# Using SharePoint for research

When to use it, organization, and sharing

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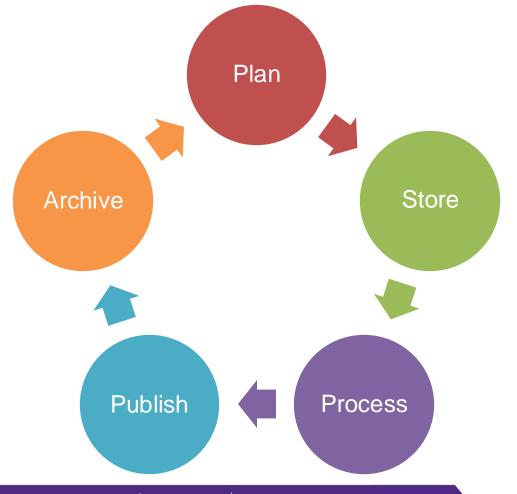
Materials: <a href="https://github.com/nuitrcs/rdm-workshops">https://github.com/nuitrcs/rdm-workshops</a>



## Outline

- What is SharePoint?
- When to use SharePoint
- SharePoint Overview
  - Structure
  - Data Organization
  - Access controls

# Research data cycle



# Storage needs change throughout research workflow

### Types of storage

### What do you want to do with your data?

Process	Share	Store	Archive
Clean, analyze and visualize	Collaborate	Ensure data integrity	Retain data long-term
<ul><li>Fast storage</li><li>Near compute source</li><li>Costly</li></ul>	<ul> <li>Access for all group members</li> <li>Collaboration Tools</li> <li>Free *</li> </ul>	<ul><li>Access for core group members</li><li>Replication</li><li>Versioning</li></ul>	<ul> <li>"Cold" storage for</li> <li>Less accessible</li> <li>Inexpensive</li> <li>Retention period</li> </ul>

<sup>\*</sup> licensing changing, pricing/limits may apply

### Storage options

### Northwestern data storage options

Process

Clean, analyze and visualize

Quest Storage

Share

Collaborate with colleagues

SharePoint



Store

Ensure data integrity

Research Data Storage Service (RDSS)

### **Archive**

Retain data long-term

Research
Data Archival
Service (RDAS)



### Storage options

### Northwestern data storage options

### **Process**

Clean, analyze and visualize

Quest Storage

### Share

Collaborate with colleagues

SharePoint



### Store

Ensure data integrity

Research Data Storage Service (RDSS)

### **Archive**

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### What is SharePoint?

### "Your mobile, intelligent intranet"

- Content management system for teams
- Part of Microsoft 365
- Approved by Northwestern for research
- Share with anyone who has a Microsoft account
- Secure: encryption and auditing



## Related Microsoft Products



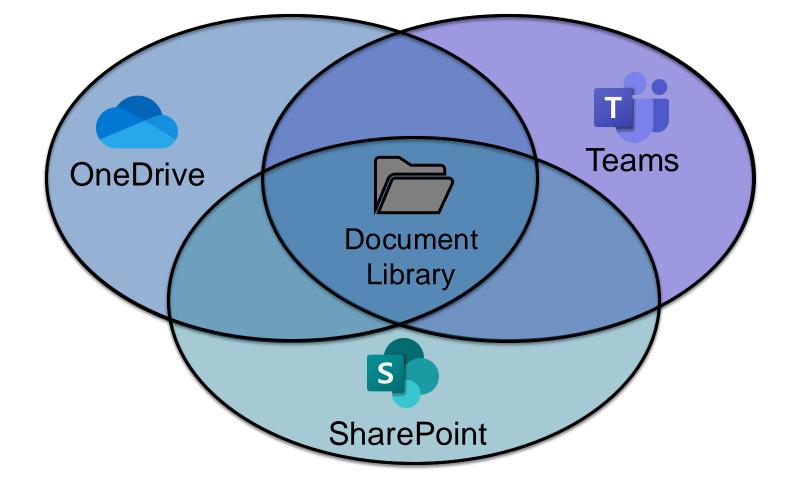
OneDrive
Personal Files



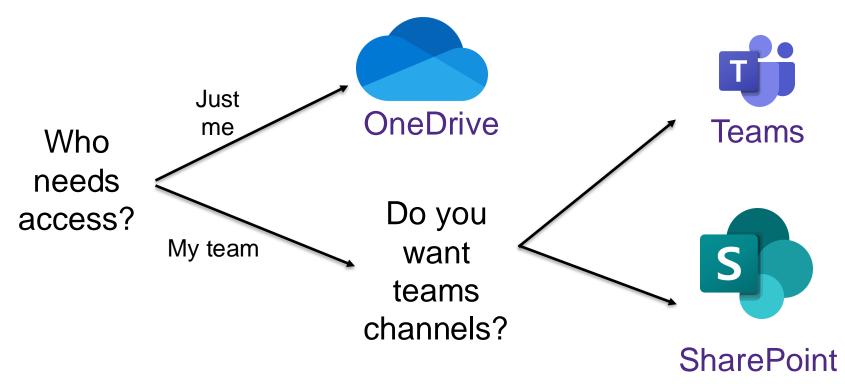
SharePoint
Team files



Teams
Team Collaboration



### OneDrive vs. SharePoint vs. Teams



https://support.microsoft.com/en-us/office/should-i-save-files-to-onedrive-or-sharepoint-d18d21a0-1f9f-4f6c-ac45-d52afa0a4a2e

## SharePoint

### When to use it

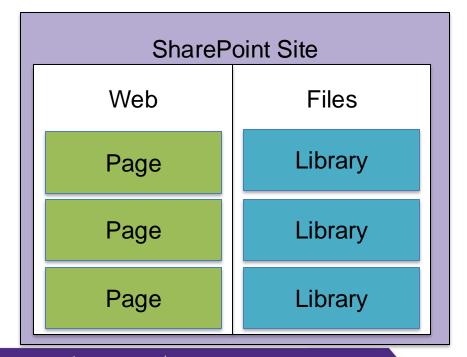
- Store files that need to be accessible to groups of users
- Collaborate on documents
- Share with people who don't have NetIDs

### When not to use it

- Storing private files
- Archiving data
- Very large files (> 250 GB)
- Many small files (> 50,000)

## SharePoint Structure

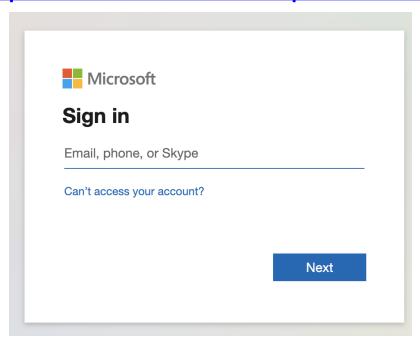
- Sites are made up of pages and libraries
- Pages: Organize content (like a webpage)
- Libraries: Store documents



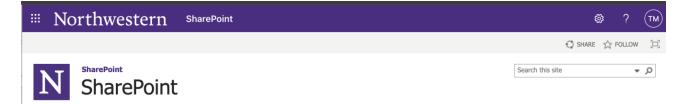
# SharePoint Overview

# Log In

### https://nuwildcat.sharepoint.com/



# Landing page



#### Welcome to Northwestern's Online SharePoint Site!

Northwestern Online SharePoint is the University's Microsoft SharePoint environment for fostering collaboration, automating processes, and standardizing information sharing across schools, departments, units, and groups. Northwestern SharePoint Online is comprised of site collections - hierarchical sets of sites that can be managed together and each can have their own features and permissions. Site collections can be created for schools (by campus), departments, projects, programs, centers, and institutes and are administered by a designated site collection owner(s). Go here to start exploring your SharePoint sites  $\rightarrow$  SharePoint Online.

#### Support

To request a new SharePoint site visit the Collaboration Services Requests Page.

For site-specific questions, contact your local technical support staff.

For general usage questions, contact the IT Support Center at 847-491-4357 (1-HELP) or visit the <u>IT Support</u> Center web page for additional support options.

For additional help see Microsoft's SharePoint Help center page.

# Navigate to your sites



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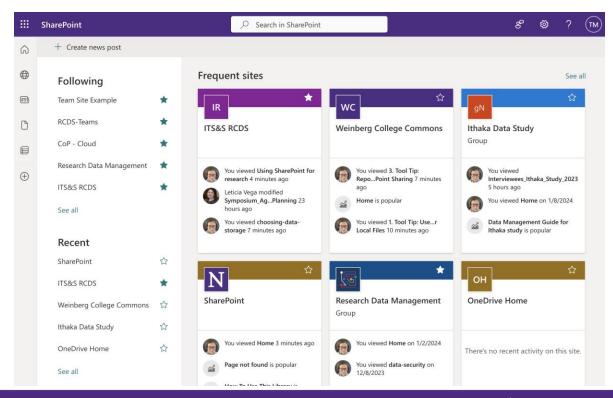
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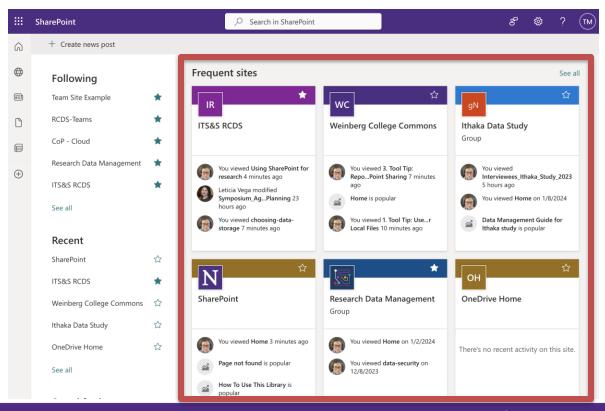
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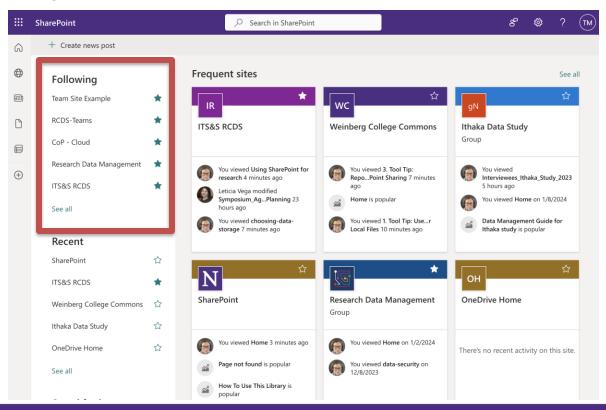
# Your Sites



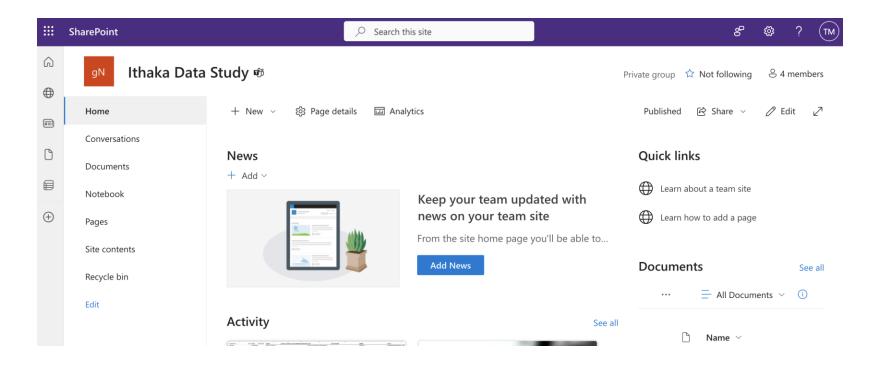
# Sites you've visited



# Sites you follow



## Inside a SharePoint Site



# Types of SharePoint sites

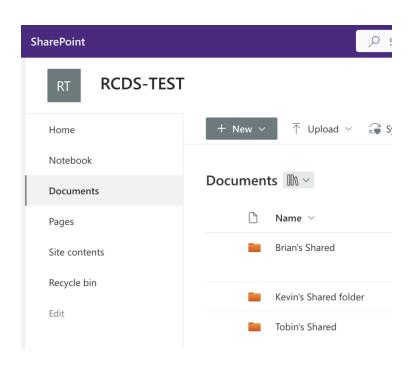
#### Communication

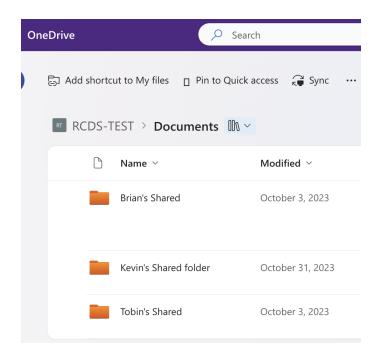
- Content hosting only
- Default: Empty folder
- Visible in SharePoint or OneDrive interfaces
- Create directories to group content

#### **Teams**

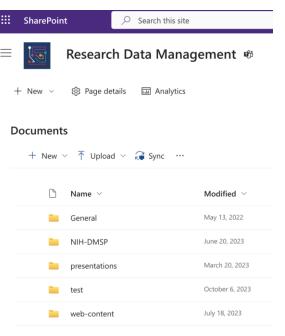
- A folder for every channel
- Default: General
- Visible in SharePoint or Teams
- Can add additional folders
  - Not visible in teams

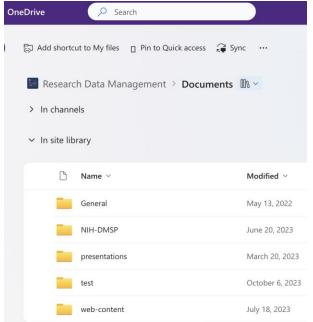
# Communication Site example

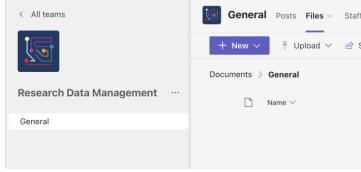




# Teams site example







# Content: Pages & Libraries

### Parts of a SharePoint site

Ways to organize content

Pages Libraries

### Parts of a SharePoint site

### Ways to organize content

### Pages

- Create your own internal website
- Organize content into Pages
- Page called **Home** created by default
- Add Sections to Pages

### Libraries

### Parts of a SharePoint site

### Ways to organize content

### Pages

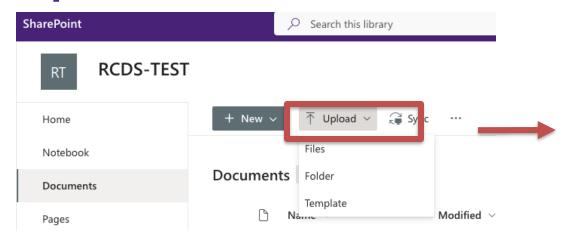
- Create your own internal website
- Organize content into Pages
- Page called **Home** created by default
- Add Sections to Pages

### Libraries

- Where to store files
- Organize files in Folders
- One called **Documents** is created by default

# Transferring files in and out of SharePoint

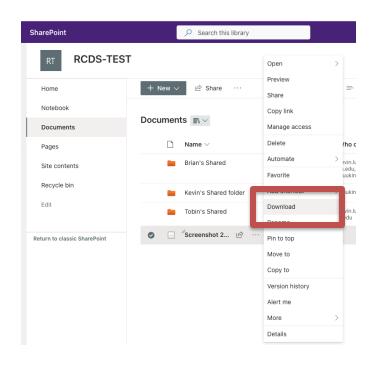
# Upload

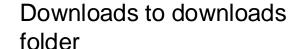


Opens file browser window

Or drag and drop

# Download





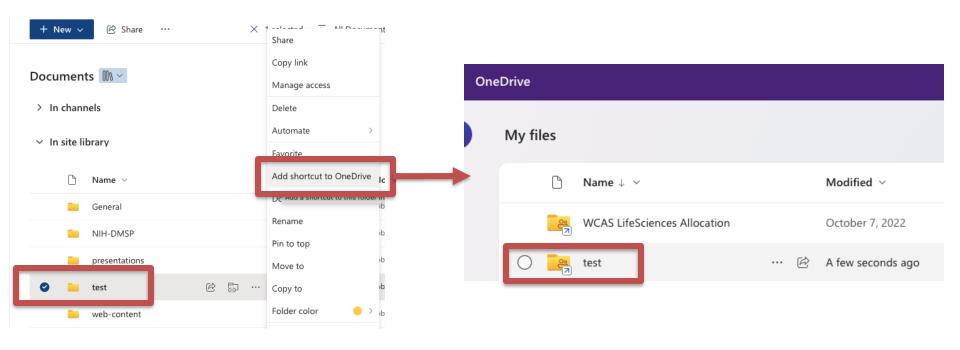
# Syncing to your computer

- Install OneDrive App
- "Files on Demand" ON
- Choose SharePoint files to sync
  - Add shortcuts to OneDrive.
  - Sync document library.

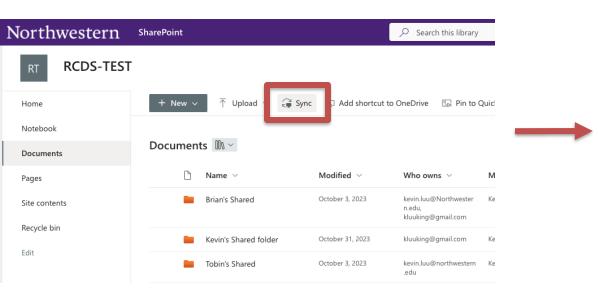


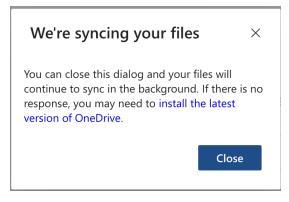
https://support.microsoft.com/en-us/office/sync-sharepoint-files-and-folders-87a96948-4dd7-43e4-aca1-53f3e18bea9b

## Add Shortcuts to OneDrive



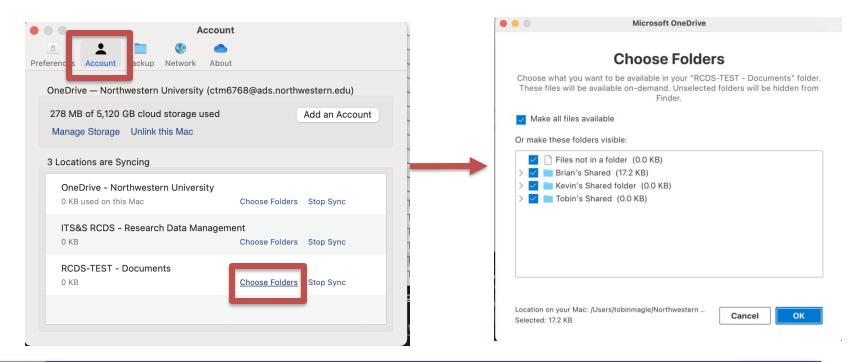
# Sync Document Library





### Choose files

#### Open OneDrive App



## Globus data transfer tool

# Move large amounts of data between storage platforms

- High speed transfers
- Data integrity checks
- Resumes interrupted data transfers
- Easy to use interface
- Automation features



## **SharePoint Limitations**

Feature	Limit
Total amount of data	25 TB
Individual file size	250 MB
Data uploaded/download	250 GB or 10k files per day
File movement	30,000 files at once
Syncing files	300,000 files total across sites

https://learn.microsoft.com/en-us/office365/servicedescriptions/sharepoint-online-service-description/sharepoint-online-limits

## File Organization

# Good Organization Practices

#### There's no one right answer

- Make a system that works for you
- Think about who needs access
- Group similar files into folders
- Use descriptive names



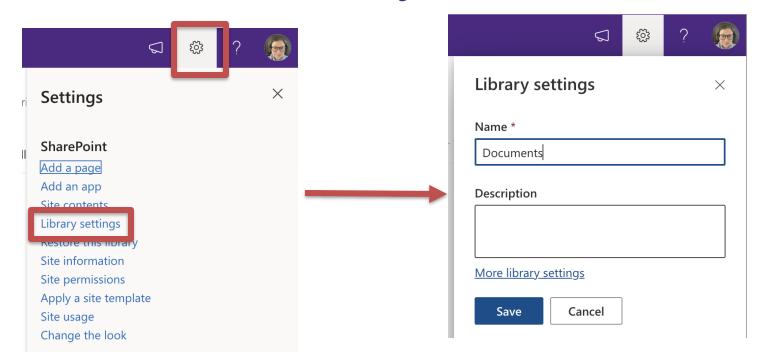
## SharePoint Library tips

- Keep the number of files <100,000</p>
- Organize based on who needs access
- E.g.: a library for files only visible to your team and a separate library for content shared outside your team
- Rename your Libraries descriptively

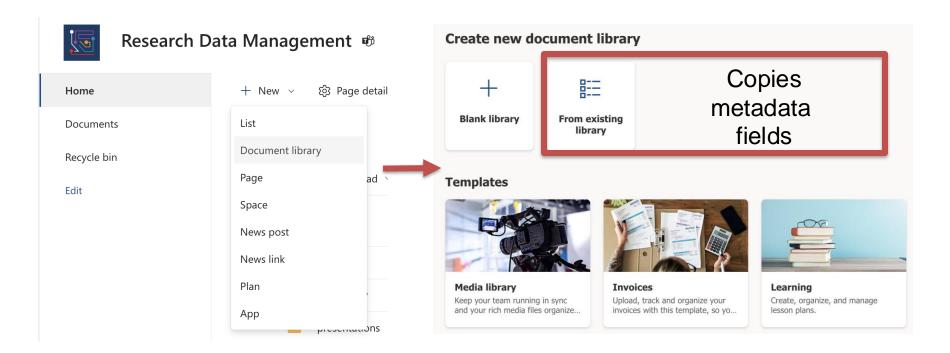
# Naming advice

- Names should tell you what's in the file
- Make sure to include information that differentiates files
- Use sort to your advantage
  - General to specific
  - Ex: YYYY-MM-DD vs MM-DD-YY)
- Pick a convention and stick to it

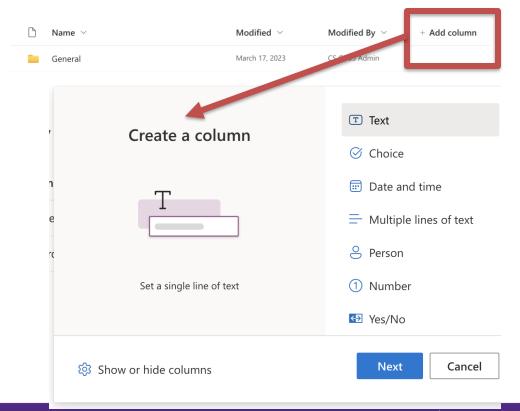
## Rename library



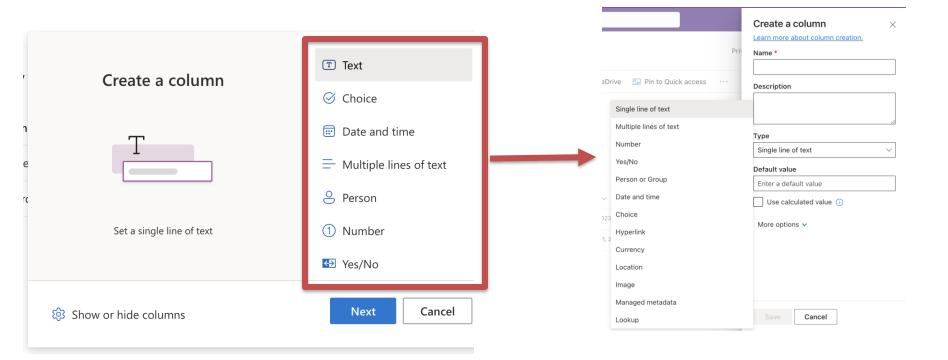
# Create a new Library



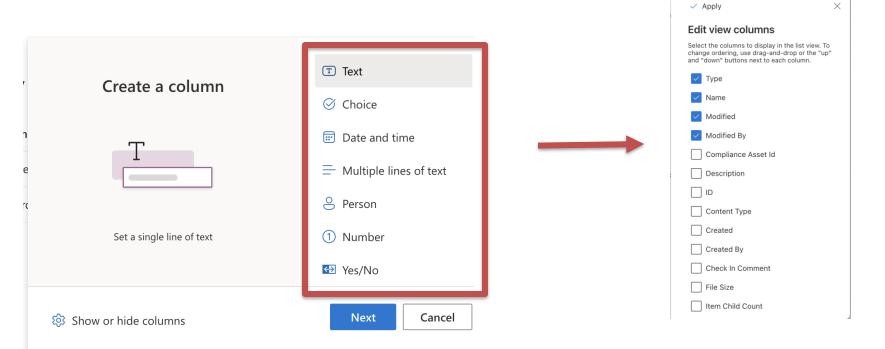
## Add Metadata



## **Custom Metadata**

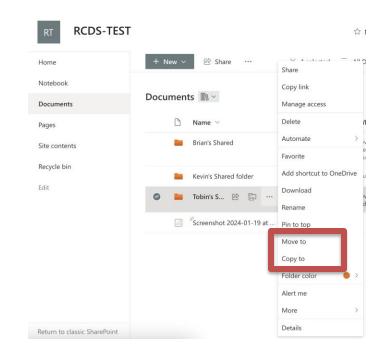


# System Metadata



# Moving and copying files

- Reorganizing content within OneDrive and SharePoint
- Differences in behavior
- Files that are copied or moved in a single operation must be:
  - No more than 100 GB total file size
  - No more than 30,000 files
  - Less than 15 GB



# Moving and copying files

#### Moving

- Creates the file in the new location
- Deletes the original from the source (Recycle bin)
- Retains version history

#### Copying

- Creates a copy of the original file at the destination
- File remains at the origin

Loses version history

# Moving files:

#### OneDrive to SharePoint

- SharePoint changes the file metadata (changes checkpoint)
- Hyperlinks stop working
- Follows stop working
- Microsoft suggests replacing original doc with a link to the new doc

#### SharePoint to OneDrive

Collaborators will lose access

https://nuwildcat.sharepoint.com/sites/WNB-College-Commons/SitePages/WITS-Tool-Tip-2.aspx

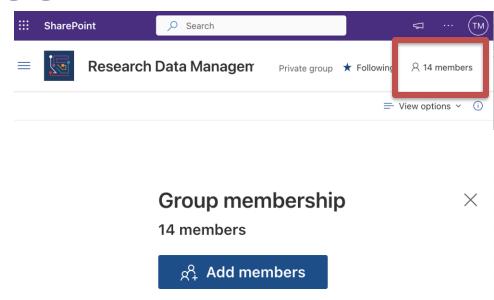
## Access and Sharing

## Access best practices

- Tradeoff between openness and security
- "Least privilege" limit access to minimal number of people
- Required by some DUAs
- Groups based on role can help with large groups and large libraries

## Site Level Access

- People who have access to all the content in the site
- Includes documents (unless otherwise specified)
- Roles: Owner, Member, Visitor



## SharePoint User Roles

#### **Owner**

- Manage site features
- Delete a site
- See all content

#### Member

- Add content
- Edit content
- Delete content
- Share

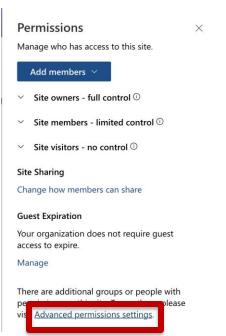
#### **Visitor**

- Read only
- Can Download
- Can share with approval

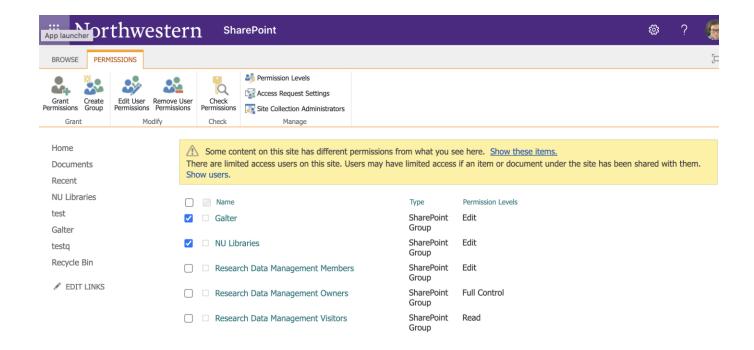
# Custom groups

- Create groups of people who you can share specific content with
- Note: by default, people in these groups have access to everything in the library when the group is created. Need to be removed manually.





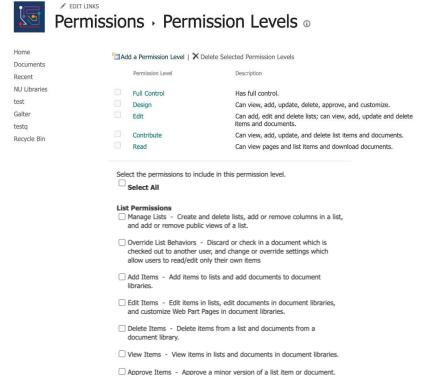
# Custom groups



## Custom permission Level

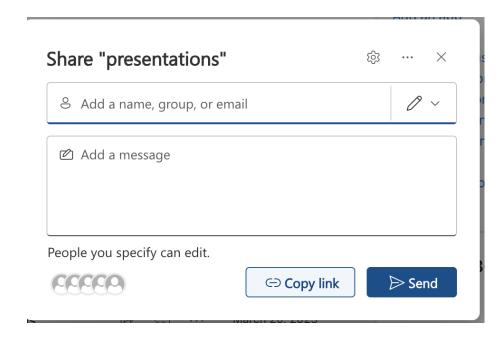
#### Apply to groups

- Add and remove permissions
- Document library in List permissions menu
- Dependencies: If you have edit permissions, you also need View permissions
- E.g.: Create an edit, no delete permission level



## Sharing outside site level access

- Can share files/folders with additional people
- Choose type of access (edit or view)
- Limit: <50,000 files</li>

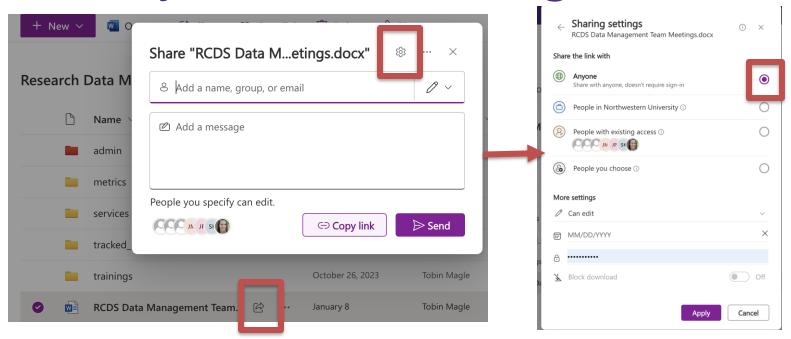


# Anonymous sharing

#### Anyone with the link can...

- Sharing with no authentication (ie: public)
- Can see which files are shared this way
- Can't track who has accessed it
- Can be disabled at the site level

Anonymous sharing



# But what if you need to restrict access to files?

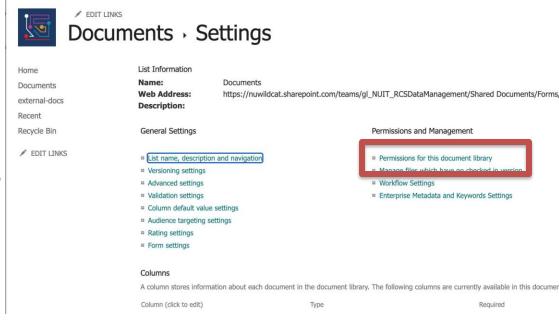
# Breaking Inheritance

Share a document library with a different set of users than the main site

- Remove access from site level access
- Add new set of users

## Breaking Inheritance

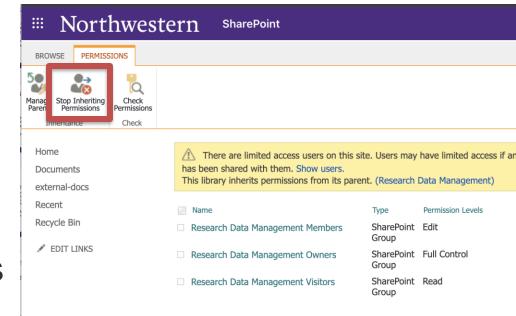
Settings >
Library Settings >
More Library Settings>



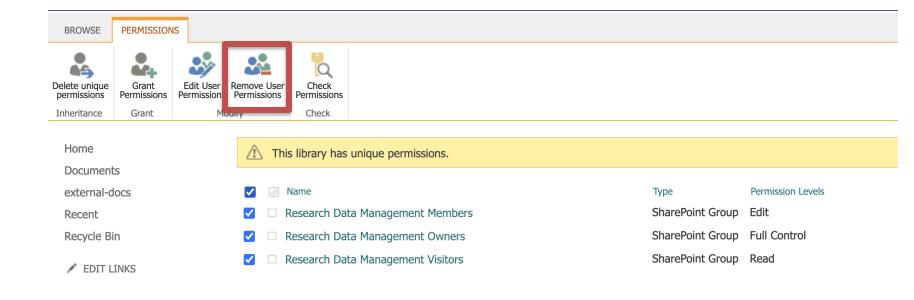
# Breaking Inheritance

Settings >
Library Settings >
More Library Settings>

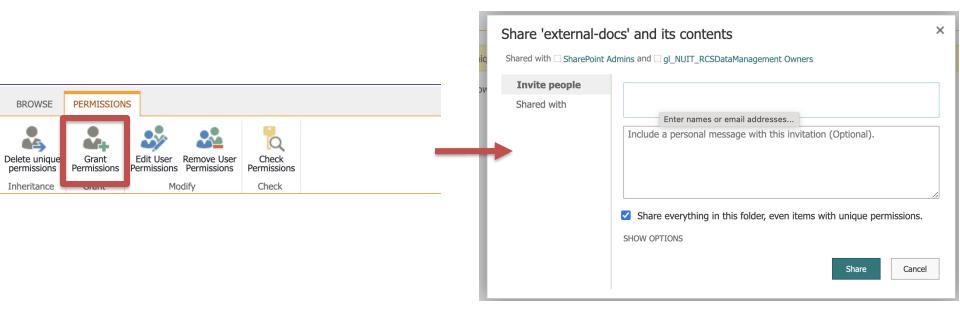
Permissions for this
Document Library >
Stop Inheriting Permissions



# Remove Group permissions



## Add other users

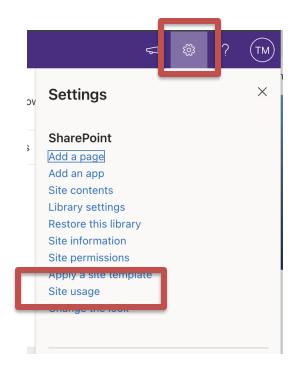


## Who has access?

# Audit File Sharing

Check to make sure only people who need access have access

- Which files are shared?
- Who has access?
- What kind of access?

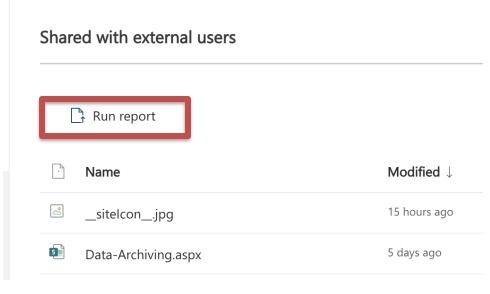


# Audit File Sharing

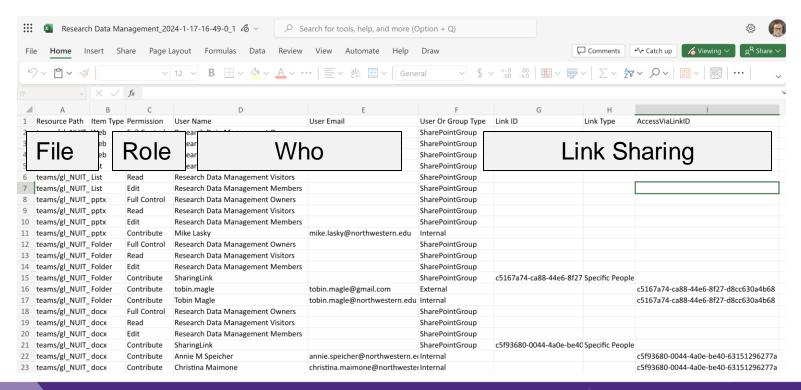
 Check to make sure only people who need access have access

#### Under Settings > Site Usage:

- Scroll to bottom to "Shared with External Users" section
- Click "Run Report"
- Can take a while to run



# Audit Report



## Questions?

researchdata@northwestern.edu

## Thank You