

Accessing Nextcloud files using WebDAV



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Nextcloud fully supports the WebDAV protocol, and you can connect to and synchronize with Nextcloud Files over WebDAV. This chapter explains how to connect Linux, macOS, Windows, and mobile devices to your Nextcloud server.

WebDAV stands for Distributed Authoring and Versioning. It is an HTTP extension that makes it easy to create, read, and edit files hosted on remote Web servers. With a WebDAV client, you can access your Nextcloud Files (including shares) on Linux, macOS and Windows in a similar way as any remote network share, and stay synchronized.

Before you configure WebDAV, review the recommended way to connect client devices to Nextcloud.

Official Nextcloud desktop and mobile clients

The recommended way to synchronize a computer with a Nextcloud server is by using the [official Nextcloud sync clients](#). You can configure the client to save files in any local directory and you can choose which directories on the Nextcloud server to sync with. The client displays the current connection status and logs all activity, so you always know which remote files have been downloaded to your PC and you can verify that files created and updated on your local PC are properly synchronized with the server.

The recommended way to synchronize Android and Apple iOS devices is by using the [official Nextcloud mobile apps](#).

To connect the official Nextcloud apps to a Nextcloud server use the same URL you use to access Nextcloud from your web browser - e.g.:

```
https://cloud.example.com
```

If Nextcloud is installed in a subdirectory called "nextcloud":

```
https://example.com/nextcloud
```

Third-party WebDAV clients

If you prefer, you may also connect your computer to your Nextcloud server by using any third-party client that supports the WebDAV protocol (including what may be built into your operating system).

You can also use third-party WebDAV capable apps to connect your mobile device to Nextcloud.

When using third-party clients, keep in mind that they may not be optimized for use with Nextcloud or implement capabilities you consider important to your use case.

Mobile clients that Nextcloud community members have reported using include:

- [FolderSync \(Android\)](#)
- [WebDAV Navigator \(iPhone\)](#)

The URL to use when configuring third-party apps to connect to Nextcloud is a bit lengthier than the one for official clients:

```
https://cloud.example.com/remote.php/dav/files/USERNAME/
```

If Nextcloud is installed in a subdirectory called "nextcloud":

```
https://example.com/nextcloud/remote.php/dav/files/USERNAME/
```

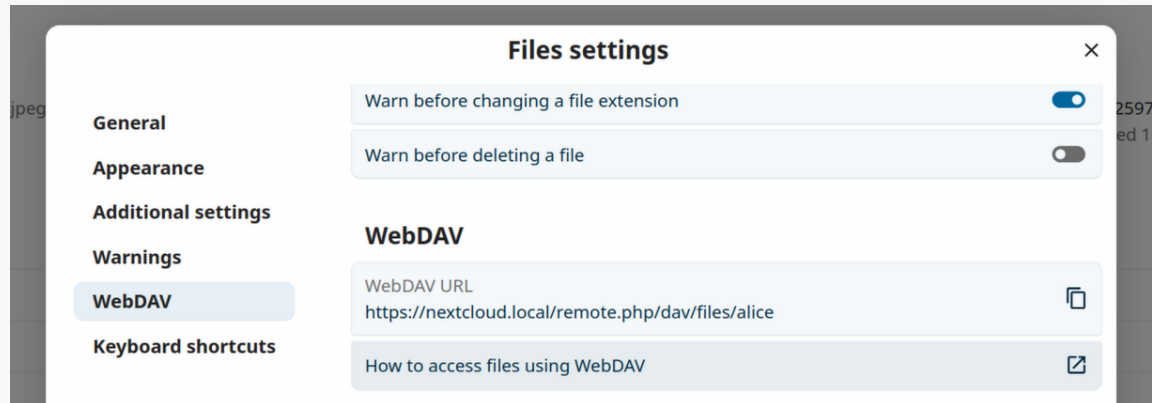


When using a third-party WebDAV client (including your operating system's built-in client), you should use an application password for login rather than your regular password. In addition to improved security, this [increases performance significantly](#). To configure an application password, log in to the Nextcloud Web interface, click your avatar, and choose *Personal settings*. Then choose *Security* in the left sidebar and scroll to the very bottom. There you can create an app password (which can also be revoked in the future without changing your main user password).



In the following examples, you should replace **example.com/nextcloud** with the URL of your Nextcloud server (omit the directory part if the installation is in the root of your domain), and **USERNAME** with the username of the connecting user.

You can find the WebDAV URL in **Files settings** under **WebDAV** in your Nextcloud account.



Accessing files using Linux

You can access files in Linux operating systems using the following methods.

Nautilus file manager

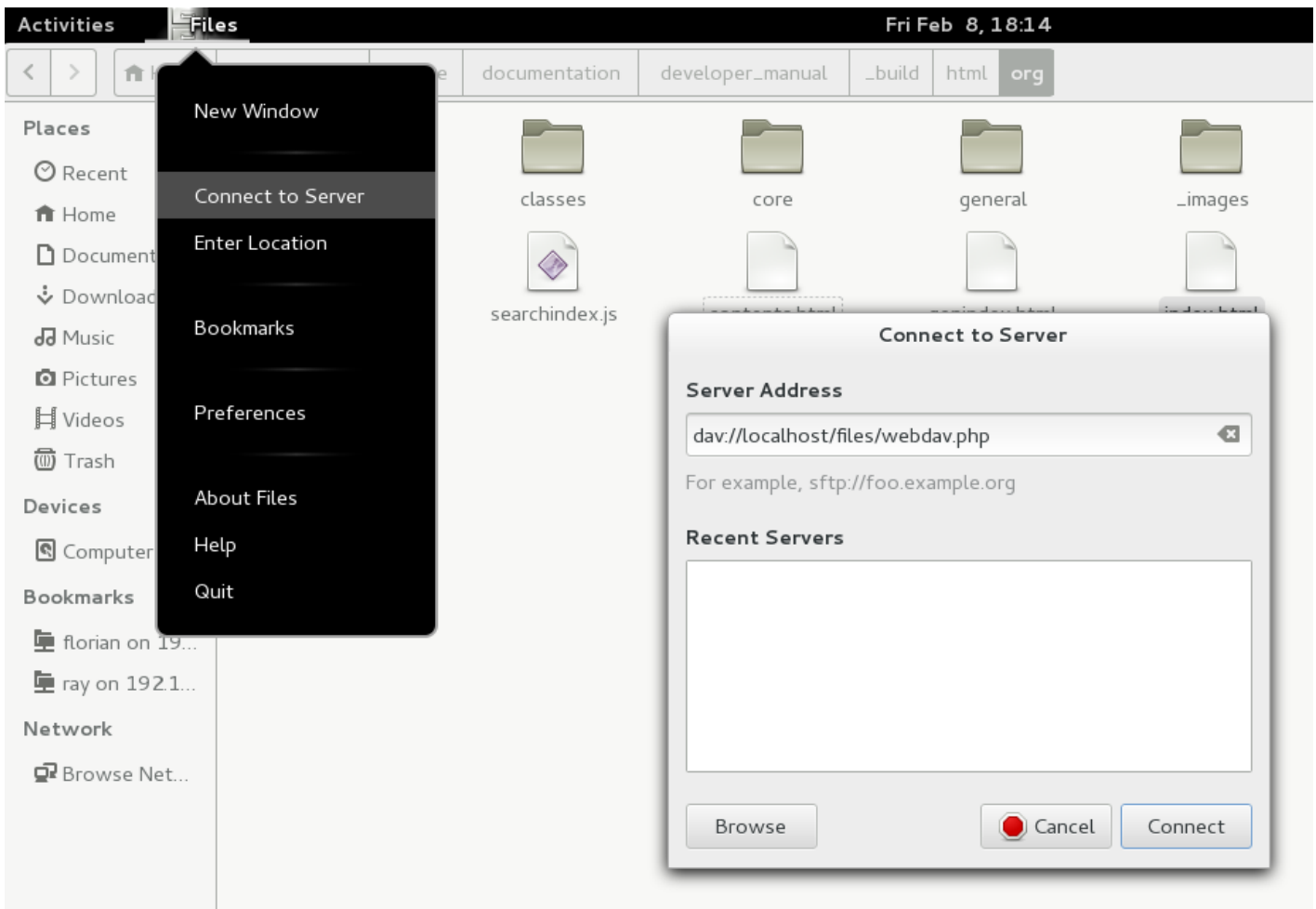
When you configure your Nextcloud account in the [GNOME Control Center](#), your files will automatically be mounted by Nautilus as a WebDAV share, unless you deselect file access.

You can also mount your Nextcloud files manually. Use the `davs://` protocol to connect the Nautilus file manager to your Nextcloud share:

```
davs://example.com/nextcloud/remote.php/dav/files/USERNAME/
```



If your server connection is not HTTPS-secured, use `dav://` instead of `davs://`:



“ ”

The same method works for other file managers that use GVFS, such as MATE's Caja and Cinnamon's Nemo.

Accessing files with KDE and Dolphin

1. Navigate to System Settings -> Networking -> Online Accounts
2. Click "Add Account..."
3. Click Nextcloud
4. Enter your server address
5. Follow the on-screen instructions to log in
6. After logging in, ensure you enable "Storage" in the "Use This Account For" section
7. You can now access your files in Dolphin under "Network" in the sidebar
8. (Optional) To add this location as a shortcut in the sidebar, right-click "Nextcloud Storage", then click "Add to Places"
9. (Optional) To customize the shortcut, right-click it in the sidebar, then click "Edit..." and customize the icon and label

Creating WebDAV mounts on the Linux command line

You can create WebDAV mounts from the Linux command line. This is useful if you prefer to access Nextcloud the same way as any other remote filesystem mount. The following example shows how to create a personal mount and have it mounted automatically every time you log in to your Linux computer.

1. Install the `davfs2` WebDAV filesystem driver, which allows you to mount WebDAV shares just like any other remote filesystem. Use this command to install it on Debian/Ubuntu:

```
apt-get install davfs2
```

2. Use this command to install it on CentOS, Fedora, and openSUSE:

```
yum install davfs2
```

3. Add yourself to the `davfs2` group:

```
usermod -aG davfs2 <username>
```

“ ”

If the `davfs2` group doesn't exist after installing the package, you may need to create it yourself and, possibly, adjust the `davfs` config file to use the group after you've created it.

1. Then create a `nextcloud` directory in your home directory for the mount point, and `.davfs2/` for your personal configuration file:

```
mkdir ~/nextcloud  
mkdir ~/.davfs2
```

2. Copy `/etc/davfs2/secrets` to `~/.davfs2/`:

```
cp /etc/davfs2/secrets ~/.davfs2/secrets
```

3. Set yourself as the owner and make the permissions read-write owner only:

```
chown <linux_username>:<linux_username> ~/.davfs2/secrets  
chmod 600 ~/.davfs2/secrets
```

4. Add your Nextcloud login credentials to the end of the `secrets` file, using your Nextcloud server URL and your Nextcloud username and password:

```
https://example.com/nextcloud/remote.php/dav/files/USERNAME/ <username> <password>
or
$PathToMountPoint $USERNAME $PASSWORD
for example
/home/user/nextcloud john 1234
```

5. Add the mount information to `/etc/fstab`:

```
https://example.com/nextcloud/remote.php/dav/files/USERNAME/
/home/<linux_username>/nextcloud davfs user,rw,auto 0 0
```

6. Then test that it mounts and authenticates by running the following command. If you set it up correctly you won't need root permissions:

```
mount ~/nextcloud
```

7. You should also be able to unmount it:

```
umount ~/nextcloud
```

Now every time you login to your Linux system your Nextcloud share should automatically mount via WebDAV in your `~/nextcloud` directory. If you prefer to mount it manually, change `auto` to `noauto` in `/etc/fstab`.

Known issues

Problem

Resource temporarily unavailable

Solution

If you experience trouble when you create a file in the directory, edit `/etc/davfs2/davfs2.conf` and add:

```
use_locks 0
```

Problem

Certificate warnings

Solution

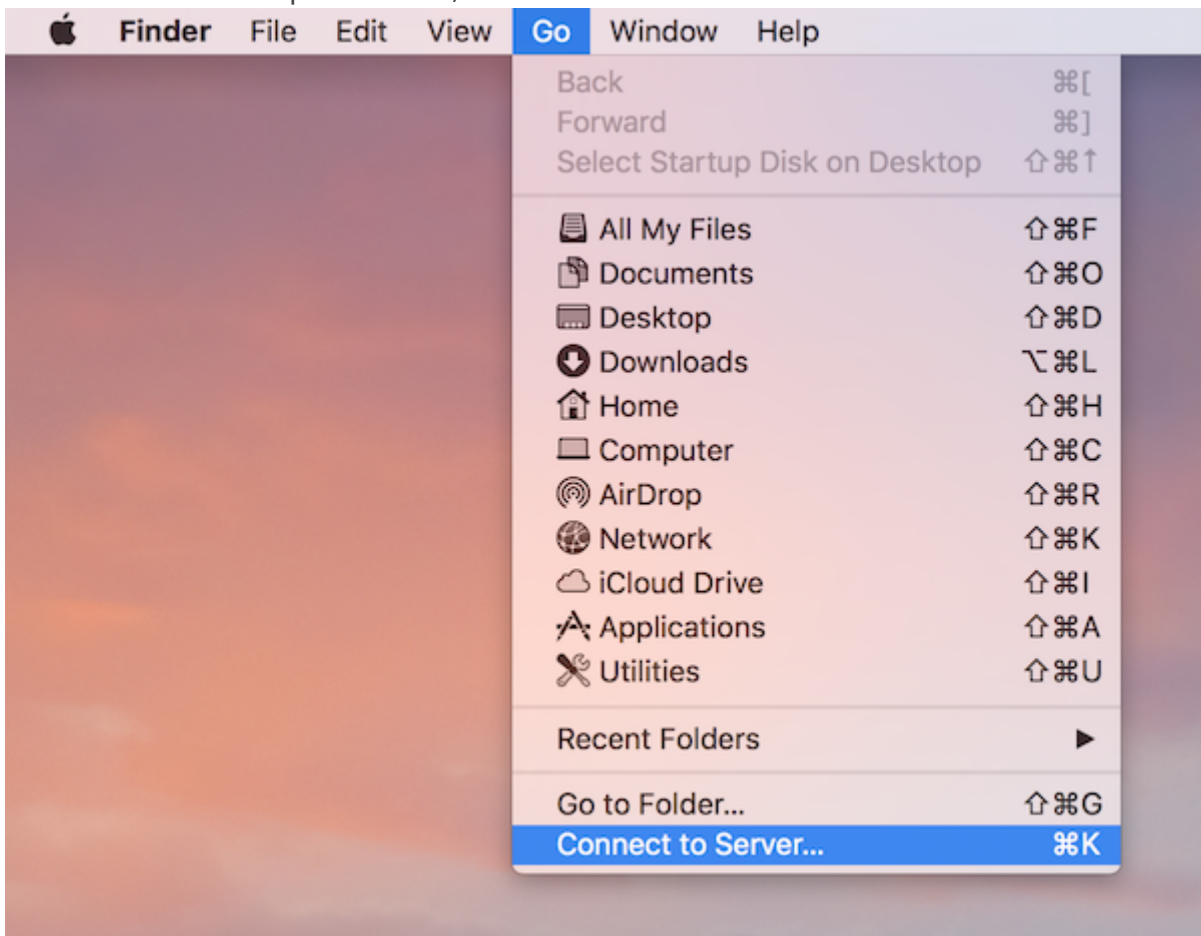
If you use a self-signed certificate, you will get a warning. To change this, you need to configure `davfs2` to recognize your certificate. Copy `mycertificate.pem` to `/etc/davfs2/certs/`. Then edit `/etc/davfs2/davfs2.conf` and uncomment the line `servercert`. Now add the path of your certificate as in this example:

```
servercert /etc/davfs2/certs/mycertificate.pem
```

Accessing files using macOS

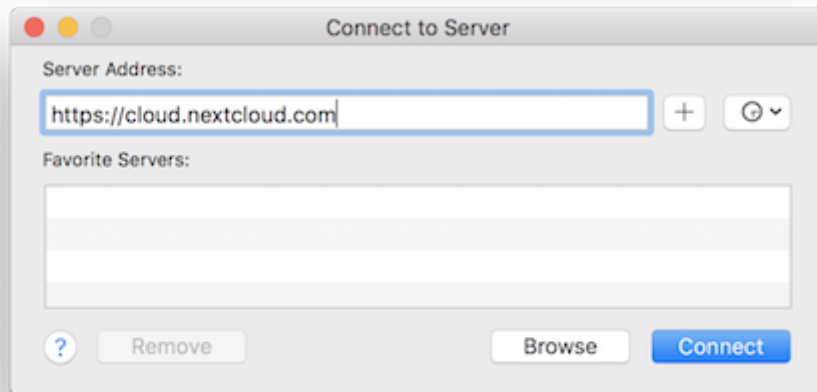
To access files through the macOS Finder:

1. From the Finder's top menu bar, choose **Go > Connect to Server...**:



2. When the **Connect to Server...** window opens, enter your Nextcloud server's WebDAV address in the **Server Address:** field, i.e.:

```
https://cloud.YOURDOMAIN.com/remote.php/dav/files/USERNAME/
```



3. Click **Connect**. Your WebDAV server should appear on the Desktop as a shared disk drive.

Accessing files using Microsoft Windows

If you use the native Windows implementation of WebDAV, you can map Nextcloud to a new drive using Windows Explorer. Mapping to a drive enables you to browse files stored on a Nextcloud server the way you would browse files stored in a mapped network drive.

Using this feature requires network connectivity. If you want to store your files offline, use the Desktop Client to sync all files on your Nextcloud to one or more directories of your local hard drive.



In Windows 10, Basic Authentication is allowed by default when HTTPS is enabled before mapping your drive.

On older versions of Windows, you must permit the use of Basic Authentication in the Windows Registry:

- launch `regedit` and navigate to `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\WebClient\Parameters`.
- Create or edit the `BasicAuthLevel` (Windows Vista, 7 and 8), or `UseBasicAuth` (Windows XP and Windows Server 2003), `DWORD` value and set its value data to `1` for SSL connections. A value of `0` means that Basic Authentication is disabled, and a value of `2` allows both SSL and non-SSL connections (not recommended).
- Then exit Registry Editor, and restart the computer.

Mapping drives with the command line

The following example shows how to map a drive using the command line. To map the drive:

1. Open a command prompt in Windows.
2. Enter the following line in the command prompt to map to the computer Z drive:

```
net use Z: https://<drive_path>/remote.php/dav/files/USERNAME/ /user:youruser  
yourpassword
```

with `<drive_path>` as the URL to your Nextcloud server. For example:

```
net use Z: https://example.com/nextcloud/remote.php/dav/files/USERNAME/  
/user:youruser yourpassword
```

The computer maps the files of your Nextcloud account to the drive letter Z.

“ ”

If you get the following error `System error 67 has occurred. The network name cannot be found.`, or frequent disconnections, open the **Services** app and make sure that the `WebClient` service is running and started automatically at startup.

“ ”

Though not recommended, you can also mount the Nextcloud server using HTTP, leaving the connection unencrypted.

If you plan to use HTTP connections on devices while in a public place, we strongly recommend using a VPN tunnel to provide the necessary security.

An alternative command syntax is:

```
net use Z: \example.com@sslnextcloudremote.phpdav /user:youruser  
yourpassword
```

Mapping drives with Windows Explorer

To map a drive using Microsoft Windows Explorer:

1. Open Windows Explorer on your MS Windows computer.
2. Right-click on **Computer** entry and select **Map network drive...** from the drop-down menu.
3. Choose a local network drive to which you want to map Nextcloud.
4. Specify the address to your Nextcloud instance, followed by **/remote.php/dav/files/USERNAME/**.

For example:

```
https://example.com/nextcloud/remote.php/dav/files/USERNAME/
```

“ ”

For SSL-protected servers, check **Reconnect at sign-in** to ensure that the mapping is persistent upon subsequent reboots. If you want to connect to the Nextcloud server as a different user, check **Connect using different credentials**.

What network folder would you like to map?

Specify the drive letter for the connection and the folder that you want to connect to:

Drive:

Folder:

Example: \\server\share

☒ Reconnect at sign-in

☒ Connect using different credentials

[Connect to a Web site that you can use to store your documents and pictures.](#)

5. Click the button.

Windows Explorer maps the network drive, making your Nextcloud instance available.

Accessing files using Cyberduck

[Cyberduck](#) is an open source FTP, SFTP, WebDAV, OpenStack Swift, and Amazon S3 browser designed for file transfers on macOS and Windows.

“ ”

This example uses Cyberduck version 4.2.1.

To use Cyberduck:

1. Specify a server without any leading protocol information.
For example:
2. Specify the appropriate port.
The port you choose depends on whether or not your Nextcloud server supports SSL. Cyberduck requires that you select a different connection type if you plan to use SSL.
For example:

- 80 for unencrypted WebDAV
- 443 for secure WebDAV (HTTPS/SSL)

3. Use the 'More Options' drop-down menu to add the rest of your WebDAV URL into the 'Path' field.

For example: `remote.php/dav/files/USERNAME/`

Now Cyberduck enables file access to the Nextcloud server.

Accessing public shares over WebDAV

Nextcloud provides the possibility to access public shares anonymously over WebDAV.

To access the public share, open:

```
https://example.com/nextcloud/public.php/dav/files/USERNAME
```

in a WebDAV client, use the share token as username and the (optional) share password as the password. For example, with a share link <https://example.com/s/kFy9Lek5sm928xP>, `kFy9Lek5sm928xP` will be the username.

“ ”

Settings → Administration → Sharing → Allow users on this server to send shares to other servers. This option also allows WebDAV access to public shares and needs to be enabled to make this feature work, except if cURL is being used (see below).

Known problems

Problem

WebDAV access is very slow or times out.

Solution

When using a third-party WebDAV client (including your operating system's built-in client), you should authenticate with an **application password** rather than your regular account password. Using a regular password carries a significant performance penalty because Nextcloud must perform additional work to verify it on every request. Using an application password removes this overhead and can improve transfer speeds substantially.

To create an application password, log in to the Nextcloud web interface, click your avatar, choose **Personal settings**, then open the **Security** section in the left sidebar and scroll to the bottom. Create an app password there and use it in your WebDAV client instead of your main password.

Problem

Windows does not connect using HTTPS.

Solution 1

The Windows WebDAV Client might not support Server Name Indication (SNI) on encrypted connections. If you encounter an error mounting an SSL-encrypted Nextcloud instance, contact your provider about assigning a dedicated IP address for your SSL-based server.

Solution 2

The Windows WebDAV Client might not support TLSv1.1 and TLSv1.2 connections. If you have restricted your server config to only provide TLSv1.1 and above the connection to your server might fail. Please refer to the [WinHTTP](#) documentation for further information.

Problem

You receive the following error message: **Error 0x800700DF: The file size exceeds the limit allowed and cannot be saved.**

Solution

Windows limits the maximum size a file transferred from or to a WebDAV share may have. You can increase the value `FileSizeLimitInBytes` in `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\WebClient\Parameters` by clicking on **Modify**.

To increase the limit to the maximum value of 4GB, select **Decimal**, enter a value of `4294967295`, and reboot Windows or restart the **WebClient** service.

Problem

Adding a WebDAV drive on Windows with the steps above does not display the correct available Nextcloud space and instead shows the size and free space of the C: drive.

Answer

Unfortunately, this is a limitation of WebDAV itself, because it does not provide a way for the client to retrieve available free space from the server. Windows automatically falls back to the size and free space of the C: drive. There is no direct solution for this limitation.

Problem

Accessing your files from Microsoft Office via WebDAV fails.

Solution

Known problems and their solutions are documented in the [KB2123563](#) article.

Problem

Cannot map Nextcloud as a WebDAV drive in Windows using a self-signed certificate.

Solution

1. Access your Nextcloud instance in your preferred Web browser.
2. Click through until you get to the certificate error in the browser status line.
3. View the certificate, then from the Details tab, select 'Copy to File'.
4. Save the file to your desktop with an arbitrary name, for example `myNextcloud.pem`.
5. Go to Start menu > Run, type MMC, and click 'OK' to open Microsoft Management Console.
6. Go to File > Add/Remove Snap-In.
7. Select Certificates, Click 'Add', choose 'My User Account', then 'Finish', and finally 'OK'.
8. Dig down to Trust Root Certification Authorities, Certificates.
9. Right-Click Certificate, Select All Tasks, and Import.
10. Select the saved certificate from the Desktop.

11. Select Place all Certificates in the following Store, and click Browse.
12. Check the Box that says Show Physical Stores, expand out Trusted Root Certification Authorities, select Local Computer there, click 'OK', and Complete the Import.
13. Check the list to make sure the certificate shows up. You will probably need to Refresh before you see it.
14. Exit MMC.

For Firefox users:

1. Launch your browser, go to Application menu > History > Clear recent history...
2. Select 'Everything' in the 'Time range to clear' dropdown menu
3. Select the 'Active Logins' check box
4. Click the 'Clear now' button
5. Close the browser, then re-open and test.

For Chrome-based browsers (Chrome, Chromium, Microsoft Edge) users:

1. Open Windows Control Panel, navigate down to Internet Options
2. In the Content tab, click the Clear SSL State button.
3. Close the browser, then re-open and test.

Accessing files using cURL

Since WebDAV is an extension of HTTP, cURL can be used to script file operations.



Settings → Administration → Sharing → Allow users on this server to send shares to other servers. If this option is disabled, the option `--header "X-Requested-With: XMLHttpRequest"` needs to be passed to cURL.

To create a folder with the current date as name:

```
$ curl -u user:pass -X MKCOL  
"https://example.com/nextcloud/remote.php/dav/files/USERNAME/$(date '+%d-%b-%Y')"
```

To upload a file `error.log` into that directory:

```
$ curl -u user:pass -T error.log  
"https://example.com/nextcloud/remote.php/dav/files/USERNAME/$(date '+%d-%b-%Y')/error.log"
```

To move a file:

```
$ curl -u user:pass -X MOVE --header 'Destination:
https://example.com/nextcloud/remote.php/dav/files/USERNAME/target.jpg'
https://example.com/nextcloud/remote.php/dav/files/USERNAME/source.jpg
```

To get the properties of files in the root folder:

```
$ curl -X PROPFIND -H "Depth: 1" -u user:pass
https://example.com/nextcloud/remote.php/dav/files/USERNAME/ | xml_pp
<?xml version="1.0" encoding="utf-8"?>
<d:multistatus xmlns:d="DAV:" xmlns:oc="http://nextcloud.org/ns"
xmlns:s="http://sabredav.org/ns">
  <d:response>
    <d:href>/nextcloud/remote.php/dav/files/USERNAME/</d:href>
    <d:propstat>
      <d:prop>
        <d:getlastmodified>Tue, 13 Oct 2015 17:07:45 GMT</d:getlastmodified>
        <d:resourcetype>
          <d:collection/>
        </d:resourcetype>
        <d:quota-used-bytes>163</d:quota-used-bytes>
        <d:quota-available-bytes>11802275840</d:quota-available-bytes>
        <d:getetag>"561d3a6139d05"</d:getetag>
      </d:prop>
      <d:status>HTTP/1.1 200 OK</d:status>
    </d:propstat>
  </d:response>
  <d:response>
    <d:href>/nextcloud/remote.php/dav/files/USERNAME/welcome.txt</d:href>
    <d:propstat>
      <d:prop>
        <d:getlastmodified>Tue, 13 Oct 2015 17:07:35 GMT</d:getlastmodified>
        <d:getcontentlength>163</d:getcontentlength>
        <d:resourcetype/>
        <d:getetag>"47465fae667b2d0fee154f5e17d1f0f1"</d:getetag>
        <d:getcontenttype>text/plain</d:getcontenttype>
      </d:prop>
      <d:status>HTTP/1.1 200 OK</d:status>
```

```
</d:propstat>
</d:response>
</d:multistatus>
```

Accessing files using WinSCP

[WinSCP](#) is a free, open-source SFTP, FTP, WebDAV, S3, and SCP client for Windows. Its main function is file transfer between a local and a remote computer. WinSCP also offers scripting and basic file management functionality.

You can [download](#) the portable version of WinSCP and run it on Linux through [Wine](#).

To run WinSCP on Linux, install Wine through your distribution's package manager, then run: `wine WinSCP.exe`.

To connect to Nextcloud:

- Start WinSCP
- Press 'Session' in the menu
- Press the 'New Session' menu option
- Set the 'File protocol' dropdown to WebDAV
- Set the 'Encryption' dropdown to TLS/SSL Implicit encryption
- Fill in the hostname field: `example.com`
- Fill in the username field: `NEXTCLOUDUSERNAME`
- Fill in the password field: `NEXTCLOUDPASSWORD`
- Press the 'Advanced...' button
- Navigate to 'Environment', 'Directories' on the left side
- Fill in the 'Remote directory' field with the following:
`/nextcloud/remote.php/dav/files/NEXTCLOUDUSERNAME/`
- Press the 'OK' button
- Press the 'Save' button
- Select the desired options and press the 'OK' button
- Press the 'Login' button to connect to Nextcloud

“ ”

If you use TOTP, use an app password. At the time of writing (2022-11-07), WinSCP does not support TOTP with Nextcloud.