOR
Today
Yesterday
PDF
Box Sync ReadMe.pdf
Default Sync Folder
2 items, 34.65 GB available


Sun 3:04 AM
Last Changed: Today 2:57 AM
Start Sync Now
Show Change Log...
lizorban@netzero.net
Using 77.5 MB of 5.0 GB
Go to my Box Account
Go to my Box Documents Folder
Send Feedback!
Open Box Sync Preferences...
Quit


All files and folders - Box
https://www.box.com/files/0/f/0
Google
Apple
Yahoo!
YouTube
Wikipedia
News (6)
Popular
box
Search Files
Upgrade
Jump to folder
All Files and Folders
Upload
New...
M Orban
UPGRADE
Help
Log out
Files and Folders
Sort by Date
Default Sync Folder
Updated Yesterday by M Orban 0
Sample Office Files
Updated Apr 21, 2013 by M Orban 6
2013-03-06 Folder
Created Mar 6, 2013 by M Orban 1
Data Folder on 2013-02-25
Updated Feb 26, 2013 by M Orban 16
Share
Account
Personal Account UPGRADE
Storage: 71.9MB of 5.0GB
Business Solutions
Resources
Trash
Help
Box Community

FOUR CLOUD STORAGE SERVICES:

FOUR CLOUD STORAGE SERVICES WITH FREE ENTRY-LEVEL STORAGE

- Microsoft's "**OneDrive**" (7 GB)
- "**Google Drive**" (15 GB shared between all Google services)
- Apple's "**iCloud**" (5 GB)
- "**Box**" (10 GB)

FOUR CLOUD STORAGE SERVICES (continued)

- According to http://www.thetop10bestonlinebackup.com/ all of these cloud storage services claim to have "geo-redundant storage".

SHORT DESCRIPTIONS OF THE FOUR CLOUD STORAGE SERVICES:

SHORT DESCRIPTIONS.. (continued)

- **"Google Drive"**
  - http://drive.google.com
  - Great online viewing and editing
  - Easy to upload folders to: can use Google Chrome Web browser or proprietary Java app for other browsers,
  - Protects you from inadvertently editing the original copies of your data files

SHORT DESCRIPTIONS.. (continued)

- **Microsoft's "OneDrive"**
  - http://onedrive.com
  - Known as "SkyDrive" until Feb. 19, 2013
  - Has a "Fetch from PC" feature that let's you access the files remotely from any Internet-connected "Web Browser".
  - Hardest to upload data folders to their server farm relative to the other cloud storage services
  - "Office Online" to edit document files is not as good as competitors' free editors

SHORT DESCRIPTIONS.. (continued)

- **"Box"**
  - http://box.com
  - Most feature-rich cloud storage system
  - Great online viewing and editing:
    You can use their viewer, the "Zoho" online editor, or "Google Docs" at your "Google Account" to view or edit files.
  - Most operating systems and platforms supported,
  - Folder uploads and downloads from Web browser using Java add-ons.

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud"**
  - "iCloud" is free with 5 Gigabytes of storage of when you create an "iCloud account" with an "Apple ID" from inside an "OS X" 10.7 Lion computer or an "OS X" 10.8 Mountain Lion computer or an "OS X" 10.9 Mavericks computer or a recent model "iPad" or "iPhone":

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**
  - http://icloud.com
  - Cannot use "Internet Explorer.." from a "Windows.." computer to log into the above URL for many "Windows.." computers.
  - Can use "Google Chrome" browser or "FireFox" from a "Windows.." computer for reliable access to an iCloud account at http://icloud.com

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**
  - Online viewing and editing using new, free "iWorks for iCloud beta" feature with "Pages for iCloud", "Formula for iCloud", and "Keynote for iCloud".
  - Drag into browser to upload a single file.

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**
  - "iCloud" has "Back to My Mac" which lets you access the files and screens in your Mac "OS X" computer from the "Finder" in another Mac "OS X" computer via the Internet.
    (The "Finder" in a Mac "OS X" computer is similar to "Windows Explorer" or "File Explorer" in a "Windows" computer.)

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**

TO CREATE AN iCLOUD ACCOUNT:

- From within "iTunes", create an "Apple ID".
- From within OS X 10.7, 10.8, 10.9 or an iPad or an iPhone, create a user account (unless you own it).
- Then, double-click on the "iCloud" icon to create an "iCloud" account with the "Apple ID".

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**

The step-by-step procedure for creating an "iCloud" account is available at http://aztcs.org/meeting_notes/winhardsig/cloudstorage/iCloud.pdf

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**
  - "iCloud" lets you create folders at your account at its server farm.
  - "iCloud" does not let you upload or download entire folders.

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**
  - Perfect integration with Apple's "iWork" office suite in a Mac OS X 10.7 or higher computer:
    If the "Pages" program is installed and you click on its "iCloud" button, then any .PAGES, .DOC, .DOCX, or .TXT files that you have stored in "iCloud" will be displayed for you to open and edit.
    Ditto for the "Keynote" program for .KEYNOTE, .PPT, and .PPTX files.
    Ditto for the "Numbers" program for .NUMBERS, .XLS,.XLSX, or .CSV files.

SHORT DESCRIPTIONS.. (continued)

- **Apple's "iCloud" (continued)**
  - Perfect integration with Apple's "iWork" office suite in a Mac: (continued)
    If the "Pages" program is installed and you create a new document, when you "Save", one option will be to save to "iCloud"
    Ditto for the "Keynote" program.
    Ditto for the "Numbers" program.

"REPORT CARDS" COMPARING THE FOUR POPULAR CLOUD STORAGE SERVICES:

REPORT CARD FOR **"ONEDRIVE"**

AMOUNT OF FREE STORAGE?	**7 GigaBytes**
UPLOAD AND DOWNLOAD ENTIRE FOLDERS? **(NOT AS GOOD AS "GOOGLE DOCS" AND "BOX")**	Yes: You can upload data folders with "Windows Explorer" if the "OneDrive Desktop App for "Windows" is installed. You can download entire folders as zip files when you access onedrive.com with a Web browser.
STORE PHOTO FILES?	Yes
ONLINE VIEW AND EDIT OF DOCUMENTS AND PHOTOS?	Yes
"WINDOWS STORE APP" FOR USE IN THE "START" SCREEN OF "WINDOWS 8"?	Yes

REPORT CARD FOR "GOOGLE DRIVE"

AMOUNT OF FREE STORAGE?	**15 Gigabytes** (15 Gigabytes total for "Google Drive","Gmail", and "Google+ Photos" combined)
UPLOAD AND DOWNLOAD FOLDERS OF DATA FILES? (SLIGHTLY BETTER THAN "BOX")	Yes, folder uploads and downloads from the Chrome browser or with a Java applet in other Web browsers. Also, folder uploads from the "Google Drive for PC" app's "Google Drive" folder.
STORE PHOTO FILES?	Yes
ONLINE VIEW AND EDIT OF DOCUMENTS AND PHOTOS?	Yes
"WINDOWS STORE APP" FOR USE IN THE "START" SCREEN OF "WINDOWS 8"?	Yes ("Google Drive Client")

REPORT CARD FOR **"BOX"**

AMOUNT OF FREE STORAGE?	**10 GigaBytes**
UPLOAD AND DOWNLOAD ENTIRE FOLDERS OF DATA FILES?	Yes, from most Web browsers using a Java browser add-on or upload from the "Box Sync" software program
STORE PHOTO FILES?	Yes
ONLINE VIEW AND EDIT OF DOCUMENTS AND PHOTOS? (BETTER THAN "ONEDRIVE" AND "GOOGLE DRIVE" SINCE THEY HAVE MORE OPTIONS.)	**Yes, with "Zoho" or "Google Docs"**
"WINDOWS STORE APP" FOR USE IN THE "START" SCREEN OF "WINDOWS 8"?	Yes ("Box")

REPORT CARD FOR "iCLOUD"

AMOUNT OF FREE STORAGE?	**5 GIGABYTES**
UPLOAD AND DOWNLOAD ENTIRE FOLDERS OF DATA FILES?	NO
STORES PHOTOS?	NO (SOON) (YES, IF YOU RENAME PHOTO FILES TO .DOC, .DOCX, .XLS, .XLSX., .PPT, OR .PPTX)
ONLINE VIEW AND EDIT OF DOCUMENTS AND PHOTOS?	YES FOR DOCUMENTS NO FOR PHOTOS (SOON FOR PHOTOS WITH THE FUTURE **"iCLOUD PHOTO LIBRARY"**)
"WINDOWS STORE APP" FOR USE IN THE "START" SCREEN OF "WINDOWS 8"?	NO

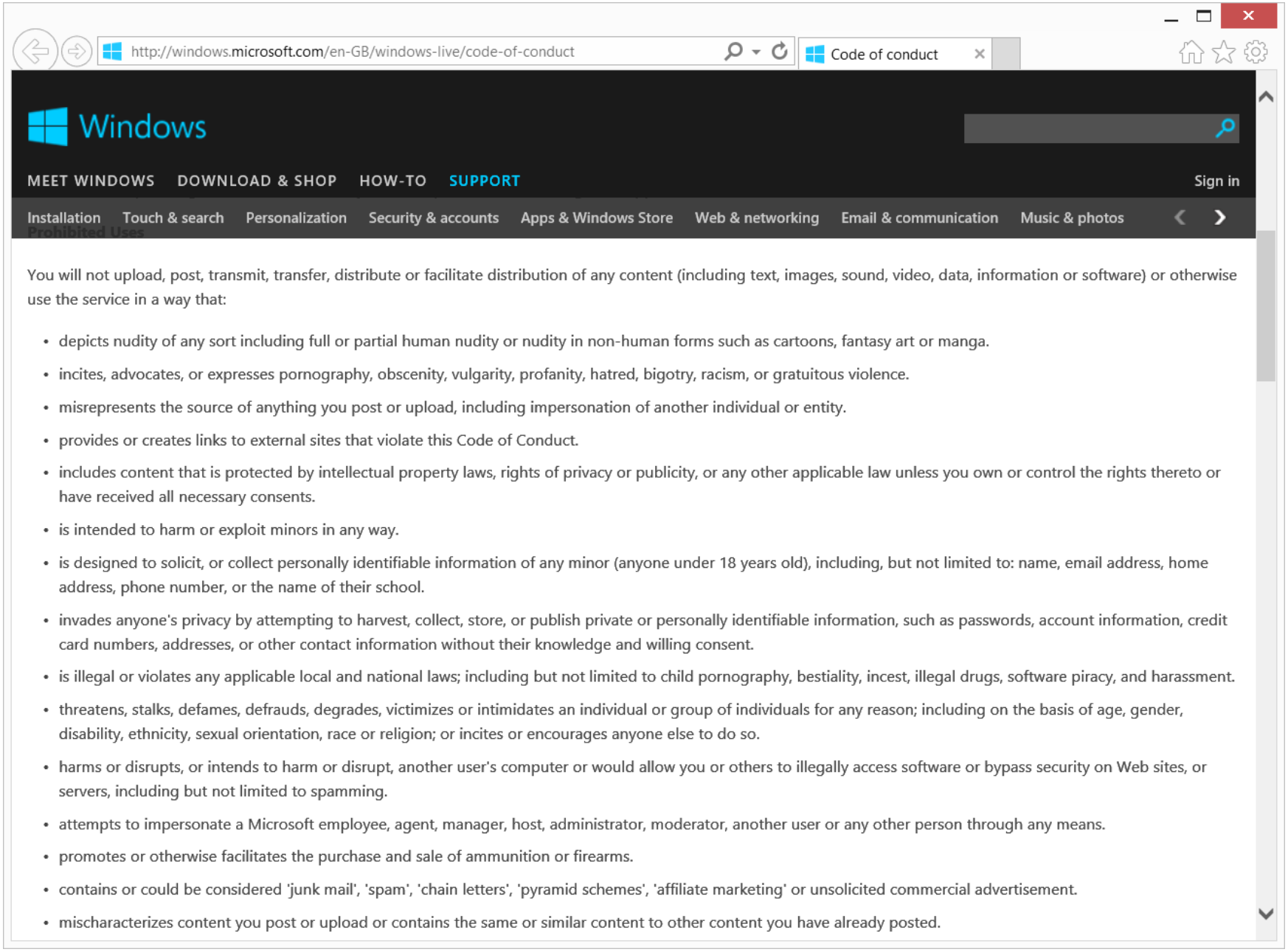
LEGAL DIFFERENCES IN THE "USER AGREEMENTS" FOR THE FOUR POPULAR CLOUD STORAGE SERVICES:

MICROSOFT'S "CODE OF CONDUCT"

- Microsoft's "Code of Conduct" which applies to all of their services including "OneDrive" is more restrictive than the user agreements of other cloud storage services.

MICROSOFT'S "CODE OF CONDUCT" (continued)

- According to http://windows.microsoft.com/en-GB/windows-live/code-of-conduct:


http://windows.microsoft.com/en-GB/windows-live/code-of-conduct
Code of conduct
Windows
MEET WINDOWS
DOWNLOAD & SHOP
HOW-TO
SUPPORT
Sign in
Installation
Touch & search
Personalization
Security & accounts
Apps & Windows Store
Web & networking
Email & communication
Music & photos
Prohibited Uses
You will not upload, post, transmit, transfer, distribute or facilitate distribution of any content (including text, images, sound, video, data, information or software) or otherwise use the service in a way that:
• depicts nudity of any sort including full or partial human nudity or nudity in non-human forms such as cartoons, fantasy art or manga.
• incites, advocates, or expresses pornography, obscenity, vulgarity, profanity, hatred, bigotry, racism, or gratuitous violence.
• misrepresents the source of anything you post or upload, including impersonation of another individual or entity.
• provides or creates links to external sites that violate this Code of Conduct.
• includes content that is protected by intellectual property laws, rights of privacy or publicity, or any other applicable law unless you own or control the rights thereto or have received all necessary consents.
• is intended to harm or exploit minors in any way.
• is designed to solicit, or collect personally identifiable information of any minor (anyone under 18 years old), including, but not limited to: name, email address, home address, phone number, or the name of their school.
• invades anyone's privacy by attempting to harvest, collect, store, or publish private or personally identifiable information, such as passwords, account information, credit card numbers, addresses, or other contact information without their knowledge and willing consent.
• is illegal or violates any applicable local and national laws; including but not limited to child pornography, bestiality, incest, illegal drugs, software piracy, and harassment.
• threatens, stalks, defames, defrauds, degrades, victimizes or intimidates an individual or group of individuals for any reason; including on the basis of age, gender, disability, ethnicity, sexual orientation, race or religion; or incites or encourages anyone else to do so.
• harms or disrupts, or intends to harm or disrupt, another user's computer or would allow you or others to illegally access software or bypass security on Web sites, or servers, including but not limited to spamming.
• attempts to impersonate a Microsoft employee, agent, manager, host, administrator, moderator, another user or any other person through any means.
• promotes or otherwise facilitates the purchase and sale of ammunition or firearms.
• contains or could be considered 'junk mail', 'spam', 'chain letters', 'pyramid schemes', 'affiliate marketing' or unsolicited commercial advertisement.
• mischaracterizes content you post or upload or contains the same or similar content to other content you have already posted.

Prohibited Uses

You will not upload, post, transmit, transfer, distribute or facilitate distribution of any content (including text, images, sound, video, data, information or software) or otherwise use the service in a way that:

- depicts nudity of any sort including full or partial human nudity or nudity in non-human forms such as cartoons, fantasy art or manga.
- incites, advocates, or expresses pornography, obscenity, vulgarity, profanity, hatred, bigotry, racism, or gratuitous violence.

- misrepresents the source of anything you post or upload, including impersonation of another individual or entity.
- provides or creates links to external sites that violate this Code of Conduct.

MICROSOFT'S "CODE OF CONDUCT" (continued)

- Microsoft's "Code of Conduct".. (continued)
  See http://venturebeat.com/2012/08/19/cloud-restrictions-porn-xxx/ and http://venturebeat.com/2012/08/19/cloud-restrictions-porn-xxx/

"GOOGLE TERMS OF SERVICE"

- In comparison to Microsoft's restrictive "Code of Conduct", the "Google Terms of Service" is relatively lax. see http://www.google.com/apps/intl/en/terms/user_terms.html and http://www.google.com/intl/en/policies/terms/

"GOOGLE TERMS OF SERVICE" (continued)

- See http://www.google.com/apps/intl/en/terms/user_terms.html and http://www.google.com/intl/en/policies/terms/

"BOX TERMS OF SERVICE"

- See https://box.com/static/html/terms.html#

"BOX TERMS OF SERVICE" (continued)

You represent and warrant that: (a) you have all the rights in the Content necessary for you to use the Service and to grant the rights in this Section; and, (b) the storage, use or transmission of the Content doesn't violate any law or these Terms.

"BOX TERMS OF SERVICE" (continued)

In addition, you promise that you will not and will not encourage or assist any third party to:

(h) use the Service to: (i) engage in any unlawful or fraudulent activity or perpetrate a hoax or engage in phishing schemes or forgery or other similar falsification

"BOX TERMS OF SERVICE" (continued)

or manipulation of data; (ii) send unsolicited or unauthorized junk mail, spam, chain letters, pyramid schemes or any other form of duplicative or unsolicited messages, whether commercial or otherwise; (iii) advertise or promote a commercial product or service that

"BOX TERMS OF SERVICE" (continued)

is not available through Box unless your account is subject to a small office, home office, business or enterprise subscription; (iv) store or transmit inappropriate Content, such as Content: (1) containing unlawful, defamatory, threatening, pornographic, abusive, libelous or

"BOX TERMS OF SERVICE" (continued)

otherwise objectionable material of any kind or nature, (2) containing any material that encourages conduct that could constitute a criminal offense, or (3) that violates the intellectual property rights or rights to the publicity or privacy of others; (iv) store or transmit any

"BOX TERMS OF SERVICE" (continued)

Content that contains or is used to initiate a denial of service attack, software viruses or other harmful or deleterious computer code, files or programs such as Trojan horses, worms, time bombs, cancelbots, or spyware; or (v) abuse, harass, stalk or otherwise violate the legal rights of a third party;

"iCLOUD TERMS AND CONDITIONS"

- See https://www.apple.com/legal/internet-services/icloud/en/terms.html

"iCLOUD TERMS AND CONDITIONS" (continued)

You agree that you will NOT use the Service to:

a. upload, download, post, email, transmit, store or otherwise make available any Content that is unlawful, harassing, threatening, harmful, tortious, defamatory,

"iCLOUD TERMS AND CONDITIONS"

libelous, abusive, violent, obscene, vulgar, invasive of another's privacy, hateful, racially or ethnically offensive, or otherwise objectionable;

b. stalk, harass, threaten or harm another;

"iCLOUD TERMS AND CONDITIONS"

c. if you are an adult, request personal or other information from a minor (any person under the age of 18 or such other age as local law defines as a minor) who is not personally known to you, including but not limited to any of the following: full name or last name,

"iCLOUD TERMS AND CONDITIONS"

home address, zip/postal code, telephone number, picture, or the names of the minor's school, church, athletic team or friends;

d. pretend to be anyone, or any entity, you are not — you may not impersonate or misrepresent yourself as another person

(including celebrities), entity, another iCloud user, an Apple employee, or a civic or government leader, or otherwise misrepresent your affiliation with a person or entity (Apple reserves the right to reject or block any Apple ID or email address which could be deemed to be an impersonation or

misrepresentation of your identity, or a misappropriation of another person’s name or identity);

e. engage in any copyright infringement or other intellectual property infringement (including uploading any content to which you do not have the right to upload), or disclose any trade secret or

"iCLOUD TERMS AND CONDITIONS"

disclose any trade secret or confidential information in violation of a confidentiality, employment, or nondisclosure agreement;

"ONEDRIVE" DETAILS:

Your Computer, Tablet, PDA, or Cell Phone accessing ONEDRIVE

Ethernet or WiFi Adapter

Upload or download single files
Download entire folders as zip files
Cannot upload entire folders

Web Browser to access onedrive.com

No Web browser add-on is provided by "Microsoft" since onedrive.com uses HTML uploads and downloads

"OneDrive Desktop App" for Windows Vista, Windows 7, Windows 8, or Mac OS X 10.7+

Upload entire folders or single files
Cannot download entire folders or single files

Upload or or download single files
Cannot upload or download entire folders

"OneDrive App" for "Windows 8" (for the "Start Screen")

"OneDrive" Details

- To upload a folder up the the "OneDrive" server farm, you have to use the "OneDrive Desktop App" for "Windows Vista", "Windows 7", Windows 8", or Mac "OS 7+":
  You cannot upload a folder by accessing "OneDrive" with a Web browser.

"GOOGLE DRIVE" DETAILS:

Your Computer, Tablet, PDA, or Cell Phone accessing GOOGLE DRIVE

Ethernet or WiFi Adapter

Upload or download single files
Download entire folders as zip files
Can upload entire folders

Web Browser to access drive.google.com

Native upload/download capability in Chrome browser. A Java applet add-on is provided by Google for folder uploads in other browsers. Single file uploads and downloads with HTML

"Google Drive" which is a desktop application for "Windows XP", "Windows Vista", "Windows 7", "Windows 8", or "Mac OS X 10.6+"

Upload folders or single files

(No downloads using the "Google Drive" program)

For the Windows 8's "Start screen"-based "Internet Explorer 10", only the upload and download of single files is possible.

"Google Drive" Details

- You can use the "Google Chrome" browser to upload and download entire files or folders to the "Google Drive" server farm.
- You can download folders from "Google Drive" with most other Web browsers.
- You cannot upload folders to "Google Drive" with most other Web browsers.

"BOX" DETAILS:

Your Computer, Tablet, PDA, or Cell Phone

accessing **"BOX"**

Ethernet or WiFi Adapter

Upload or download single files
Download entire folders as zip files
Can upload entire folders

Web Browser to access box.com

Uploads via "Drag and Drop" java application and downloads via HTML

"Box Sync" app for "Windows XP/Vista/7/8" or Mac OS X 10.6+ ("My Box Files" folder)

Upload folders or single files
Download folders or single files

Upload or or download single files

"Box" app for "Windows 8" (for the "Start Screen")

"Box" Details

- Only "Box" gives you two methods to upload folders:
  Method 1: Using Box's Java application from within a Web browser
  or
  Method 2: Using the "Box Sync App" for "Windows XP", "Windows Vista", "Windows 7", "Windows 8", or Mac "OS X 10.6+"

"iCLOUD" DETAILS:

Your Computer, Tablet, PDA, or Cell Phone

accessing iCloud

Ethernet or WiFi Adapter

Upload or download single files

Web Browser to access http://icloud.com

Single file upload by means of the "iCloud Web App Plugin" and single file download by means of HTML.

"iCloud Control Panel" for "Windows.." (a desktop program) or Drag and Drop in the Mac "Finder"

Automatic download of "Photo Stream" photos, if "Photo Stream" is turned on and manual upload of photos by dragging into "Uploads" folder

Cannot log into an account at icloud.com from Windows 8's new "Start screen" Internet Explorer 10 (a "Windows Store App")

"iCloud" Details

- **Officially**, you cannot upload data folders up to "iCloud": You can only upload and download one data file at a time.
- You cannot create folders up at the "iCloud" server farm.
- The types of files that you can **officially** store at the "iCloud" server farm are very limited.

"iCloud" Details (continued)

- However, you can rename your data files in order to "force" them to store at your "iCloud" account.

"iCloud" Details (continued)

- **Officially**, the "Pages" storage area of "iCloud" will only accept files in the following four formats:
  - "Pages '09" files that are created by the "Pages" app in an Mac, .iPad, or .iPhone (.PAGES file extension)
  - "Microsoft Word" files with a .DOC file extension
  - Microsoft Word files with a .DOCX file extension
  - Text files with a .TXT file extension

"iCloud" Details (continued)

- **Officially**, the "Numbers" storage area of "iCloud" will only accept files in the following four formats:
  - "Numbers '09" files that are created by the "Numbers 09" app in an Mac, .iPad, or .iPhone (.NUMBERS file extension)
  - "Microsoft Excel" files with a .XLS file extension
  - "Microsoft Word" files with a .XLSX file extension
  - Comma Delimited files with a .CSV file extension

"iCloud" Details (continued)

- **Officially**, the "Keynote" storage area of "iCloud" will only accept files in the following three formats:
  - "Keynote '09" files that are created by the "Keynote 09" app in an Mac, .iPad, or .iPhone (.KEYNOTE file extension)
  - "Microsoft PowerPoint" files with a .PPT file extension
  - "Microsoft PowerPoint" files with a .PPTX file extension

"iCloud" Details (continued)

- **Unofficially**, you can store a file with any format by renaming it with the file extension of an **officially** supported file format.
  - In the "Pages" storage area, you can "force" any file to be stored there by renaming it with a file extension of .PAGES, .DOC, .DOCX, or .TXT

"iCloud" Details (continued)

- **Unofficially**, you can store a file with any format by renaming it with the file extension of an **officially** supported file format (continued)
  - In the "Numbers" storage area, you can "force" any file to be stored there by renaming it with a file extension of .NUMBERS, .XLS, .XLSX, or .CSV

"iCloud" Details (continued)

- **Unofficially**, you can store a **file** with any format by renaming it with the file extension of an **officially** supported file format (continued)
  - In the "Keynote" storage area, you can "force" any file to be stored there by renaming it with a file extension of .KEYNOTE, .PPT, or .PPTX

"iCloud" Details (continued)

- Example of storing an unsupported file in "iCloud":
  Start with a file called "SIG Photo 2013-05-01-1.jpg.".
  Change the name of the file to "SIG Photo 2013-05-01-1.jpg.docx"
  Drag the file to the "Pages" tab of "iCloud".

"iCloud" Details (continued)

- **Unofficially**, you can store a **folder** by zipping the folder and then renaming the .ZIP file with the file extension of an **officially** supported file format.
  - In the "Pages" storage area, you can "force" a folder to be stored there by zipping it and then renaming zip file with a file extension of .PAGES, .DOC, .DOCX, or .TXT

"iCloud" Details (continued)

- **Unofficially**, you can store a **folder** by zipping the folder and then renaming the .ZIP file with the file extension of an **officially** supported file format (continued)
  - In the "Numbers" storage area, you can "force" any folder to be stored there by zipping it and then renaming the zip file with a file extension of .NUMBERS, .XLS, .XLSX, or .CSV

"iCloud" Details (continued)

- **Unofficially**, you can store a folder by zipping the folder and then renaming the .ZIP file with the file extension of an **officially** supported file format (continued)
  - In the "Keynote" storage area, you can "force" any folder to be stored there by zipping it and then renaming the zip file with a file extension of .KEYNOTE, .PPT, or .PPTX

"iCloud" Details (continued)

- Example of storing a folder in "iCloud":
  Start with a folder called "Computer Class Notes".
  Zip it to create a zip file called "Computer Class Notes.zip"
  Change the name of the file to "Computer Class Notes.zip.doc"
  Drag the file to the "Pages" tab of "iCloud".

DOWNLOADING THE FILES AND FOLDERS THAT YOU HAVE STORED AT A SERVER FARM

Downloading the Files That You Have Stored..(continued)

- All cloud storage services let you download stored folders as Zip files
- Box's "Box Sync" program also allows the downloading of stored folders in native format

Downloads of Folders As Zip Files

- "OneDrive" and "Google Drive" allow the download of data folders as Zip files, when you access their respective Web sites with a Web browser.
- "Box" also downloads folders as Zip files when you click on "Download" from within the "Box" Web site, using a Web browser.

Downloads of Folders As Zip Files (continued)

- The zipping process fails for some types of files:
  When this happens during the download process in "OneDrive" or "Google Drive", you will get an error message. However the error message will not tell you which file failed the "zipping" process, which is inconvenient.

Downloads of Folders In Native, Unzipped Format

- Only "Box" allows folder downloads in native, unzipped format:
  You have to have "Box Sync" installed into your "Windows" PC or your "Mac". If you then use a Web browser to access box.com, and you copy a folder into the "Default Sync Folder" at the "Box" Web site, the "Box Sync" software will download the entire folder in native format into your "Windows" PC or "Mac".

Downloads of Folders In Native, Unzipped Format (continued)

- Only "Box" allows the download of data folders in native, unzipped format.
- "OneDrive" and "Google Drive" do not allow the download of data folders in native, unzipped format.

Downloads of Folders In Native, Unzipped Format (continued)

- (Apple's "iCloud" does not allow the upload or download of data folders: only single files can be uploaded or downloaded.)

Downloads of Folders In Native, Unzipped Format

- Only "Box" allows folder downloads in native, unzipped format:
  You have to have "Box Sync" installed into your "Windows" PC or your "Mac". If you then use a Web browser to access box.com, and you copy a folder into the "Default Sync Folder" at the "Box" Web site, the "Box Sync" software will download the entire folder in native format into your "Windows" PC or "Mac".

DISPLAY OF FILE EXTENSIONS?

Display of File Extensions?

- "OneDrive" does not display most file extensions.
- "Box" displays all file extensions
- "Google Drive" displays all file extensions
- "iCloud" does not display any file extensions.

UPLOADS OF SAME-NAMED FILES AND FOLDERS:

WHEN YOU UPLOAD THE SAME FILE OR FOLDER TO THE SAME DIRECTORY LOCATION, THE VARIOUS CLOUD STORAGE SERVICES WILL HANDLE THE SITUATION DIFFERENTLY:

Uploads of Same-Named Files and Folders

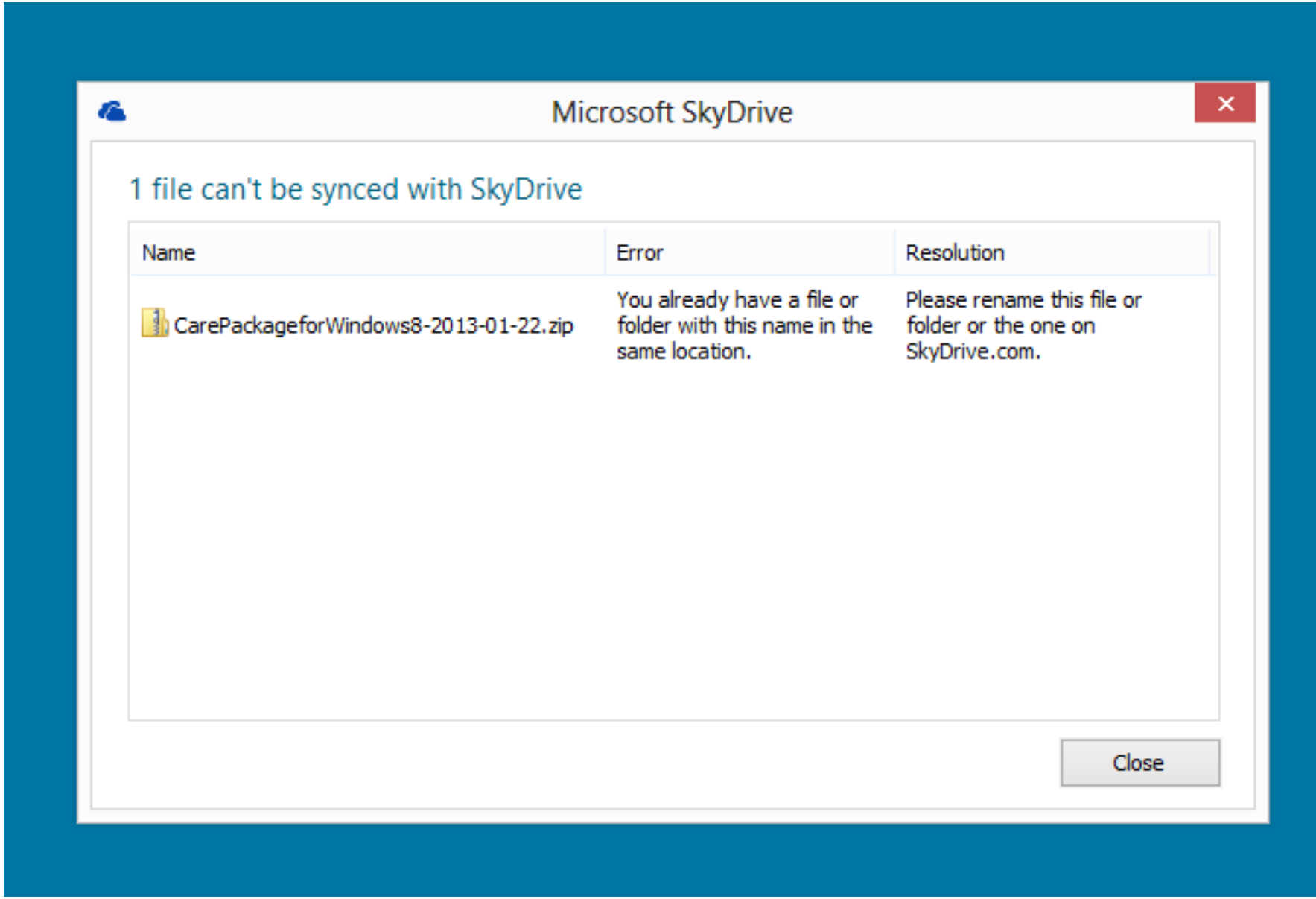
- When you access "OneDrive with a Web browser, OneDrive will not let you store more than one copy of the same file in the same directory level ("OneDrive" will give you an error message in your Web browser.)
  (You cannot upload folders to OneDrive using a Web browser.)

Uploads of Same-Named Files and Folders (continued)

- When you access OneDrive with the "OneDrive app" for the Windows 8 "Start" screen, you cannot upload files or folders with names that are the same as files or folders that are already stored at the "OneDrive" server farm:

Uploads of Same-Named Files and Folders (continued)

- In other words, in "OneDrive", you need to delete or move a file or folder before uploading one with the same name.

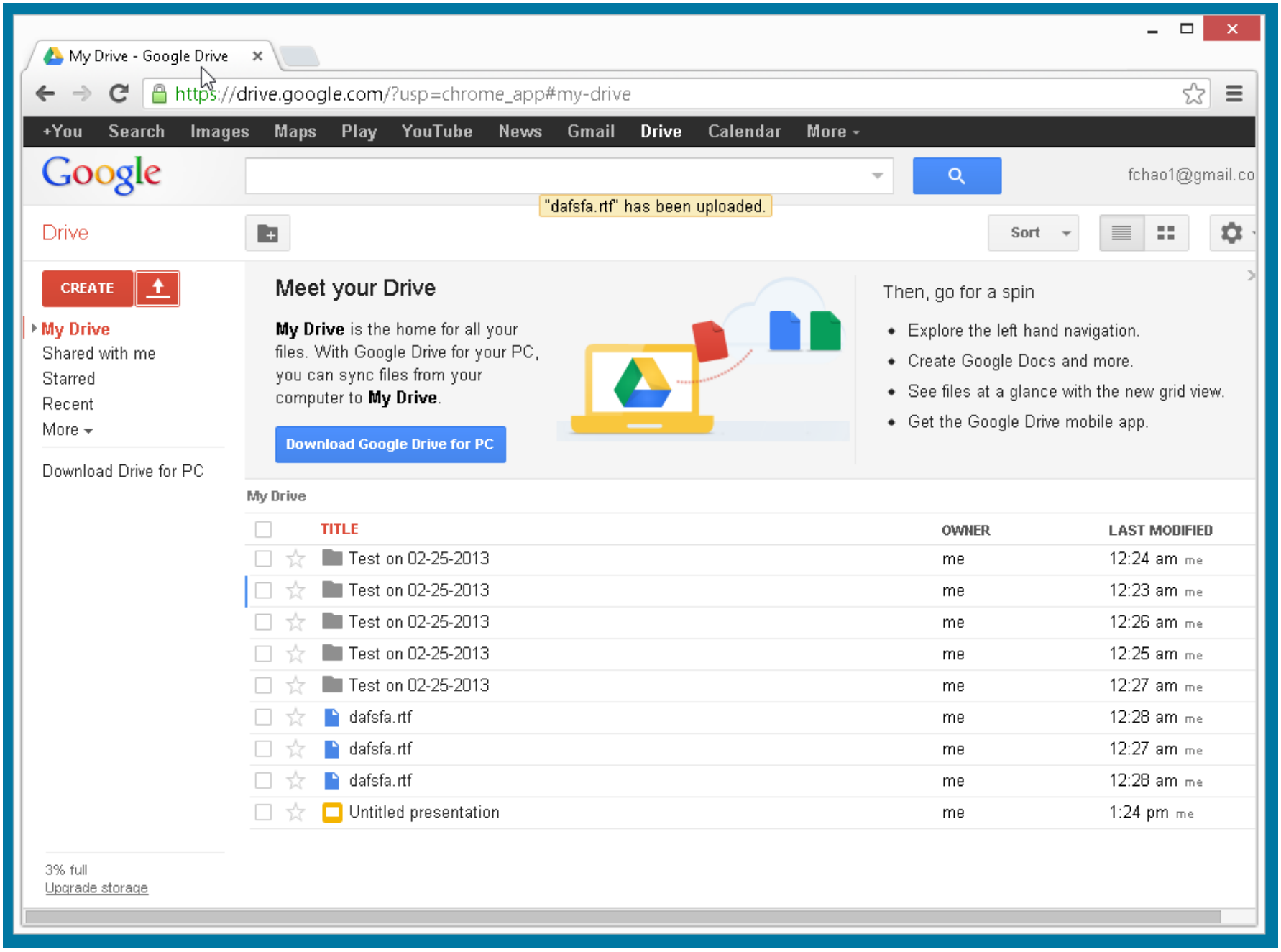

Microsoft SkyDrive
1 file can't be synced with SkyDrive
Name
Error
Resolution
CarePackageforWindows8-2013-01-22.zip
You already have a file or folder with this name in the same location.
Please rename this file or folder or the one on SkyDrive.com.
Close

Uploads of Same-Named Files and Folders (continued)

- If you use your local "Google Drive" folder (of the "Google Drive for PC" program) to upload a folder that is already stored at "Google Drive", it will merge the old and new folders together and replace existing files inside the folder with the ones that are being uploaded.

Uploads of Same-Named Files and Folders (continued)

- If you use a Web browser to upload a folder or a file to the "Google Drive" server farm, you can upload and store more than one copy of the same file or folder at the same directory level.


My Drive - Google Drive
https://drive.google.com/?usp=chrome_app#my-drive
+You Search Images Maps Play YouTube News Gmail Drive Calendar More
Google
fchao1@gmail.co
"dafsfa.rtf" has been uploaded.
Drive
Sort
CREATE
My Drive
Shared with me
Starred
Recent
More
Download Drive for PC
Meet your Drive
My Drive is the home for all your files. With Google Drive for your PC, you can sync files from your computer to My Drive.
Download Google Drive for PC
Then, go for a spin
Explore the left hand navigation.
Create Google Docs and more.
See files at a glance with the new grid view.
Get the Google Drive mobile app.
My Drive
TITLE
OWNER
LAST MODIFIED
Test on 02-25-2013 me 12:24 am me
Test on 02-25-2013 me 12:23 am me
Test on 02-25-2013 me 12:26 am me
Test on 02-25-2013 me 12:25 am me
Test on 02-25-2013 me 12:27 am me
dafsfa.rtf me 12:28 am me
dafsfa.rtf me 12:27 am me
dafsfa.rtf me 12:28 am me
Untitled presentation me 1:24 pm me
3% full
Upgrade storage

My Drive

TITLE	OWNER	LAST MODIFIED
Test on 02-25-2013	me	12:24 am me
Test on 02-25-2013	me	12:23 am me
Test on 02-25-2013	me	12:26 am me
Test on 02-25-2013	me	12:25 am me
Test on 02-25-2013	me	12:27 am me
dafsfa.rtf	me	12:28 am me
dafsfa.rtf	me	12:27 am me
dafsfa.rtf	me	12:28 am me
Untitled presentation	me	1:24 pm me

Uploads of Same-Named Files and Folders (continued)

- To prevent confusion, if you upload the same file or folder up to "Google Drive", use the RIGHT mouse to click on the folder at the "Google" server farm and add the date and time of the upload to the name of the file or folder.

Uploads of Same-Named Files and Folders (continued)

- When you upload a folder with the same name to the same level as an existing folder, Box will merge the two folders together. If Box finds that you are sending up a file that has the same name as an existing file, the existing file will be replaced with the one that you are currently sending up to the Box server farm.

"Windows XP" Issues

- "Box" has no issues with "Windows XP": When you access box.com with a Web browser in "Windows XP" (or "Vista" or "7" or 8"), you can upload and download folders using their Java applet.

"Windows XP" Issues (continued)

- "Google Drive" has no issues with "Windows XP": When you access drive.google.com with a Web browser in "Windows XP" (or "Vista" or "7" or 8"), you can upload and download folders using the "Chrome" Web browser.

"Windows XP" Issues (continued)

- "Windows XP" has issues for OneDrive: You cannot upload a **folder** from a **"Windows XP"** computer to **"Onedrive"** because you cannot install "OneDrive Desktop App for Windows" into a "Windows XP" computer:
  You can only upload **single files** to the OneDrive server farm in "Windows XP".

RAM Usage Differences for the Optional Programs and Apps That Are Provided by Cloud Storage Services

SOFTWARE PROGRAM	PROCESS	RAM USAGE (Kilobytes)
= ONEDRIVE (WINDOWS DESKTOP VERSION)	OneDrive.exe	**12,800**
= ONEDRIVE (WINDOWS 8 STORE APP FOR THE WINDOWS 8 START SCREEN)	microsoft.microsoftonedrive_16.4.4204.712_x64__8wekyb3d8bbwe	**47,500**
Google Drive (32-bit)	googledrivesync.exe	33,800
+ Google Drive (32-bit)	googledrivesync.exe	700
= GOOGLE DRIVE		**34,500**
Box Sync	BoxSync.exe	57,600
+ Box Sync Helper Process	BoxSyncHelper.exe	7,000
= BOX SYNC		**64,600**

Online Viewing and Editing of Stored Files

- When in doubt, use the RIGHT mouse button in "Windows", the "Control" click in a Mac, the "Touch and Hold" in a iPad, etc to get a pop-up context menu for performing a function on a stored file or folder.

Sharing / Publishing Stored Files or Folders:

- For files or folders that you have stored at Microsoft's "OneDrive", "Google Drive", or "Box", you can share files by logging into your cloud storage account with a Web browser.
  Locate the file or folder than you wish to share / publish.

Sharing / Publishing Stored Files or Folders: (continued)

- Use your RIGHT mouse button to click on the file or folder (in a Windows.. computer)
  or perform a Control + Click on the file or folder (in Mac OS X).
  Then click on "Share" in the pop-up context menu, etc.

Sharing / Publishing Stored Files or Folders: (continued)

- This sharing procedure creates a Internet address ("URL") that anyone can use to access the file from any Internet-connected computer in the world.
  Apple's "iCloud" does not allow the sharing / publishing of stored files at the present time.

More Details About "OneDrive"

- See http://aztcs.org/meeting_notes/winhardsig/cloudstorage/OneDrive.pdf

More Details About "Google Drive"

- See http://aztcs.org/meeting_notes/winhardsig/cloudstorage/GoogleDrive.pdf

More Details About "Box"

- See http://aztcs.org/meeting_notes/winhardsig/cloudstorage/Box.pdf

More Details About "iCloud"

- See http://aztcs.org/meeting_notes/winhardsig/cloudstorage/iCloud.pdf

PRICING FOR ADDITIONAL, NOT-FREE STORAGE SPACE

PRICING FOR "ONEDRIVE" STORAGE

- See https://onedrive.live.com/about/en-us/plans/

PRICING FOR "GOOGLE DRIVE" STORAGE

- See https://support.google.com/drive/answer/2375123?hl=en

PRICING FOR "BOX" STORAGE

- See https://www.box.com/pricing/

PRICING FOR "iCLOUD" STORAGE

- See http://support.apple.com/kb/HT5879

Additional Advice and Recommendations (continued)

- See https://www.grc.com/securitynow.htm for Steve Gibson's weekly podcasts. The current series have segments about cloud storage services and

Additional Advice and Recommendations (continued)

- Steve Gibson will be populating the currently-blank spreadsheet at http://bit.ly/sn-css with additional lines in upcoming weeks as he and Leo Laporte discuss the features of various cloud storage services.

Additional Advice and Recommendations (continued)

- See also http://www.cnet.com/news/free-cloud-services-compared/ and http://www.pcmag.com/article2/0,2817,2413556,00.asp

Additional Advice and Recommendations (continued)

- See also http://www.cnet.com/news/free-cloud-services-compared/