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Welcome to Nextcloud: A safe home for all your data.

Nextcloud is open source file sync and share software for everyone from individuals operating the free Nextcloud Server in the privacy of their own home, to large enterprises and service providers supported by the Nextcloud Enterprise Subscription. Nextcloud provides a safe, secure, and compliant file synchronization and sharing solution on servers that you control.

You can share one or more files and folders on your computer, and synchronize them with your Nextcloud server. Place files in your local shared directories, and those files are immediately synchronized to the server and to other devices using the ownCloud / Nextcloud Desktop Sync Client, Android app, or iOS app. To learn more about the Nextcloud desktop and mobile clients, please refer to their respective manuals:

- Nextcloud/ownCloud Desktop Client
- Nextcloud Android App
WHAT’S NEW FOR USERS IN NEXTCLOUD 9

• File tagging, and filtering by tags. (Accessing your Files Using the Nextcloud Web Interface)
• See all re-shares on files you have shared.
• Auto-fill user and group names when you create Federation shares (Using Federation Shares)
• Shared comments on files.
• Video player.
CHAPTER THREE

THE NEXTCLOUD WEB INTERFACE

You can connect to your Nextcloud server using any Web browser; just point it to your Nextcloud server and enter your username and password. Supported Web browsers are:

- Firefox 14+
- Chrome 18+
- Safari 5+
- IE9+ (except Compatibility Mode)
Note: Some apps like files_external or encryption will disable the Stay logged in checkbox.

3.1 Navigating the Main User Interface

By default, the Nextcloud Web interface opens to your Files page. You can add, remove, and share files, and make changes based on the access privileges set by you (if you are administering the server) or by your server administrator.

The Nextcloud user interface contains the following fields and functions:

- **Apps Selection Menu**: Located in the upper left corner, click the arrow to open a dropdown menu to navigate to your various available apps.

- **Apps Information** field: Located in the left sidebar, this provides filters and tasks associated with your selected app. For example, when you are using the Files apps you have a special set of filters for quickly finding your files, such as files that have been shared with you, and files that you have shared with others. You’ll see different items for other apps.

- **Application View**: The main central field in the Nextcloud user interface. This field displays the contents or user features of your selected app.

- **Navigation Bar**: Located over the main viewing window (the Application View), this bar provides a type of breadcrumbs navigation that enables you to migrate to higher levels of the folder hierarchy up to the root level (home).

- **New** button: Located in the Navigation Bar, the New button enables you to create new files, new folders, or upload files.

Note: You can also drag and drop files from your file manager into the Nextcloud Files Application View to upload them to Nextcloud. Currently, the only Web browsers that support drag-and-drop folders are Chrome and Chromium.

- **Search** field: Click on the magnifier in the upper right hand corner of to search for files.
• **Gallery** button. This looks like four little squares, and takes you directly to your image gallery.

• **Personal Settings** menu: Click on your Nextcloud username, located to the right of the Search field, to open your Personal Settings dropdown menu. Your Personal page provides the following settings and features:
  – Links to download desktop and mobile apps
  – Re-run the First Run Wizard
  – Server usage and space availability
  – Password management
  – Name, email, and profile picture settings
  – Group memberships
  – Interface language settings
  – Manage notifications
  – Federated Cloud ID
  – Social media sharing buttons
  – SSL certificate manager
  – Nextcloud Version information

See *Setting Your Preferences* section to learn more about these settings.
4.1 Accessing your Files Using the Nextcloud Web Interface

You can access your Nextcloud files with the Nextcloud Web interface and create, preview, edit, delete, share, and re-share files. Your Nextcloud administrator has the option to disable these features, so if any of them are missing on your system ask your server administrator.

4.1.1 Tagging Files

New for 9: file tagging. You can assign tags to files. To create tags, open a file to the Details view. Then type your tags. To enter more than one tag press the return key after creating each tag. All tags are system tags, and are shared by all users on your Nextcloud server.

Then use the Tags filter on the left sidebar to filter files by tags.

4.1.2 Comments

New for 9.0: Comments. Use the Details view to add and read comments on any file or folder. Comments are visible to everyone who has access to the file.
4.1. Accessing your Files Using the Nextcloud Web Interface
4.1.3 Video Player

You can play videos in Nextcloud with the Video Player app by simply clicking on the file. Video streaming by the native Nextcloud video player depends on your Web browser and the video format. If your Nextcloud administrator has enabled video streaming, and it doesn’t work in your Web browser, it may be a browser issue. See https://developer.mozilla.org/en-US/docs/Web/HTML/Supported_media_formats#Browser_compatibility for supported multimedia formats in Web browsers.

4.1.4 File Controls

Nextcloud can display thumbnail previews for image files, MP3 covers, and text files, if this enabled by your server administrator. Hover your cursor over a file or folder to expose the controls for the following operations:

**Favorites** Click the star to the left of the file icon to mark it as a favorite, and quickly find all of your favorites with the Favorites filter on the left sidebar.

**Share** Share the file or folder with a group or other users, and create public shares with hyperlinks. You can also see who you have shared with already, and revoke shares by clicking the trash can icon.

**Note:** New in 9.0, you can see all re-shares of your original file shares.

If username auto-completion is enabled, when you start typing the user or group name Nextcloud will automatically complete it for you. If your administrator has enabled email notifications, you can send an email notification of the new share from the sharing screen.

You have five share permissions:
4.1. Accessing your Files Using the Nextcloud Web Interface
• Can share; allows the users you share with to re-share.
• Can edit; allows the users you share with to edit your shared files, and to collaborate using the Documents app.
• Create; allows the users you share with to create new files and add them to the share.
• Change; allows uploading a new version of a shared file and replacing it.
• Delete; allows the users you share with to delete shared files.

Overflow Menu  The Overflow menu (three dots) displays file details, and allows you to rename, download, or delete files.

Fig. 1: The Details view shows Activities, Sharing, and Versions information.
4.1.5 Previewing Files

You can display uncompressed text files, OpenDocument files, videos, and image files in the Nextcloud embedded viewers by clicking on the file name. There may be other file types you can preview if your Nextcloud administrator has enabled them. If Nextcloud cannot display a file, it starts a download process and downloads the file to your computer.

4.1.6 Navigating Inside Your Nextcloud

Navigating through folders in Nextcloud is as simple as clicking on a folder to open it and using the back button on your browser to move to a previous level. Nextcloud also provides a navigation bar at the top of the Files field for quick navigation.

4.1.7 Sharing Status Icons

Any folder that has been shared is marked with the Shared overlay icon. Public link shares are marked with a chain link. Un-shared folders are blank.

4.1.8 Creating or Uploading Files and Directories

Upload or create new files or folders directly in an Nextcloud folder by clicking on the New button in the Files app. The New button provides the following options:

- **Up arrow**  Upload files from your computer into Nextcloud. You can also upload files by dragging and dropping them from your file manager.
- **Text file**  Creates a new text file and adds the file to your current folder.
- **Folder**  Creates a new folder in the current folder.

4.1.9 Selecting Files or Folders

You can select one or more files or folders by clicking on their checkboxes. To select all files in the current directory, click on the checkbox located at the top of the files listing.
When you select multiple files, you can delete all of them, or download them as a ZIP file by using the **Delete** or **Download** buttons that appear at the top.

**Note:** If the **Download** button is not visible, the administrator has disabled this feature.

### 4.1.10 Filtering the Files View

The right sidebar on the Files page contains several filters for quickly sorting and managing your files.

- **All files** The default view; displays all files that you have access to.
- **Favorites** Files or folders marked with the yellow star.
- **Shared with you** Displays all files shared with you by another user or group.
- **Shared with others** Displays all files that you have shared with other users or groups.
- **Shared by link** Displays all files that are shared by you via public link.
- **External Storage** Files that you have access to on external storage devices and services such as Dropbox, Google, and Amazon S3.

### 4.1.11 Moving Files

You can move files and folders by dragging and dropping them into any directory.

### 4.1.12 Change in Share Expiration Date

In older versions of Nextcloud, you could set an expiration date on both local and public shares. Now you can set an expiration date only on public shares, and local shares do not expire when public shares expire. The only way to “expire” a local share is to click the trash can icon to un-share your files.

### 4.1.13 Creating or Connecting to a Federation Share Link

Federated Cloud Sharing allows you to mount file shares from remote Nextcloud servers, and manage them just like a local share. The process for creating a new sharing link is easier and more streamlined now. See [Using Federation](#).
Shares to learn how to create and connect to new Federated Cloud shares.

4.2 Accessing Nextcloud Files Using WebDAV

Nextcloud fully supports the WebDAV protocol, and you can connect and synchronize with your Nextcloud files over WebDAV. In this chapter you will learn how to connect Linux, Mac OS X, Windows, and mobile devices to your Nextcloud server via WebDAV. Before we get into configuring WebDAV, let’s take a quick look at the recommended way of connecting client devices to your Nextcloud servers.

4.2.1 Nextcloud Desktop and Mobile Clients

The recommended method for keeping your desktop PC synchronized with your Nextcloud server is by using the Nextcloud/ownCloud sync clients. You can configure the client to save files in any local directory you want, and you 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 method for syncing your Nextcloud server with Android and Apple iOS devices is by using the Nextcloud mobile apps.

To connect to your Nextcloud server with the Nextcloud mobile apps, use the base URL and folder only:

`example.com/nextcloud`

In addition to the mobile apps provided by Nextcloud, you can use other apps to connect to Nextcloud from your mobile device using WebDAV. WebDAV Navigator is a good (proprietary) app for Android devices and iPhones. The URL to use on these is:

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

4.2.2 WebDAV Configuration

If you prefer, you may also connect your desktop PC to your Nextcloud server by using the WebDAV protocol rather than using a special client application. Web Distributed Authoring and Versioning (WebDAV) is a Hypertext Transfer Protocol (HTTP) extension that makes it easy to create, read, and edit files on Web servers. With WebDAV you can access your Nextcloud shares on Linux, Mac OS X and Windows in the same way as any remote network share, and stay synchronized.

*Note:* In the following examples, you must adjust `example.com/` to the URL of your Nextcloud server installation.

4.2.3 Accessing Files Using Linux

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

**Nautilus File Manager**

Use the `davs://` protocol to connect the Nautilus file manager to your Nextcloud share:
Accessing Files with KDE and Dolphin File Manager

To access your Nextcloud files using the Dolphin file manager in KDE, use the `webdav://` protocol:

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

**Note:** If your server connection is not HTTPS-secured, use `dav://` instead of `davs://`. 
You can create a permanent link to your Nextcloud server:

1. Open Dolphin and click “Network” in the left hand “Places” column.
2. Click on the icon labeled **Add a Network Folder**. The resulting dialog should appear with WebDAV already selected.
3. If WebDAV is not selected, select it.
4. Click **Next**.
5. Enter the following settings:
   - Name: The name you want to see in the **Places** bookmark, for example Nextcloud.
   - User: The Nextcloud username you used to log in, for example admin.
   - Server: The Nextcloud domain name, for example example.com (without http:// before or directories afterwards).
   - Folder – Enter the path `nextcloud/remote.php/dav/files/USERNAME/`.
6. (Optional) Check the “Create icon checkbox” for a bookmark to appear in the Places column.
7. (Optional) Provide any special settings or an SSL certificate in the “Port & Encrypted” checkbox.

### 4.2.4 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:
2. Use this command to install it on CentOS, Fedora, and openSUSE:

```
apt-get install davfs2
```

3. Add yourself to the `davfs2` group:

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

3. Then create an `nextcloud` directory in your home directory for the mountpoint, and `.davfs2/` for your personal configuration file:

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

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

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

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

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

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

```
example.com/nextcloud/remote.php/dav/files/USERNAME/ <username> <password>
```

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

```
exampke.com/nextcloud/remote.php/dav/files/USERNAME/ /home/<username>/nextcloud
davfs user,rw,auto 0 0
```

8. 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
```

9. 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`.

### 4.2.5 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
```

4.2.6 Accessing Files Using Mac OS X

Note: The Mac OS X Finder suffers from a series of implementation problems and should only be used if the Nextcloud server runs on Apache and `mod_php`, or Nginx 1.3.8+.

To access files through the Mac OS X Finder:

1. Choose Go > Connect to Server.

   The “Connect to Server” window opens.

2. Specify the address of the server in the Server Address field.
For example, the URL used to connect to the Nextcloud server from the Mac OS X Finder is:

https://example.com/nextcloud/remote.php/dav/files/USERNAME/
3. Click **Connect**.

   The device connects to the server.

For added details about how to connect to an external server using Mac OS X, check the vendor documentation.

4.2.7 Accessing Files Using Microsoft Windows

It is best to use a suitable WebDAV client from the WebDAV Project page.

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

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

**Note:** Prior to mapping your drive, you must permit the use of Basic Authentication in the Windows Registry. The procedure is documented in KB841215 and differs between Windows XP/Server 2003 and Windows Vista/7. Please follow the Knowledge Base article before proceeding, and follow the Vista instructions if you run Windows 7.

**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:

   ```
   yourpassword
   ```

   where `<drive_path>` is the URL to your Nextcloud server.

4.2. Accessing Nextcloud Files Using WebDAV
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.

**Note:** 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\ssl\nextcloud\remote.php\dav /user:youruser yourpassword
```

### Mapping Drives With Windows Explorer

To map a drive using the Microsoft Windows Explorer:

1. Migrate to your computer in Windows Explorer.
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/
   ```

   **Note:** For SSL protected servers, check Reconnect at logon 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.

5. Click the Finish button.

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

### 4.2.8 Accessing Files Using Cyberduck

Cyberduck is an open source FTP and SFTP, WebDAV, OpenStack Swift, and Amazon S3 browser designed for file transfers on Mac OS X and Windows.

**Note:** This example uses Cyberduck version 4.2.1.

To use Cyberduck:

1. Specify a server without any leading protocol information. For example:
   ```
   example.com
   ```

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:
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.

4.2.9 Accessing public shares over WebDAV

Nextcloud provides the possibility to access public shares over WebDAV.

To access the public share, open:

https://example.com/nextcloud/public.php/dav

in a WebDAV client, use the share token as username and the (optional) share password as password.

4.2.10 Known Problems

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 TSLv1.1 / TSLv1.2 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

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 self-signed certificate.

Solution

1. Go to the your Nextcloud instance via your favorite Web browser.
2. Click through until you get to the certificate error in the browser status line.
3. View the cert, then from the Details tab, select Copy to File.
4. Save to the desktop with an arbitrary name, for example **myNextcloud.cer**.
5. Start, Run, **MMC**.
6. File, Add/Remove Snap-In.
7. Select Certificates, Click Add, My User Account, then Finish, then OK.
8. Dig down to Trust Root Certification Authorities, Certificates.
9. Right-Click Certificate, Select All Tasks, Import.
10. Select the Save Cert from the Desktop.
11. Select Place all Certificates in the following Store, Click Browse,
12. Check the Box that says Show Physical Stores, Expand out Trusted Root Certification Authorities, and select Local Computer there, click OK, Complete the Import.
13. Check the list to make sure it shows up. You will probably need to Refresh before you see it. Exit MMC.
14. Open Browser, select Tools, Delete Browsing History.
15. Select all but In Private Filtering Data, complete.
16. Go to Internet Options, Content Tab, Clear SSL State.
17. Close browser, then re-open and test.

Problem

You cannot download more than 50 MB or upload large Files when the upload takes longer than 30 minutes using Web Client in Windows 7.

Solution

Workarounds are documented in the KB2668751 article.

4.2.11 Accessing Files Using cURL

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

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:

```
```

To get the properties of files in the root folder:

```
```

(continues on next page)
4.3 Gallery App

The gallery app supports several image formats, sorting, zoom, and scrolling. It also supports advanced customizations via a simple text file.

On your main Nextcloud Files page, click the little icon at the top right, underneath your username, to open your Gallery. The Gallery app automatically finds all images in your Nextcloud folders, and overlays the thumbnails with the folder names. Click on the folder thumbnails to open the folders. At the top left you have two sorting options, alphabetical and by date.

After entering any folder, click on any image to open it in slideshow mode. This has the following features: a download button at the top center, forward and back buttons at the right and left sides, an automatic slideshow button at the bottom right, and a close button at the top right.

4.3.1 Custom Configuration

You may customize a Gallery album with a simple text file named gallery.cnf, which contains parameters structured using the Yaml markup language. You may have multiple gallery.cnf files; you need one in your own root Nextcloud folder (your Home folder) that defines global features, and then you may have individual per-album gallery.cnf files if you want to define different behaviors in different albums.

Features

The following general features are currently implemented:

- Native SVG support.
• Access to external shares.

The following album features are currently implemented:

• Adding a link to a file containing a description.
• Typing a simple copyright statement directly in the configuration file.
• Adding a link to a file containing a copyright statement.
• Defining a sort type and order.
• Defining the colour of the background.
• Defining if sub-albums will inherit the configuration.

The following slideshow features are currently implemented:

• Showing a button which lets you pick which background, either black or white, to use for the picture you are currently viewing (for images with transparent backgrounds).

Setup

The configuration file has to be named `gallery.cnf`. You may have multiple per-album `gallery.cnf` files. To enable global features, place one in your top-level folder, which is symbolised in the Web GUI by the home icon. (This puts it in `data/<user>/files/`). See an example below in the **Global features** section.

Note: You need to refresh your browser after changing your configuration to see your changes.
Format

UTF-8, without BOM. A file created from within the Nextcloud Web GUI works.

Structure

You should include a comment in the file, so that people stumbling upon the file know what it’s for. Comments start with #.

Spacing is created using 2 spaces. Do not use tabs.

Take a look at the YAML Format documentation if you are getting error messages.

Here is an example gallery.cnf:

```yaml
# Gallery configuration file
# Created on 31 Jan 2016 by Nextcloud User
features:
  external_shares: yes
  native_svg: yes
  background_colour_toggle: yes

design:
  background: "#ff9f00"
  inherit: yes

information:
  description: This is an **album description** which is only shown if there is no `description_link`
  description_link: readme.md
  copyright: Copyright 2003-2016 [interfaSys sàrl](http://www.interfasys.ch), Switzerland
  copyright_link: copyright.md
  inherit: yes

sorting:
  type: date
  order: des
  inherit: yes
```

Supported Variables

Global Features

Place this in your root Nextcloud folder, which is your Home folder.

- **external_shares**: Set to yes in your root configuration file if you want to load images stored on external locations, when using the files_external app.

- **native_svg**: Set to yes in your root configuration file to enable rendering SVG images in your browser. This may represent a security risk if you can’t fully trust your SVG files.

- **background_colour_toggle**: Set to yes in your root configuration file to enable a button that toggles between black and white backgrounds on transparent images.

Note: External shares are 20-50 times slower than local shares. Be prepared to wait a long time before being able to see all the images contained in a shared album.

Album Configuration
Each album can be individually configured using the following configuration sections. Use the inherit parameter to pass configurations on to sub-albums.

**Design**

- **background**: Defines the colour of the background of the photowall using the RGB hexadecimal representation of that colour. For example: “#ff033”. You must use quotes around the value or it will be ignored. It is strongly recommended to use a custom theme, with a CSS loading spinner if you intend to use this feature. You can use this colour wheel to find a colour you like.

- **inherit**: Set to yes if you want sub-folders to inherit this part of the configuration.

**Album Presentation**

- **description**: A markdown-formatted string which will be displayed in the info box. It can spread over multiple lines using the Yaml markers.

- **description_link**: A markdown file located within the album which will be parsed and displayed in the info box instead of the description.

- **copyright**: A markdown-formatted string. This supports links to external resources.

- **copyright_link**: Any file (e.g. copyright.html), in the album itself, which will be downloaded when the user clicks on the link.

- **inherit**: Set to yes if you want sub-folders to inherit this part of the configuration.

See http://www.markitdown.net/markdown for the markdown syntax.

**Note:** Do not add links to your copyright string if you use the copyright_link variable.

**Sorting**

- **sorting**: date or name. date only works for files.

- **sort_order**: asc or des (Ascending or descending).

- **inherit**: Set to yes if you want sub-folders to inherit this part of the configuration.

**4.3.2 Notes**

- When only the sort type variable has been set, the default sort order will be used.

- When only the sort order variable has been found, the sort configuration will be ignored and the script will keep looking for a valid configuration in upper folders.

- To enable a feature such as native SVG in a public share, you need to create in that folder a configuration file containing that feature.

- If you share a folder publicly, don’t forget to add all the files you link to (e.g. description.md or copyright.md) inside the shared folder as the user won’t have access to files stored in the parent folder.

- Since people can download a whole folder as an archive, it’s usually best to include all files within a shared folder, rather than adding text directly in the configuration file.

**4.3.3 Examples**

**Sorting Only**

Applies to the current folder only:
Short description and link to copyright document, applies to the current folder and all of its sub-folders. This also shows you the syntax you can use to spread a description over multiple lines:

```yaml
# Gallery configuration file
information:
  description: |
    # La Maison Bleue, Winter '16
    This is our Winter 2016 collection shot in **Kyoto**
    Visit our [website](http://www.secretdesigner.ninja) for more information
  copyright: Copyright 2015 La Maison Bleue, France
  copyright_link: copyright_2015_lmb.html
  inherit: yes
```

Load Images From External Clouds

**Note:** Features can only be defined in the root folder.

You can add standard configuration items to the same configuration file:

```yaml
# Gallery configuration file
features:
  external_shares: yes
```

Enabling native SVG

**Note:** Special features can only be defined in the root folder.

You can add standard configuration items to the same configuration file:

```yaml
# Gallery configuration file
features:
  native_svg: yes
```

### 4.3.4 Possible Future Extensions

Different sorting parameters for albums.

### 4.3.5 Keeping Up With New Features

See the Gallery Wiki page to stay informed of new developments.

### 4.4 Managing Deleted Files

When you delete a file in Nextcloud, it is not immediately deleted permanently. Instead, it is moved into the trash bin. It is not permanently deleted until you manually delete it, or when the Deleted Files app deletes it to make room for new files.
Find your deleted files by clicking on the **Deleted files** button on the Files page of the Nextcloud Web interface. You’ll have options to either restore or permanently delete files.

### 4.4.1 Quotas

Deleted files are not counted against your storage quota. Only files that originate with users count against their quotas, not files shared with them that originate from other users. (See *Storage Quota* to learn more about quotas.)

### 4.4.2 What Happens When Shared Files Are Deleted

Deleting files gets a little complicated when they are shared files, as this scenario illustrates:

1. User1 shares a folder “test” with User2 and User3
2. User2 (the recipient) deletes a file/folder “sub” inside of “test”
3. The folder “sub” will be moved to the trashbin of both User1 (owner) and User2 (recipient)
4. But User3 will not have a copy of “sub” in her trash bin

When User1 deletes “sub” then it is moved to User1’s trash bin. It is deleted from User2 and User3, but not placed in their trash bins.

When you share files, other users may copy, rename, move, and share them with other people, just as they can for any computer files; Nextcloud does not have magic powers to prevent this.

### 4.4.3 How the Deleted Files app Manages Storage Space

To ensure that users do not run over their storage quotas, the Deleted Files app allocates a maximum of 50% of their currently available free space to deleted files. If your deleted files exceed this limit, Nextcloud deletes the oldest files (files with the oldest timestamps from when they were deleted) until it meets the memory usage limit again.

Nextcloud checks the age of deleted files every time new files are added to the deleted files. By default, deleted files stay in the trash bin for 180 days. The Nextcloud server administrator can adjust this value in the `config.php` file by setting the `trashbin_retention_obligation` value. Files older than the `trashbin_retention_obligation` value will be deleted permanently. Additionally, Nextcloud calculates the maximum available space every time a new file is added. If the deleted files exceed the new maximum allowed space Nextcloud will expire old deleted files until the limit is met once again.

### 4.5 Desktop and Mobile Synchronization

For synchronizing files with your desktop computer, we recommend using the `ownCloud Sync Client` for Windows, Mac OS X and Linux.

The Nextcloud Desktop Sync Client enables you to connect to your private Nextcloud Server. You can create folders in your home directory, and keep the contents of those folders synced with your Nextcloud server. Simply copy a file into the directory and the Nextcloud desktop client does the rest. Make a change to the files on one computer, it will flow across the others using these desktop sync clients. You will always have your latest files with you wherever you are.

Its usage is documented separately in the *Nextcloud/ownCloud Desktop Client Manual*. 

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**Chapter 4. Files & Synchronization**
4.5.1 Mobile Clients

Visit your Personal page in your Nextcloud Web interface to find download links for Android and iOS mobile sync clients. Or, visit the Nextcloud download page.

Visit the Nextcloud documentation page to read the mobile apps user manuals.

4.6 Encrypting Your Nextcloud Files

Nextcloud includes an Encryption app, and when it is enabled by your Nextcloud administrator all of your Nextcloud data files are automatically encrypted. Encryption is server-wide, so when it is enabled you cannot choose to keep your files unencrypted. You don’t have to do anything special, as it uses your Nextcloud login as the password for your unique private encryption key. Just log in and out and manage and share your files as you normally do, and you can still change your password whenever you want.

Its main purpose is to encrypt files on remote storage services that are connected to your Nextcloud server, such as Dropbox and Google Drive. This is an easy and seamless way to protect your files on remote storage. You can share your remote files through Nextcloud in the usual way, however you cannot share your encrypted files directly from Dropbox, Google Drive, or whatever remote service you are using, because the encryption keys are stored on your Nextcloud server, and are never exposed to outside service providers.

If your Nextcloud server is not connected to any remote storage services, then it is better to use some other form of encryption such as file-level or whole disk encryption. Because the keys are kept on your Nextcloud server, it is possible for your Nextcloud admin to snoop in your files, and if the server is compromised the intruder may get access to your files.

4.6.1 Using Encryption

Nextcloud encryption is pretty much set it and forget it, but you have a few options you can use.

When your Nextcloud admin enables encryption for the first time, you must log out and then log back in to create your encryption keys and encrypt your files. When encryption has been enabled on your Nextcloud server you will see a yellow banner on your Files page warning you to log out and then log in again.

When you log back in it takes a few minutes to work, depending on how many files you have, and then you are returned to your default Nextcloud page.

Note: You must never lose your Nextcloud password, because you will lose access to your files. Though there is an optional recovery option that your Nextcloud administrator may enable; see the Recovery Key Password section (below) to learn about this.

4.6.2 Sharing Encrypted Files

Only users who have private encryption keys have access to shared encrypted files and folders. Users who have not yet created their private encryption keys will not have access to encrypted shared files; they will see folders and filenames, but will not be able to open or download the files. They will see a yellow warning banner that says “Encryption App is enabled but your keys are not initialized, please log-out and log-in again.”
Share owners may need to re-share files after encryption is enabled; users trying to access the share will see a message advising them to ask the share owner to re-share the file with them. For individual shares, un-share and re-share the file. For group shares, share with any individuals who can’t access the share. This updates the encryption, and then the share owner can remove the individual shares.

**Recovery Key Password**

If your Nextcloud administrator has enabled the recovery key feature, you can choose to use this feature for your account. If you enable “Password recovery” the administrator can read your data with a special password. This feature enables the administrator to recover your files in the event you lose your Nextcloud password. If the recovery key is not enabled, then there is no way to restore your files if you lose your login password.

**Encryption**

Enable recovery key (allow to recover users files in case of password loss):

- Recovery key password
- Repeat Recovery key password
- Enabled
- Disabled

### 4.6.3 Files Not Encrypted

Only the data in your files is encrypted, and not the filenames or folder structures. These files are never encrypted:

- Old files in the trash bin.
• Image thumbnails from the Gallery app.
• Previews from the Files app.
• The search index from the full text search app.
• Third-party app data

There may be other files that are not encrypted; only files that are exposed to third-party storage providers are guaranteed to be encrypted.

Change Private Key Password

This option is only available if your log-in password, but not your encryption password, was changed by your administrator. This can occur if your Nextcloud provider uses an external user back-end (for example, LDAP) and changed your login password using that back-end configuration. In this case, you can set your encryption password to your new login password by providing your old and new login password. The Encryption app works only if your login password and your encryption password are identical.

4.7 Using Federation Shares

Federation Sharing allows you to mount file shares from remote Nextcloud servers, in effect creating your own cloud of Nextclouds. You can create direct share links with users on other Nextcloud servers.

4.7.1 Creating a New Federation Share

Federation sharing is enabled on new or upgraded Nextcloud installations by default. Follow these steps to create a new share with other Nextcloud or ownCloud 9+ servers:

1. Go to your Files page and click the Share icon on the file or directory you want to share. In the sidebar enter the username and URL of the remote user in this form: <username>@<nc-server-url>. In this example, that is layla@remote-server/nextcloud. The form automatically echoes the address that you type and labels it as “remote”. Click on the label.

2. When your local Nextcloud server makes a successful connection with the remote Nextcloud server you’ll see a confirmation. Your only share option is Can edit.

Click the Share button anytime to see who you have shared your file with. Remove your linked share anytime by clicking the trash can icon. This only unlinks the share, and does not delete any files.
4.7.2 Creating a New Federated Cloud Share via Email

Use this method when you are sharing with users on ownCloud 8.x and older.

What if you do not know the username or URL? Then you can have Nextcloud create the link for you and email it to your recipient.

When your recipient receives your email they will have to take a number of steps to complete the share link. First they must open the link you sent them in a Web browser, and then click the Add to your Nextcloud button.

The Add to your Nextcloud button changes to a form field, and your recipient needs to enter the URL of their Nextcloud or ownCloud server in this field and press the return key, or click the arrow.

Next, they will see a dialog asking to confirm. All they have to do is click the Add remote share button and they’re finished.

Remove your linked share anytime by clicking the trash can icon. This only unlinks the share, and does not delete any files.
4.8 Large File Uploads

When uploading files through the web client, Nextcloud is limited by PHP and Apache configurations. By default, PHP is configured for only 2 megabyte uploads. As this default upload limit is not entirely useful, we recommend that your Nextcloud admin increase the Nextcloud variables to sizes appropriate for users.

Modifying certain Nextcloud variables requires administrative access. If you require larger upload limits than have been provided by the default (or already set by your administrator):

- Contact your administrator to request an increase in these variables
- Refer to the section in the Admin Documentation that describes how to manage file upload size limits.

4.9 Storage Quota

Your Nextcloud admin has the option to set a storage quota on users. Look at the top of your Personal page to see what your quota is, and how much you have used.

You have used 70.6 MB of the available 5 GB

It may be helpful to understand how your quota is calculated.

Metadata (thumbnails, temporary files, cache, and encryption keys) takes up about 10% of disk space, but is not counted against user quotas. Some apps store information in the database, such as the Calendar and Contacts apps. This data is excluded from your quota.

When other users share files with you, the shared files count against the original share owner’s quota. When you share a folder and allow other users or groups to upload files to it, all uploaded and edited files count against your quota. When you re-share files shared with you, the re-share still counts against the quota of the original share owner.

Encrypted files are a little larger than unencrypted files; the unencrypted size is calculated against your quota.

Deleted files that are still in the trash bin do not count against quotas. The trash bin is set at 50% of quota. Deleted file aging is set at 30 days. When deleted files exceed 50% of quota then the oldest files are removed until the total is below 50%.
When version control is enabled, the older file versions are not counted against quotas. If you create a public share via URL, and allow uploads, any uploaded files count against your quota.

### 4.10 Version Control

Nextcloud supports simple version control system for files. Versioning creates backups of files which are accessible via the Versions tab on the Details sidebar. This tab contains the history of the file where you can roll back a file to any previous version. Changes made at intervals greater than two minutes are saved in `data/[user]/versions`.

To restore a specific version of a file, click the circular arrow to the left. Click on the timestamp to download it.

The versioning app expires old versions automatically to make sure that the user doesn’t run out of space. This pattern is used to delete old versions:

- For the first second we keep one version
- For the first 10 seconds Nextcloud keeps one version every 2 seconds
- For the first minute Nextcloud keeps one version every 10 seconds
- For the first hour Nextcloud keeps one version every minute
- For the first 24 hours Nextcloud keeps one version every hour
- For the first 30 days Nextcloud keeps one version every day
- After the first 30 days Nextcloud keeps one version every week

The versions are adjusted along this pattern every time a new version gets created.

The version app never uses more that 50% of the user’s currently available free space. If the stored versions exceed this limit, Nextcloud deletes the oldest versions until it meets the disk space limit again.
5.1 Using the Contacts App

The Contacts app is not enabled by default in Nextcloud 9 and needs to be enabled separately.

5.2 Using the Calendar App

The Calendar app is not enabled by default in Nextcloud 9 and needs to be enabled separately.

5.3 iOS - Synchronize iPhone/iPad

5.3.1 Calendar

1. Open the settings application.
2. Select Mail, Contacts, Calendars.
3. Select Add Account.
4. Select Other as account type.
5. Select Add CalDAV account.
6. For server, type example.com/remote.php/dav/principals/users/USERNAME/
7. Enter your user name and password.
8. Select Next.
9. If your server does not support SSL, a warning will be displayed. Select Continue.
10. If the iPhone is unable to verify the account information perform the following steps:
    • Select OK.
    • Select advanced settings.
    • If your server does not support SSL, make sure Use SSL is set to OFF.
    • Change port to 80.
• Go back to account information and hit Save.

Your calendar will now be visible in the Calendar application

5.3.2 Address book

1. Open the settings application.
2. Select Mail, Contacts, Calendars.
3. Select Add Account.
4. Select Other as account type.
5. Select Add CardDAV account.
6. For server, type example.com/remote.php/dav/principals/users/USERNAME/
7. Enter your user name and password.
8. Select Next.
9. If your server does not support SSL, a warning will be displayed. Select Continue.
10. If the iPhone is unable to verify the account information perform the following:
    • Select OK.
    • Select advanced settings.
    • If your server does not support SSL, make sure Use SSL is set to OFF.
    • Change port to 80.
    • Go back to account information and hit Save.

Now should now find your contacts in the address book of your iPhone. If it’s still not working, have a look at the Troubleshooting and Troubleshooting Contacts & Calendar guides.

5.4 Synchronizing with OS X

To use Nextcloud with iCal you will need to use the following URL:

https://example.com/remote.php/dav/principals/users/USERNAME/

The setup is basically the same as with iOS using the path https://example.com/remote.php/dav/principals/users/USERNAME/ to sync with Nextcloud. For OS X 10.7 Lion and 10.8 Mountain Lion everything works fine, but OS X 10.6 (Snow Leopard) and older needs some fiddling to work. A user contributed the following:

#. Make sure, addressbook is not running. If it is, select the windows and press Command + Q to terminate it.
#. Navigate to /Users/YOUR_USERNAME/Library/Application Support/AddressBook/Sources. If you already have some kind of addressbook setup, it is likely you will see some folders named like this BEA92826-FBF3-4E53-B5C6-ED7C2B454430. Note down what folders there are now and leave the window open. #. Open addressbook and try to add a new CardDAV addressbook. At this point, it does not matter what information you enter. It will come up with the same error message you mentioned before when you click “Create”. Ignore it and click “Create” again. A non-functional addressbook will be added. #. Close addressbook again using Command + Q #. Go back to the folder window from step 2. You will now see a newly created folder with another long string as its name. #. Navigate to the newly created folder and edit the Configuration.plist with your favorite text editor. #. Search for a section looking like this:
8. Make it look like this. Please note that the :443 after example.com is important:

```
<key>servername</key> <string>https://example.com:443/nextcloud/remote.php/dav/principals/users/USERNAME</string> <key>username</key> <string>username</string>
```

9. Save the file and open addressbook again. It will not work yet.

10. Open the preferences for your Nextcloud CardDAV-Account and enter your password.

11. You may have to restart addressbook once more. After this, it should work.

If it’s still not working, have a look at the Troubleshooting and Troubleshooting Contacts & Calendar guides.

There is also an easy HOWTO in the forum.

## 5.5 Synchronizing with KDE SC

From KDE SC 4.8 and forward setting up Nextcloud is very easy. Note that the KDE calendar needs to have the Nextcloud Calendar and Contacts apps enabled on the Nextcloud server. You need both and not just the Calendar. From System Settings Personal Information/Akonadi Resources Configuration select DAV Groupware resource.
Enter your Nextcloud username and password and click “Next”.

Select Nextcloud in the drop down list and click “Next”.
Enter the host name and installation path. If you do not use SSL remember to de-select “Use secure connection”.

Test the connection. If everything went well you should see a message like the one below.
Click “Finish” and you will be able to change the display name and refresh interval.

Now you should see the Akonadi resource doing the first synchronization.

You can find the Contacts and Calendars in Kontakt (or KOrganizer/KAddressbook if you run the programs separately.)
5.6 Thunderbird - Synchronize Addressbook

5.6.1 Addressbook

As someone who is new to Nextcloud, new to SoGo Connector, and new to Thunderbird Addressbook... here is what you need in excruciating pithy detail to make this work (for all the other lost souls out there):

1. Thunderbird for your OS unless it comes with your OS distribution (Linux)
2. SoGo Connector (latest release)
3. Lightning (a Thunderbird calendar add-on. At the time (Aug 14), syncing your contacts only works with this add-on installed.)

With an installed Thunderbird mailtool, an installed SoGo Connector, and an installed Lightning add-on:

1. Thunderbird Addressbook is in the Thunderbird “Tools” Menu
2. In the Thunderbird Addressbook application:
   - “File > New > Remote Addressbook” (SoGo Connector added this)
   - “Name:” is the name you want to give your Addressbook in the Thunderbird addressbook bar area
   - “URL:” is found in your Nextcloud Contacts area, that little Gear symbol

   ![Gear Symbol](image)

   in the -bottom left- of the Contacts View (same symbol as found in the -top right- in the Calendar view). Then look for a little impeller symbol

   ![Impeller Symbol](image)

   which will display the URL you need for your installation to work.
Once installed, synchronize (right click on your newly made remote address book and select “Synchronize”). You’ll see your address book populate from Nextcloud! Don’t click “read only” above unless you don’t want to modify your Nextcloud server addressbook, like it contains a listing of corporate contacts and is shared with lots of people, and you don’t want a new user dragging it somewhere unintended.

The rest of the details of dealing with Thunderbird addressbook are left to the reader... First thing I learned is dragging a contact to a different addressbook is a “move” operation. If you are worried about losing the contact, save it to a VCF file using Nextcloud (Or LDIF using Thunderbird Addressbook) first! Like dragging from “Nextcloud Addressbook” to “Personal Address Book” removes the contact from Nextcloud Server (deleting it from all the other synchronized installations) and puts it in your Local Machine -only- Address Book. So be careful or you’ll have unintended consequences where you might have intended a “copy” operation.

Contact Pictures are also sync’ed!

5.7 Troubleshooting

5.7.1 BlackBerry OS 10.2

BlackBerry OS up to 10.2.2102 does not accept a URL with protocol https:// in front of the server address. It will always tell you that it cannot login on your server. So instead of writing:

https://example.com/remote.php/dav/principals/users/USERNAME/

in the server address field, you have to write:

example.com/remote.php/dav/principals/users/USERNAME/
COLLABORATIVE DOCUMENT EDITING

The Documents application supports editing documents within Nextcloud, without the need to launch an external application. The Documents app supports these features:

- Cooperative edit, with multiple users editing files simultaneously.
- Document creation within Nextcloud.
- Document upload.
- Share and edit files in the browser, and then share them inside Nextcloud or through a public link.

Supported file formats are `.odt`, `.doc`, and `.docx`.

6.1 The main interface

6.1.1 Create or Upload a Document

In the Documents application, you can upload an existing document or create a new one. The New document button creates a document named “New document.odt”. The extension ODT is an OpenDocument format, which is supported by most word processors including Microsoft Word, LibreOffice Writer, and OpenOffice Writer.

6.1.2 Edit a Document

To edit a document, access the Documents app from your Apps menu at the top left of your Nextcloud window.
1. Click on the file name to change it.
2. Share your document (See the Share a document section.)
3. Formatting toolbar.
4. Zoom in/out
5. Close and save.
6. Users currently editing this document.

Collaboratively Editing a Document

To edit a file collaboratively, it must be shared with everyone who needs editing permissions. Multiple users can edit it at the same time, and changes appear as they are made. The cursor of each user is the same color as the border color of their user picture.

If a user is not a local user (e.g. accessing the file using public link), they will be shown as guest in the user list, automatically named Guest 1, Guest 2, and so on. Guests can change their nicknames at any time by clicking on their names or thumbnails in the user list.

6.1.3 Delete a Document

You can’t delete a document from inside the Document app, but must go to your Files page and delete it from there. You’ll find it in your default documents directory, which is configured on your Nextcloud Personal page (see Setting Your Preferences.)
6.1.4 Share a Document

Document sharing has the same options as when sharing other files. While editing a document, you can use the Share button to enable other users to edit the document. This button will display all available options to share.
SETTING YOUR PREFERENCES

As a user, you can manage your personal settings.

To access your personal settings:

1. Clicking on your username in the top, right corner of your Nextcloud instance.
   The Personal Settings Menu opens.

   ![Personal Settings Menu]

2. Choose *Personal* from the drop down menu.

*Note:* If you are an administrator, you can also manage users and administer the server. These links do not appear to a non-admin user.

The options listed in the Personal Settings Page depend on the applications that are enabled by the administrator. Some of the features you will see include the following.

- Usage and available quota
- Manage your profile picture.
- Full name. You can make this anything you want, as it is separate from your Nextcloud login name, which is unique and cannot be changed.
- Email address.
- Lists your Group memberships.
- Manage your password.
- Choose the language for your Nextcloud interface.
- Links to desktop and mobile apps.
You are using 698 KB of Unlimited

Profile picture

Full name

bernie madhatter

Email

bernie@example.com

For password recovery and notifications

Groups

You are member of the following groups:

graphics, users, video

Password

Current password

New password

Change password
• Manage your Activity stream and notifications.
• Default folder to save new documents to.
• Your Federated sharing ID.
• Social sharing links.
• Nextcloud version.
8.1 Configuring External Storage

The External Storage application allows you to mount external storage services, such as Google Drive, Dropbox, Amazon S3, SMB/CIFS file servers, and FTP servers in Nextcloud. Your Nextcloud server administrator controls which of these are available to you. Please see Configuring External Storage (GUI) in the Nextcloud Administrator’s manual for configuration howtos and examples.