

Hub Users

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The User Guide is a user manual for a HUB. It progresses step-by-step through the features of the site and how a user can accomplish such tasks as:

- Edit their profile
- Start and manage a user group
- Participate in the Questions & Answers forum
- Submit, comment on, and monitor support tickets
- Submit a new resource
- And more...

Video Tutorials

How-To Videos

The HUBzero team is proud to present a growing series of How-to videos hosted on YouTube.

We've used our flagship site, nanoHUB.org, to demonstrate basic HUB concepts; however, most other HUB sites should function similarly, if not identically, to nanoHUB. Below is an up-to-date list of How-to videos, organized by topic. To view the entire series, click the YouTube icon in the upper-right corner of this page.

```
{xhub:module position="ytplaylistintro" style="-2"} {xhub:module position="ytplaylisttools" style="-2"} {xhub:module position="ytplaylistgroups" style="-2"} {xhub:module position="ytplaylistresources" style="-2"}
```

Groups

What are groups?

Groups are a way to connect people with a common interest. They are also an easy way to share content and conversation, either privately or with the world. Group members can:

- Post content that only other group members are allowed to see.
- Export their content to other web sites, and brand it with their own logo.
- Upload a group logo and use it as the group identity.
- Create events on the group calendar that only group members can attend.

Member Functions

Inviting Users

Group managers can invite both hub users and unregistered users to join their group.

1. From the "My Groups" section on your "my HUB" page, select the group.
2. Click Show Manager Controls and click Invite Members.
3. Type in the name of the user you would like to invite (notice that the auto completer assists in finding users) or the email address of the person.
4. You may include a message with your invitation in appropriate box.
5. Click "Invite" and they will receive the invite in their email.
6. Verify that the invitation have been sent to the correct people.

Promote a User to a Manager

Groups can have multiple managers. As a group manager, you can promote other group members or demote other managers.

NOTE: A group must have at least one manager at all times.

1. Go to the main group page and click on the "Members" tab at the left side.
2. Click on the promote icon(indicated by the arrow pointing up) next to the name of the person you would like to promote to manager status.

Customization

Customizing a Group's Look

1. On your main page of the group, click on "Show Manager Controls" and click on "Customize Group".
2. Use the box on the right side of the page to upload a photo. Choose that photo from the drop-down box in the "Group Logo" section.
3. Choose the custom content option in the "Group Main Content" section to add your own description.
4. Specify access to individual tabs within the group in the "Group Access" section by selecting the desired option to the right of item in the list.
5. Click "Save Group Customization" to save your changes.
6. To customize all the group pages at once, click on "Manage Group Pages" in the "Group Custom Content" section. This will take you different interface away from the group customization area, please save all other changes before making this customization.

Customizing a Group's Content

Group Custom Content refers to user generated pages that can contain text, images, links, etc.

Begin on your main page of the group, click on "Show Manager Controls" and click on "Customize Group" and then click on "Manage Group Pages" at the bottom of the page. And click ok to continue.

To create a new group page:

1. Click on Add a New Group Page on the right.
2. Enter a Page Title and page content. You may upload a file on the right in insert it into the page content using Wiki formatting.
3. Choose the appropriate option for "Page Privacy"
4. Click Add Page and your new page will be added as a sub-page of the groups Overview page.

Creating/Deleting Groups

Creating a Group

All registered users can create a group on the hub.

1. Log into the HUB with you user name and password.
2. The first page that you see is you "myHUB", click on "New Group" under the "My Groups" section in the middle of the page.
3. Fill in the required and any optional fields.
4. Click Submit and verify your group is created.

Some helpful definitions:

Group ID

Your group alias. This will be part of the URL.

Group Title

The official name of your group.

Interests (tags)

Helps categorize your group in search results.

Public Text

The group description that non-members see when they come across your group.

Private Text

The group description that is visible only group members.

Membership

Group join policy determines how members join the group.

Anyone

Auto accepts group membership requests

Restricted

Hold membership requests to be approved or denied by the group manager.

Invite Only

Members can join only by manager invitation.

Closed

Does not allow group membership to be requested.

Discoverability Settings

Determines whether or not the group appears in searches or by browsing the group list.

Visible

The group can be found in searches and by browsing the group list.

Hidden

The group cannot be found in a search and only is only viewable by group members and those who know the groups direct"URL".

Deleting a group

To delete a group you must be the manager of the group and the sole member.

1. Log into the hub.
2. From the "My Groups" section click on the group that you want to delete.
3. Under Group Manager at the right, click on show manager controls.
4. Click on delete group.
5. Check "Yes, I want to destroy this group." and click on Delete.
6. Verify that you have successfully deleted a group.

Wiki Pages

What are Wiki Pages?

Wiki Pages are meant to be user-created community editable pages covering a specific topic or topics. Wiki pages allow users to share their knowledge of a subject and related areas in a simplified mark-up with a complete history of page changes.


Creating New Wiki Pages

Creating a New Wiki Page

To create a new wiki page:

1. Log in on the hub's front-end interface.
2. Navigate to **/wiki**.
3. Click on **New Page**.

4. Fill in the required fields.

5. **Note:** The Page text box uses wiki markup formatting. Plain text (no wiki markup) is allowed, but if you want to apply font style changes, embed images/files, add links, etc., you will have to use wiki markup. The toolbar on top displays shortcut buttons for common wiki markup commands. When you click any of the icons, the command is automatically provided and all you have to do is type the words you want to be formatted in place of the highlighted text within the command. For instance, to create a heading,  icon. You will see this command where you had the cursor: `<h2>Headline text</h2>`. Replace the words "Headline text" with what you want for the heading.

 link at the bottom of the Page text box.

6. Click **Preview** if you'd like to see how your page looks like before submitting it.

Click **Submit** when ready.

The wiki page is now created.

Note: If the main wiki page is using a macro that displays all existing wiki pages on the hub, your new page will be added to the list on the main wiki page. If not, your new page will have to be manually added to the list so that it is accessible to everybody. If you know the URL of your wiki page (which, by default, is the title you have set for your page, only with no spaces), you can get to it by typing it on the address bar in this format: https://yourhub.org/wiki/NAME_OF_YOUR_PAGE. For example, a wiki page with the title "My New Page" will have the URL: <https://yourhub.org/wiki/MyNewPage>.

To create a new wiki page within a group:

1. Go to the **Wiki** tab inside a group.
2. Click on **New Page**.

3. Fill in the required fields.

4. Click **Preview** if you'd like to see how your page looks like before submitting it. Click **Submit** when ready.

Note: If the main group wiki page is using a macro that displays all existing wiki pages within the group, your new page will be added to the list on the main group wiki page. If not, your new page will have to be manually added to the list so that it is accessible to everybody. If you know the URL of your group wiki page (which, by default, is the title you have set for your page, only with no spaces), you can get to it by typing it on the address bar in this format: https://yourhub.org/groups/NAME_OF_YOUR_GROUP/wiki/NAME_OF_YOUR_PAGE. For example, a group wiki page with the title "My New Page" will have the URL: <https://yourhub.org/groups/samplegroup/wiki/MyNewPage>.

Editing Wiki Pages

Editing Content on Wiki Pages

To edit wiki content:

1. Open the wiki page you would like to edit.
2. Go to the Edit section of the wiki page.
3. Edit the page.
4. When you're done with all your changes, scroll down the bottom of the page and click **Preview** if you'd like to see how your page looks like before submitting it. Click **Submit** when ready.

The wiki page is now updated.

Uploading an Image or File to Wiki Pages

In order to embed an image or file on the wiki page, you must first upload the image or file in the wiki.

To upload an image or file:

1. Go to the Edit section of the wiki page you would like to edit.

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2. To the right of the page, you will see a box for uploading a file. Click on the **Browse** button.

3. Locate the image or file you would like to upload and click **Open**.

4. Click **Upload**.

Your file is now uploaded in the wiki and you can now embed it in the wiki's Page text box so others can view or download it.

Embedding an Image or File on Wiki Pages

Note: In order to embed an image or file on the wiki page, you must first upload the image or file.

To embed an uploaded image/file:

1. Go to the Edit section of the wiki page you would like to edit.

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2. On the Page text box, place your cursor where you want the image or file to be. If you are uploading an image, click the **Embedded Image** button on the toolbar. If you are uploading a file, click on the **Embedded File** button.

3. Replace the highlighted text with the full name of the uploaded item you want to embed.

For image:

4. Scroll down to the bottom of the page and click **Submit**.

The item you chose to embed will now appear in the area where you placed it on the wiki. If you embedded a file, it will show up as a link that users can download.

Making a List of Available Wiki Pages

When a new wiki page is created, there is really no way to access the newly created wiki unless you know the URL of it (see [Creating a Wiki Page](#) tutorial to figure out the URL of your wiki page). *A wiki macro (or custom function to insert dynamic content in a page) can be added to a page to display a list of existing wiki pages within a given wiki.*

To add a wiki macro that generates a list of all wiki pages:

1. Go to the Edit section of the wiki page you would like to edit.
2. Type in **[[TitleIndex]]** where you want the list to appear

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3. Click **Submit**.

You will then see a bulleted list of all available pages where you added the macro.

Members

What is a Member?

A Member Area is each individual user's space within the HUB. Your member profile contains many sections including your dashboard, your profile, a wiki, a blog, and many more. Each member has the ability to use or not use each of these sections how they want. Some of the more important sections will be discussed in more detail below.

Dashboard

Member Dashboard

The Member Dashboard section is the user's landing page after logging in successfully. It has a number of widgets that contain items for easy access, for example the "My Sessions" widget which lists any of your current tool sessions and also shows your storage space usage.

Personalizing Your Dashboard

You have the option to personalize your Dashboard by adding, removing, or rearranging modules. This customization feature allows you to fit the Dashboard to your personal needs. Once it has been personalized, it will appear how you arranged it at each login.

To add a module to your Dashboard:

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1. Place your mouse pointer on the Personalize Dashboard button in the upper right hand corner of the screen. This button allows you to add a module.
2. A box will appear with a list of modules available. Click the "add" button next to the module you would like added to your Dashboard.

After clicking "add", the new module will appear on your dashboard.

To remove a module to your Dashboard:

1. Place your mouse pointer over the upper right hand corner of the box, and click the X that appears.
2. A message will appear asking you to confirm the removal. Click OK to confirm.

To rearrange your modules:

1. Place your mouse on the top of the module you wish to move until a cursor appears.
2. Press and hold down the button on the mouse or other pointing device to grab the module.
3. Drag the module to the desired location, and drop it by releasing the button.

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Profile

Member Profile

The Member Profile section contains specific details about the user, ranging from their name to email address, phone number, and personal website.

Editing Your Profile

The Member Profile has a new "edit in place" feature to help users edit their profile easier and faster. To edit your profile, first navigate to your Member Profile. You should see a screen similar to the picture above. Simply click on the edit link along the right side of any profile field to start editing that field. A hidden pane should slide down and you should see fields to edit that specific field of your profile. This is also where you can set the privacy level for that specific field. When you're done editing, click the Save Button and your profile will be updated. Clicking the Cancel Button will disregard your changes.

Profile Privacy

All Member accounts on the HUB are created with a default privacy setting of "Public". To edit your Profile Privacy setting, first navigate to your Member Profile. Next to your name you should see a lock icon. A dark colored icon means that your Profile Privacy is set to public. A light colored icon means your Profile Privacy is set to private. You can toggle your Profile Privacy by simply clicking on the lock icon.

***Note: You will see the lock icon next to your name on every section of your Member Area, but you must navigate to the Member Profile section within your Member area in order to toggle your privacy setting.*

Uploading/Updating your Profile Picture

All Member accounts on the HUB will be created with a default Profile Picture that is a silhouette. To edit your Profile Picture, first navigate to your Member Profile. You should see a semi-transparent black button over your current Profile Picture that says "Change Picture". Clicking that link will bring up a popup to upload a new photo or remove your current one (if its not set to the default silhouette) and should look like the image below.

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To Upload a new picture click on the black button that says "Upload an Image". Your computer should display a file browser to select an image. After you select an image the file will be automatically uploaded and once complete should be displayed in the preview area within the popup. If you are happy with the newly uploaded image click the "Save Changes" Button and your profile should refresh with the new profile picture set.

***Note: You will see your profile picture on every section of your Member area, but you must navigate to the Profile section with your Member area first in order to upload, update, or remove your profile picture.*

Tools

Tool How To's

Have a simulation/modeling tool that you want to deploy for others to use? This hub makes it easy. You don't have to build the tool for multiple platforms. You don't have to distribute binaries or tar balls. Just get your tool installed and running within our environment, and others can access your tool via the Web.

Existing Graphical User Interface that runs under Linux/X11

If you already have a tool with a graphical user interface built with Java, Qt, MATLAB, or anything else that runs under Linux/X11, you can probably deploy it as-is within this hub in a matter of hours. There are a few caveats:

- **If your tool relies on a graphics card for acceleration, the graphics performance will be slow.** Tools running within the virtual machines of this hub use software rendering for all graphics. It will probably work, but graphics may be clunky.
- **If your tool needs to pull data from external sites (other web sites and databases), you will have to let the hub team know.** All such connections are blocked by default, in order to safeguard against malicious tools. Once your tool has been approved and white-listed, it will have controlled access to external sites.
- **Your tool will be running in a remote server environment with its own file system.** The usual *File > Open...* operation will look for files on the server--not on the user's desktop. Users can upload files via sftp, WebDAV, and the hub's own importfile command. You might consider modifying your tool so that *File > Open...* launches importfile, so your users can upload files from their desktop on demand.

Command-line interface that runs under Linux

If you don't have a graphical user interface for your tool, you can create one in short order by using our [Rappture Toolkit](#). Rappture integrates with a wide variety of programming languages, including C/C++, Fortran, Java, MATLAB, R, Python, Perl, Ruby, and Tcl/Tk. Check out these videos to get started:

- [Introducing the Rappture Toolkit](#)

- [What's Under the Hood?](#)
- [More Rappture Objects](#)
- [Advanced Visualization](#)

Can your tool take advantage of cluster resources or parallel execution? We have additional computing resources within the hub that you can tap into via the [submit](#) command. Write a wrapper program in your favorite language, and have it gather the input values, prepare input files, and [submit](#) your runs to our remote computing resources.

Tools for Microsoft Windows or Macintosh Systems

Sorry, your options here are limited. All tools deployed on this hub must run in a Linux/X11 environment. In some cases, tools written for Microsoft Windows will run under Linux via [Wine](#) emulation. If that works in your case, then you can deploy your tool after setting up the appropriate Wine configuration files. If not, then we won't be able to host your tool.

Follow These Steps

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Create a project area for your tool

[Watch this video](#) to get a sense of the tool upload process, then [register your tool project](#). This lets us know that you're starting a new tool. We'll grant you access to our remote development environment, and we'll create a project area with a Subversion source code repository where you can store your code.

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Upload your code and build/test in the workspace

A [workspace](#) is a remote Linux desktop--a window into our remote development environment that you can access from any Web browser. [Watch this video](#) to learn how to use workspaces, then go to the [workspace page](#) and click *Launch Tool*. You can use sftp, WebDAV, or importfile to upload your code into the workspace. After that, you can build and test your code as you would in any other Linux environment. Once your tool runs properly in the workspace, it is ready to deploy.

-

Check in your code and tell us you're ready for deployment

The project area that you created in Step 1 comes with a Subversion source code repository. After having tested your code in the workspace, commit it to the Subversion repository. If you've never used Subversion before, you should [watch this tutorial](#). Once your code is checked in, you can click a link in your project that says *My code is committed*, as described in [this video](#). We'll install your code and get it ready for final testing. Click another link to say that you approve the tool, we'll make it available for others to use.

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Keep an eye on your tool

Each published tool has its own page listing the name of the tool, the authors, and a brief description. This page also shows the number of people who have accessed the tools, along with any questions they have posted, and ideas for improvement. Keep an eye on this page and watch your tool's popularity grow. Help answer the questions, use the feedback to make improvements, and publish improved versions of your tool. The more you support your tool, the more your user base will grow.

Projects

What are projects?

Projects is a project-management/collaboration tool. Whether working on a new funding proposal, research paper or developing an application, projects are a great way to manage your data, workflow and communication. Projects can be created by groups or individual users, and may include multiple groups in the team.

With each project you get:

- a Git-based repository for data and apps with a built-in web browser;
- a Wiki area for project notes;
- To-do list management;
- a Facebook-like microblogging tool providing a stream of project updates from all team members, with the ability to comment on certain activities.

Projects can be accessed by going to **/projects** on your hub. You can read in more detail about all project features by going to **/projects/features**.

Project Files

Google Drive Connection for Project Files

We are excited to offer Google Drive connection for desktop syncing and collaborative editing of your Project Files. Connecting your project is a fast and easy process, which creates a dedicated remote folder shared between all joining project team members and synced with your local Project Files directory. Team members use their own Google accounts to connect and may use Google Drive syncing apps available for various platforms and devices. In addition, individual project files may be exported to Google Docs, a suite of editing tools that makes working together better.

[What is Google Drive? with Google Drive](#)

What is Google Drive?

Google Drive is a free service that lets you store all your files including documents, photos, videos and Google Docs online and access them anywhere. With Google Drive, you can create, share and keep all your stuff in one place.

Google Drive is available for:

- PC and Mac
- Chrome OS
- iPhone and iPad
- Android devices

[Learn more about Google Drive ›](#)

Connecting your project with Google Drive

Project Files web browser now includes a **Connect** button showing remote services available for your project:

Project creator establishes the initial connection to Google Drive. For a project that is not yet connected, only Project Creator will see the **Connect** button. After the initial connection is established, all other project members will also see the button to connect and may follow the

same connection process.

Clicking the **Connect** button opens Connections screen describing available services. To proceed with the connection, you follow the green Connect link:

When connecting to Google Drive, you need to be logged into Google with your preferred gmail account.

As soon as you login To Google, you will be presented with the Request for Permission screen. Our connector app needs your permission to view and manage files and documents in your Google Drive as well as view your basic Google account information including the email address and Google screen name.

We only manage files stored in the dedicated shared remote folder that we create for your Project. Your Google screen name and email address are required to properly record file revision history.

Upon successful connection, you are returned to the **Connections** screen in your project, which now shows connection details and includes a direct link to the shared remote folder in Google Drive:

After you connect

Project Creator

If you are the Project Creator, you should now see a new folder created in the root of your Google Drive. The folder will have your project alias in its name, e.g. **Project:: myproject**. If you had any files in your project already, they would be copied to the remote directory during first sync.

Other project members

For all project members that connect after project creator, the new remote folder will appear under "Shared with me" directory in your Google Drive.

Unless something shared with you is stored in **My Drive**, it won't sync. Here's how to add the project folder from **Shared with me** to **My Drive**:

- Click **Shared with me**.
- Select the project folder.
- Click the **Add to My Drive** button. The contents of the project folder will automatically sync to the Google Drive folder on your computer.

Desktop Google Drive app

To access synced project files right from your desktop, you can [download Google Drive](#). It's free and installs in seconds. Here is an example how your Google Drive folder may be accessed on a mac:

Project Files browser

Now that the project is connected to Google Drive, the Project Files browser includes a few extra options.

The **Sync** button initiates a sync between local and remote files. Sync status is then shown to the left of the **Sync** button.

Files of certain types may be converted to Google format and back by clicking on the **start/stop Collaborative editing** button.

Sync between remote and local files

Sync of local and remote project files happens automatically every hour, after each local change, or may be initiated manually by clicking on the **Sync** button in the Project Files browser.

Sync status will be shown to the left of the **Sync** button and will tell you the progress of current sync or time since last sync operation.

You cannot abort sync once it starts and you cannot initiate a new sync request until the current sync is complete. There may be a delay of one to several minutes imposed after each manual sync request. This is to prevent unnecessary repeated server requests and to make sure all changes get propagated and synced properly.

Versioning and conflicts

During sync only the latest change on a file gets checked in. Intermediate changes that happened since last sync get omitted. However, because local changes get synced immediately after they occur, it is usually only remote intermediate revisions that may be omitted in joint file history. Frequent syncing helps keep as much revision history as possible.

In the case of a simultaneous change on the same file locally and remotely, the remote (Google) version prevails and gets committed over local version. We're working on adding proper conflict resolution mechanisms.

Meanwhile, detailed file revision history can be viewed locally by clicking on the **modified time** link for each file. There you can view diffs for text files and download older versions. The history will also show if the file was exported to Google for remote editing or brought back into the local repository.

Collaborative Editing via Google

Connecting your project with Google Drive enables you to export local project files of certain types for collaborative editing in Google. When you send a file to Google for editing, it will be converted to appropriate Google Docs format ([Docs](#), [Sheets](#), [Slides](#)).

These are the file types that can be converted to a Google document, spreadsheet, or presentation:

- For documents: .doc, .docx, .html, plain text (.txt), .rtf, .tex*
- For spreadsheets: .xls, .xlsx, .ods, .csv, .tsv, .txt, .tab
- For presentations: .ppt, .pps, .pptx
- For drawings: .wmf
- For OCR**: .jpg, .gif, .png, .pdf

* We've added support for LaTeX files conversion to and from Google Docs. TEX files will be exported to Google as text files, and imported back into the local repository as .TEX. You can compile your TEX file (both local and exported to Google) into a PDF right in the **Project Files** browser.

** Optical Character Recognition (OCR) lets you convert images with text into text documents using automated computer algorithms. Images can be processed individually (.jpg, .png, and .gif files) or in multi-page PDF documents (.pdf). More on [Optical Character Recognition](#).

Export local file to Google Docs

Select a file you wish to edit in you **Project Files** browser. If the **Start Collaborative Editing** button is active, it means that the file can be edited remotely.

After export, your file will appear in your Project as a **Google Doc**:

In your **Google Drive** the file may appear with a .gdoc (or other) Google Doc extension.

Now you and your project collaborators may work on the file together in **Google Drive**. With Google's [Real-time collaboration](#) multiple people can edit Google Docs at the same time from different computers.

Back in your **Project Files** browser you can preview the remote file as a PDF or JPEG. For .tex files exported to Google, the preview will be a compiled PDF that you can download and save back into project.

Import a Google Doc into the local repository

When you are happy with your edits of a Google Doc and wish to finalize the document for publishing in your Project or simply want to stop editing, you import the file back into the project repository. Select a remote file you wish to import and click on the **Stop Collaborative Editing** button. You'll get a choice of import formats:

Please note that original files in old Microsoft Office formats (.doc, .xls, .ppt) will be converted to the new formats (.docx, .xlsx, .ppt) when imported. If the name and format of the original file are preserved, the original file will be restored/overwritten in the local repository. If the name or format change, the file will be imported as a new file, with the revision history showing the connection.