Extensions

Overview

HUBzero is already a rich featured content management system but if you're building a website and you need extra features which aren't available by default, you can easily extend it with extensions. There are five types of extensions: Components, Modules, Plugins, Templates, and Languages. Each of these extensions handle specific functionality.

Components

The largest and most complex of the extension types, a component is in fact a separate application. You can think of a component as something that has its own functionality, its own database tables and its own presentation. So if you install a component, you add an application to your website. Examples of components are a forum, a blog, a community system, a photo gallery, etc. You could think of all of these as being a separate application. Everyone of these would make perfectly sense as a stand-alone system. A component will be shown in the main part of your website and only one component will be shown. A menu is then in fact nothing more then a switch between different components.

Modules

Modules are extensions which present certain pieces of information on your site. It's a way of presenting information that is already present. This can add a new function to an application which was already part of your website. Think about latest article modules, login module, a menu, etc. Typically you'll have a number of modules on each web page. The difference between a module and a component is not always very clear for everybody. A module doesn't make sense as a standalone application, it will just present information or add a function to an existing application. Take a newsletter for instance. A newsletter is a module. You can have a website which is used as a newsletter only. That makes perfectly sense. Although a newsletter module probably will have a subscription page integrated, you might want to add a subscription module on a sidebar on every page of your website. You can put this subscribe module anywhere on your site.

Another commonly used module would be a search box you wish to be present throughout your site. This is a small piece of re-usable HTML that can be placed anywhere you like and in different locations on a template-by-template basis. This allows one site to have the module in the top left of their template, for instance, and another site to have it in the right side-bar.

Plugins

Plugins serve a variety of purposes. As modules enhance the presentation of the final output of

the Web site, plugins enhance the data and can also provide additional, installable functionality. Plugins enable you to execute code in response to certain events, either core events or custom events that are triggered from your own code. This is a powerful way of extending the basic functionality.

Templates

A template is a series of files within the CMS that control the presentation of the content. The template is not a website; it's also not considered a complete website design. The template is the basic foundation design for viewing your website. To produce the effect of a **complete** website, the template works hand-in-hand with the content stored in the database.

Languages

Probably the most basic extensions are languages. Languages can be packaged in two ways, either as a core package or as an extension package. In essence, these files consist key/value pairs, these pairs provide the translation of static text strings which are assigned within the source code. These language packs will affect both the front and administrator side. Note: these language packs also include an XML meta file which describes the language and font information to use for PDF content generation.

Conclusion

If the difference between the three types of extensions is still not completely clear, then it is advisable to go to the admin pages of your installation and check the components menu, the module manager and the plugin manager. HUBzero comes with a number of core components, modules and plugins. By checking what they are doing, the difference between the three types of building blocks should become clear.

Modules Manager

Overview

The Module Manager is where you add and edit Modules. In HUBzero, Modules are used to display content and/or media around the main content.

The Module Manager can be found by selecting **Extensions** > **Module Manager** from the drop-down menu on the back-end of your HUB installation.

Module Facts:

1. All hubs require at least 1 Menu Module
2. All Other Module Types are Optional. (Examples: News, Banner, Latest News, Polls)
3. Every Menu is accompanied by a menu module. (Example mod_mainmenu)
4. Multiple occurrences of similar module types.
5. Some Modules are linked to components. For example, each Menu Module is related to one Menu component. To define a Menu, you need to create the Menu and Menu Items using the Menus screens and then create the Module for the Menu using this screen. Other Modules, such as Custom HTML and Breadcrumbs, do not depend on any other content.

An installation is accompanied with over 20 default module types.

Column Headers

Click on the column heading to sort the list by that column's value.

- **Number (#):** An indexing number automatically assigned by Joomla! for ease of reference.
- **Checkbox:** Check this box to select one or more items. To select all items, check the box in the column heading. After one or more boxes are checked, click a toolbar button to take an action on the selected item or items. Many toolbar actions, such as Publish and Unpublish, can work with multiple items. Others, such as Edit, only work on one item at a time. If multiple items are checked and you press Edit, the first item will be opened for editing.
- **Module Name:** The name of the Module. You can click on the name to open the Module for editing.
- **Enabled:** A green tick or a red X showing whether the use of the component is

enabled/disabled. Click the icon to toggle the item between enabled and disabled.

- **Order:** The order to display modules within a Position. If the list is sorted by this column, you can change the display order of modules within a Position by selecting a Position in the **Select Position** filter and then clicking the arrows or by entering the sequential order and clicking **Save Order**.
- **Access Level:** Who has access to this item. You can change an item's Access Level by clicking on the icon in the column. Current options are:
    - Special: Only users with author status or higher have access
    - Registered: Only registered users have access
    - Public: Everyone has access
- **Position:** The position on the page where this module is displayed. Positions are locations on the page where modules can be placed (for example, **left** or **right**). Positions are defined in the Template in use for the page. Positions can also be used to insert a Module inside an Article using the syntax **{loadposition xxx}**, where **xxx** is a unique position for the module.
- **Pages:** The Menu Items where this Module will be displayed. Options are **All** for all Menu Items, **None** for no Menu Items, and **Varies** for selected Menu Items. A Module will only display on Menu Items where it is selected.
- **Type:** The system name of the Module. Joomla! installs 20 standard Modules. Many Joomla! Extensions contribute additional Modules.
- **ID:** The ID number. This is a unique identification number for this item assigned automatically by Joomla!. It is used to identify the item internally, for example in internal links. You can not change this number.
- **Display Number:** The number of items to display on one page. If there are more items than this number, you can use the page navigation buttons (Start, Prev, Next, End, and page numbers) to navigate between pages. Note that if you have a large number of items, it may be helpful to use the Filter options, located above the column headings, to limit which items display (*where applicable*).

Toolbars

Primary Toolbar

- **Enable:** To enable one or more items, select them using the Checkbox and press this button. You may also toggle between Enabled and Disabled by clicking on the icon in the **Enabled** column.
- **Disable:** To disable one or more items, select them using the Checkbox and press this button. You may also toggle between Enabled and Disabled by clicking on the icon in the **Enabled** column.
- **Copy:** To copy one or more Modules, select them using the Checkbox and press this button. A new Module will be created for each selected Module. The new Module will have the name **Copy of** plus the original Module name. Note that the new copies are initially disabled.

- **Delete:** To delete one or more items, select them and click this button. The selected items will be deleted. **Note**: *only empty items can be deleted.*
- **Edit:** Select one item and click on this button to open it in edit mode. If you have more than one item selected (where applicable), the first item will be opened. You can also open an item for editing by clicking on its Title or Name.
- **New:** To create a new instance of a Module, press this button. You will be taken to a screen that lists all of the available Modules. See Create/Edit Modules for information about adding Modules.
- **Help:** Opens this Help Screen.

- **Site and Administrator Links: At the top left, above the Filter.**

- **Site:** Opens the Site tab. This is the default tab and allows you to manage the Modules for the front end of the web site.
- **Administrator:** This tab allows you to manage the Modules for the back end administration of the web site. If you do not need to change the Joomla! administrator menus, no modifications are required here.

List Filters

Filter by Template, Position, Type, and Published State

You can filter the list of items by typing part of the title or the ID number. Or, you can select a combination of Category and Published State.

- **Filter:** In the upper left corner just above the column headings is a Filter field and two buttons, as shown below:
    - If you have a large number of items on the list, you can use this filter to find the desired item(s) quickly. Enter either part of the title or an ID number and press **Go** to display the matching items. You can enter in whole words or part of a word. For example, **ero** will match all titles with the word **Hubzero** in them.

Filter by Template, Position, Type and Published State

In the upper right area, above the column headings, are following drop-down list boxes as shown below. The selections may be combined. Only items matching both selections will display in the list.

- **Site**
- **Select Status**
- **Select Template:** Select the Template from the drop-down list box of available

Templates. Only Templates that are enabled for this site will display.

- **Select Position:**Select a Position from the drop-down list box of available Positions.
- **Select Type:** Select the Module Type from the drop-down list box of available Module Types. HUBzero installs with 20 available Module types. Additional ones may be available if you have installed any Extensions.
- **Select State:** Use the drop-down list box to select the published state: Enabled or Disabled.
- **Select Access**
- **Select Language**

Create/Edit Modules

When you create a new Module, you will select the Module Type. This will determine what type of content this Module can display. If you edit an existing Module, the Module Type will already be determined.

- **Note:** You cannot change the Module Type of an existing Module.

All Modules have two sections that are the same: Details and Menu Assignment. The Parameters are different for each Module Type.

- **Module Type: This displays the system name of the module. No entry is allowed.**
- **Title:** The Title of the Module.
- **Show Title:** Whether or not to show the Title of the Module.
- **Enabled:** Whether or not the Module is enabled. If **No**, the Module will not be shown on the page.
- **Position:** The Position on the page to show the Module. There are two types of Positions you can use.
    - You can select a Position from the drop-down list box. The Positions in the list box are those provided by your Template. You can see the available Positions on the page by adding the letters **?tp=1** to the end of any front-end URL. For example, if your home page is **www.mysite.com**, you can type the URL **www.mysite.com?tp=1**. The page will display with labeled rectangles indicating each pre-defined Position for the current Template.
    - You can type in a Position that is different from the pre-defined positions (for example, **myposition1**). This type of Position can be used to insert a Module into an Article. If you enter the code **{loadposition xxx}** inside the text of an Article, where **xxx** matches the Position of a Module, and if the Module is assigned to the the Menu Selection where the Article is displayed (see **Menu Assignment** below), then the Module will be displayed at that point in the Article.
- **Order:** The Order that this Module will be displayed within the Position. If more than one Module is displayed at the same position, this will determine the order of display. The

drop-down list box shows all Modules displaying at the current Position. Select the Module that you want the current Module to *follow*.
    - You can also change the order of display in the Module Manager. The Module Order is only important when two or more Modules are displaying at the *same Position* and on the s*ame Menu Selections*.
- **Access Level:** Who has access to this item. Enter the desired level using the drop-down list box. Current options are:
    - Public: Everyone has access
    - Registered: Only registered users have access
    - Special: Only users with author status or higher have access
- **ID:** The ID number. This is a unique identification number for this item assigned automatically by Joomla!. It is used to identify the item internally, for example in internal links. You can not change this number.
- **Description:** A description of what the Module does. No entry is allowed.

Menu Assignment

This is where you tell the CMS which pages to show this Module on. This Module will show on the page when this Menu Item is selected. If the Menu Item allows the user to navigate to sub-pages, then this Module will also show on these sub-pages. For example, if the Menu item is a Blog Layout, the Module will also show when the user clicks on a **Read more...** link, an Article Link, or a Page Navigation link from that Blog Layout.

- **Menus: All** means show the current Module on all Menu Items. **None** means don't show the Module on any Menu Items. **Select Menu Item(s) from the List** allows you to select which Menu Items to show the Module on.
- **Menu Selection:** If **Select Menu Items(s) from the List** above is selected, select individual Menu Items that will display the Module.
    - Use Ctrl+Click to select multiple Menu Items.
    - Use Shift+Click to select a range of Menu Items.
    - If you want to select most of the Menu Items, first click **All** above under Menus and then click **Select Menu Items(s) from the List**. All of the Menu Items will be selected. Then use Ctrl+Click to deselect the Menu Items you don't want to include.

- **Parameters:** This will vary between modules.

Turning on Site Notices

Use this module to announce Hub wide events or scheduled upgrade dates.

1. Navigate to the **/administrator** interface
2. Hover over **Extensions** and from the drop-down select **Module Manager**
3. Click New and look for "mod_notices"
4. Click on the title of "mod_notices" to open up this new module
    1. Only complete steps 3 - 4 if you have not created this module previously
5. Fill in the needed information:
    1. Title: Add the title for this module, Example - "Upgrade Notices"
    2. Position: Set the position to "notices"
    3. Ordering: Set the ordering to "Site Notices"
    4. Status: Set the status to "Publish"
    5. Access: Set to the user access level this announcement pertains to
    6. Start Publishing: Select the date to start publishing this announcement
    7. Finish Publishing: Select the date to finish publishing this announcement
    8. Languages: Set lanugages to "All"
    9. Alert Level: Determine the alert level (Low, Medium, High)
    10. Message: Add the message you want to announce to your users
6. Scroll to the bottom of the form to check what pages you want this message appearing on through out the site
7. Click **Save & Close** once you are done

Templates Manager

Overview

The Template Manager is where you assign a default Template to your web site. You can also edit and preview Templates here.

The visual layout of both the Front-end and Back-end of your site is controlled by the Template. Templates are extensions that contain layout and style information that tells the CMS exactly how to draw each page of your site.

When you first install a hub, one Back-end Template and one or more Front-end templates are included. Other Templates can be installed from third-party developers as Extensions.

If you want to use the same Template for all of the pages on your site, you just assign one Template as the Default Template. You can also assign different Templates to different pages.

Select **Extensions** ? **Template Manager** from the drop-down menu in the back-end of your installation.

Column Headers

- **#:** An indexing number automatically assigned by Joomla! for ease of reference.
- **Template Name:** The name given to each Template by the Template author. Click the Name to open the Template for editing. If you hover the mouse over the Template Name, a small preview for the Template displays in a pop-up window. The Template Name normally corresponds to the sub-directory name that contains the Template in the <path-to-app>/templates/ directory. For example, the files for the **kimera** Template are in the directory <path-to-app>/templates/kimera
- **Default:** Indicator of Default Template.
- **Assigned:** Shows whether this Template has been assigned to any specific menu items. To assign a template to menu items, open the Template for editing.
- **Version:** The version number of the Extension.
- **Date:** The date this extension was released.
- **Author:** The author of this extension.
- **Display #:** The number of items to display on one page. If there are more items than this number, you can use the page navigation buttons (Start, Prev, Next, End, and page numbers) to navigate between pages. Note that if you have a large number of items, it may be helpful to use the Filter options, located above the column headings, to limit which items display (*where applicable*).
- **Location**

Toolbars

- **Default:** Select the Template that you want to be the default Template. Then click this button. The default star symbol will show in the Default column, indicating that this is now the default Template.
- **Edit:** Select one item and click on this button to open it in edit mode. If you have more than one item selected (where applicable), the first item will be opened. You can also open an item for editing by clicking on its Title or Name. See the section below called **Changing Text and Color** for information on the edit screen.
- **Help:** Opens this Help Screen.
- **Duplicate**
- **Delete**

Changing Text and Color

(**Note:** You have to be logged into your hub in order to complete the following tasks)

1. Click the **Extensions** tab and then select the **Template Manager** button located in the drop-down
2. On the **Template Manager: Styles** page, check the box of the **kameleon (admin)** template and then click the **Edit** button
3. Change the Header to **Light** or **Dark** from the drop-down
4. Change the **Theme** or main color of the backend by either choosing a color from the drop-down or by selecting **Custom (color specified below)** and fill in a color code in the **Custom color box**
5. Save the changes by clicking **Save & Close** and a pop-up will appear saying **Style successfully saved**

Kimera: Adding a Background Image

1. [redacted]
2. [redacted]
3. [redacted]
4. [redacted]
5. [redacted]
6. [redacted]
7. [redacted]
8. [redacted]

[redacted]

Plugins Manager

Overview

The Plugin Manager allows you to enable and disablePlugins and to edit a Plugin's Details and Parameters.

The Plugin Manager can be accessed by selecting **Extensions** > **Plugin Manager** from the drop-down menu on the Back-end of your HUBzero installation.

- **Plug-in Name:** The name of the plug-in. The name explains where the plug-in is located and what the plug-in is for.
    - For example: **Dashboard-Collections** means that the plug-in is on the user's Dashboard with a module for Collections.

- **Status:** If the plug-in is viewable on the Hub or not.
    - Enabled: The plug-in is available on the frontend and on the backend of the Hub.
    - Disabled: The plug-in has been removed from the frontend of the Hub but is still accessible on the backend.
- **Ordering:** Where the plug-in is on the master list of plug-ins. This list can be seen when plug-ins are being enabled the ordering determines how the plug-in is displayed in the drop-down.
- **Type:** The location of the plug-in.
    - This is the first part of the plug-in's title.
- **Element:** What the plug-in is implementing.
    - This is the second part of the plug-in's title.
- **Access:** Who is able to view or use the plug-in.
    - Public: All visitors or users on the Hub are able to view and use the plug-in.
    - Registered: Only registered users are able to view and use the plug-in.
    - Special: Only users given special permissions can access and use the plug-in.
- **ID:** The identification number given to the plugin after it was created on the Hub. This allows for easier search results.

Column Headers

- **#:** An indexing number automatically assigned by Joomla! for ease of reference.
- **Checkbox:** Check this box to select one or more items. To select all items, check the box in the column heading. After one or more boxes are checked, click a toolbar button to take an action on the selected item or items. Many toolbar actions, such as Publish and Unpublish, can work with multiple items. Others, such as Edit, only work on one item at a time. If multiple items are checked and you press Edit, the first item will be

opened for editing.

- **Plugin Name:** The Name of the Plugin. Click on the Name to open the Plugin for editing.
- **Enabled:** A green tick or a red X showing whether the use of the component is enabled/disabled. Click the icon to toggle the item between enabled and disabled.
- **Order:** The order to display items. If the list is sorted by this column, you can change the order by clicking the arrows or by entering the sequential order and clicking **Save Order**. Note that the display order on a page is set in the Parameters - Advanced section for each Menu Item. If that order is set to use something other than **Order**(for example, **Title - Alphabetical**), then the order value in this screen will be ignored. If the Menu Item Order parameter is set to use **Order**, then the items will display on the page based on the order in this screen.
- **Access Level:** Who has access to this item. You can change an item's Access Level by clicking on the icon in the column. Current options are:
    - Public: Everyone has access
    - Registered: Only registered users have access
    - Special: Only users with author status or higher have access
- **Type:** The Type of the Plugin. Possible types are: authentication, content, editors, editors-xtd, search, system, user, and xmlrpc. These are also the names of the subfolders where the Plugin files are located. For example, Plugins with a Type of **authentication** are located in the folder **plugins/authentication**.
- **File:** The name of the Plugin files. Each Plugin has two files, a **.php** file and a **.xml** file. So, for example, the Authentication - Facebook plugin has two files: **facebook.php** and **facebook.xml**.
- **ID:** The ID number. This is a unique identification number for this item assigned automatically by Joomla!. It is used to identify the item internally, for example in internal links. You can not change this number.
- **Display #:** The number of items to display on one page. If there are more items than this number, you can use the page navigation buttons (Start, Prev, Next, End, and page numbers) to navigate between pages. Note that if you have a large number of items, it may be helpful to use the Filter options, located above the column headings, to limit which items display (*where applicable*).

Toolbars

- **Enable:** To enable one or more items, select them using the Checkbox and press this button. You may also toggle between Enabled and Disabled by clicking on the icon in the **Enabled** column.
- **Disable:** To disable one or more items, select them using the Checkbox and press this button. You may also toggle between Enabled and Disabled by clicking on the icon in the **Enabled** column.
- **Edit:** Select one item and click on this button to open it in edit mode. If you have more than one item selected (where applicable), the first item will be opened. You can also

open an item for editing by clicking on its Title or Name.
- **Help:** Opens this Help Screen.
- **Check-in**
- **Options**

List Filters

You can filter the list of items by typing in part of the Title or the ID number. Or you can select a combination of Category and Published State.

- **Filter:** If you have a large number of items on the list, you can use this filter to find the desired item(s) quickly. Enter either part of the title or an ID number and press **Go** to display the matching items. You can enter in whole words or part of a word. For example, **ooml** will match all titles with the word **Joomla!** in them.
- **Filter by Type and State:** The selections may be combined. Only items matching both selections will display in the list.
- **Select Type:** Select a Type from the drop-down list box to select only Plugins of this Type.
- **Select State:** Select a state (Enabled or Disabled) from the drop-down list box to select only Plugins with this state.
- **Select Access**

Edit Plugins

You can edit details and parameters for Plugins. Some Plugins have several parameters, while others don't have any.

- **Details:** The Details section is the same for all Plugins, as follows:
- **Name:** The Name of the Plugin.
- **Enabled:** Whether or not this Plugin is enabled.
- **Type:** The Type of the Plugin. This value cannot be changed.
- **Plugin File:** The name of the Plugin file. Each Plugin has two files with this name. One has the file extension **.php** and the other has the file extension **.xml**.
- **Access Level:** Who has access to this item. Enter the desired level using the drop-down list box. Current options are:
    - Public: Everyone has access
    - Registered: Only registered users have access
    - Special: Only users with author status or higher have access
- **Order:** The order this item will display in the Manager screen. Use the drop-down list

box to change the Order. You can select **First** or **Last** to make this the first or last item. Or you can select an item from the list. In this case, the current item will be listed just *after* the item you select. Note that the Order can also be changed in the Manager screen.
- **Description:** The description of what this Plugin does. This cannot be changed.
- **Parameters:** This will vary between plugins.

Reordering

1. Log in to the backend of the Hub and access the **Extensions** tab
2. Click on the **Plugin-in Manager** navigate to the **Plug-in Manager: Plug-ins** page
3. Locate the column labeled **Ordering** and then click on the title of the column
4. Arrows will appear on the left side of the numbering
5. To begin reordering click the arrows up or down to reorder the plug-ins
6. Save the changes by clicking the **Save** icon

Enabling a Plug-in

1. Log in to the backend of the Hub and access the **Extensions** tab and then click on **Plug-in Manager**
2. Locate the plug-in that needs enabling and select the box beside the plug-in’s name
3. Click **Enable** to enable the plug-in
4. The plug-in will now be useable on the frontend of the Hub

Editing a Plug-in

1. Log in to the backend of the Hub and access the **Extensions** tab and then click on **Plug-in Manager**
2. Locate the plug-in that needs editing and select the box beside the plug-in’s name
3. Click **Edit** to begin editing the plug-in
4. Click **Save & Close** to save the newly edited content

Disabling a Plug-in

1. Log in to the backend of the Hub and access the **Extensions** tab and then click on **Plug-in Manager**
2. Locate the plug-in that needs disabling and select the box beside the plug-in’s name
3. Click **Disable** to disable the plug-in
4. The plug-in will now be removed from the frontend of the Hub, but still accessible from the backend

Extension Manager

Overview

A Hub administrator can manage extensions (i.e.: plugins, components, modules, templates, etc.), from the /administrator interface. Extensions are categorized into two sections - "Hubzero Core" and "Custom Extensions". Hubzero Core extensions are the core codeset of Hubzero and may be disabled or enabled but never completely removed. Hubzero Core extensions, however, can be overridden by a Custom Extension of the same name. See the Web Developer documentation section for instructions on how to create your own.

Enabling Hubzero Core Extensions

1. Navigate to **/administrator**.
2. Hover over **Extensions** and select **Extension Manager.**
3. Click **Hubzero Core** to view the list of extensions.
4. **Check the box** beside the extension that you would like to enable.
5. Click the **Enable** button in the upper right corner.

Disabling Hubzero Core Extensions

1. Navigate to **/administrator.**
2. Hover over **Extensions** and select **Extension Manager.**
3. Click **Hubzero Core** to view the list of extensions.
4. **Check the box** beside the extension that you would like to disable.
5. Click the **Disable** button in the upper right corner.

Adding Custom Extensions

1. Navigate to **/administrator**.
2. Hover over **Extensions** and select **Extension Manager.**
3. Click **Custom Extensions** to view the list of extensions if available.
4. Click the **New** button in the upper right corner.
5. Complete the form.
6. Click the **Save & Close** button in the upper right corner.

Editing Custom Extensions

1. Navigate to **/administrator.**
2. Hover over **Extensions** and select **Extension Manager.**
3. Click **Custom Extensions** to view the list of extensions.
4. **Check the box** beside the extension that you would like to disable.
5. Click the **Edit** button in the upper right corner.
6. Complete the form.
7. Click the **Save & Close** button in the upper right corner.

Enabling Custom Extensions

1. Navigate to **/administrator**.
2. Hover over **Extensions** and select **Extension Manager.**
3. Click **Custom Extensions** to view the list of extensions.
4. **Check the box** beside the extension that you would like to enable.
5. Click the **Enable** button in the upper right corner.

Disabling Custom Core Extensions

1. Navigate to **/administrator.**
2. Hover over **Extensions** and select **Extension Manager.**
3. Click **Custom Extensions** to view the list of extensions.
4. **Check the box** beside the extension that you would like to disable.
5. Click the **Disable** button in the upper right corner.

Additional Info:

Installing and Updating a Custom Extension

From the Custom Extension tab in the Extension manager, select a Custom Extension from the list and the click the "Update" button at the top right of the page.

Incoming commits will be displayed, if you wish to process, click the Merge button at the top right.

You should now see a see a confirmation page that the code has been succesfully updated.

Authentication

Why it matters?

By default, your hub comes configured to allow local account creation and authentication. In addition to this default option, HUBzero gives you the ability to extend the authentication process by adding support for third party services, like Facebook, Google, and LinkedIn. Using one or more of these providers, users are given a **single sign-on** experience, while easing the barriers to entry caused by the account creation process. Plus, as more social networking features are developed for the hubs - like posting new resources to your Facebook wall - users will already have that link setup between their hub and Facebook identities.

In brief, that's the principle behind offering multiple authentication options to users. Keep reading to find out how to set it up on your hub!

Setup

Prior to starting this process, you will have to register an **app** for your hub on a given provider's website. A few examples include:

- https://developers.facebook.com/apps
- https://developer.linkedin.com/ (go to **API Keys**)
- https://developers.google.com/ (go to the API console)

NOTE: the information above is accurate as of Aug 2012. It will undoubtedly change. Exact steps and terminology differs between providers.

Whichever provider you're interested in, you'll need to register a new app to obtain an app ID/key and secret (terminology may be slightly different between providers). Once you've completed the registration process and obtained the API key and secret, you can jump over to the hub.

NOTE: the Oauth protocol requires the specification of a redirect URI. Most of the providers mentioned above require you to specify the redirect domain (usually just your hub URL). The Google API requires you to specifically list any redirect URI's that will be used. These should be as follows:
(HUBzero 1.1 - see image below)
https://yourhub.org/index.php?option=com_user&task=login&authenticator=google
https://yourhub.org/index.php?option=com_user&task=link&authenticator=google
(HUBzero 1.2)
https://yourhub.org/index.php?option=com_users&task=user.login&authenticator=google
https://yourhub.org/index.php?option=com_users&task=user.link&authenticator=google

Setup begins in the administrative interface for your hub.

1. First, navigate to **Extensions -> Plugin Manager**, and filter the results to the **authentication** type

2. Next, select the plugin you desire to enable (we'll use Facebook in this example)

- In the plugin edit screen, fill in the appropriate values for App ID and Consumer Secret as obtained above. Also be sure to enable the plugin.

That's about it! Now, when you go to your hub's login page, you'll see a new option for Facebook login.

More details

What happens if someone already has a local hub account, but wants to start using a new third party provider?

Users that already have hub accounts can go to the accounts tab of their members page. From there, they can link their existing account with external providers. Additionally, if a user tries to log in with an external account that doesn't match one used on the hub before, we check to see if we can match them with an already existing hub account prior to talking them through the new account creation process.

Purdue Hubs

In addition to the authentication options mentioned above, HUBzero has also developed an authentication plugin for the Purdue Central Authentication Service (CAS). If you're interested in taking advantage of this service, follow the instruction here: https://www.purdue.edu/apps/account/docs/CAS/CAS_information.jsp to register your hub with the Identity and Access Management Office at Purdue. Once this is done, simply turn the plugin on and you'll be all set.

Other institutions or universities may find the Purdue CAS plugin a good template for developing their own CAS authentication plugin. If you're developing a plugin that uses Oauth, consider using the Facebook plugin as a starting point.