

How to setup and work with Drupal on LAMP

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Contents

Drupal Installation Introduction	3
Downloading Drupal	3
Creating Database for Drupal Installation	4
Troubleshooting Drupal Database Creation	5
Setting up Drupal in your Web Browser	5
Troubleshooting Drupal Setup in Web Browser	10
Setting a Different Drupal Theme	11
Troubleshooting Installation of Drupal Themes and Modules	13
Enable Clean Drupal URLs	14
Adding Full Page Calendar to Drupal:	17
Troubleshooting Drupal Modules Not Enabling:	22
Creating a Home Page for a Drupal Site	22
Setup Drupal Users with Customized Permissions	24
Create News Page in Drupal	27
Create a Drupal Media Page	28

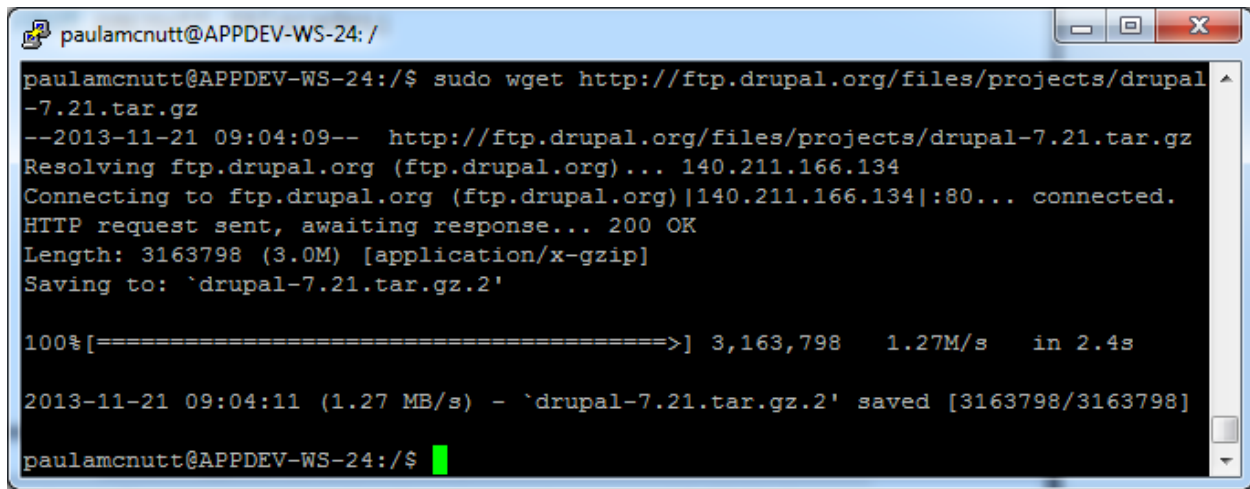
Drupal Installation Introduction

This tutorial outlines how to install Drupal on LAMP, and setup a Drupal site with multiple pages and features, user accounts with custom permissions, and clean URLs.

Downloading Drupal

Once you are logged in and at the command prompt type the following:

```
sudo wget http://ftp.drupal.org/files/projects/drupal-7.21.tar.gz
```



```
paulamcnutt@APPDEV-WS-24: /
paulamcnutt@APPDEV-WS-24:/$ sudo wget http://ftp.drupal.org/files/projects/drupal-7.21.tar.gz
--2013-11-21 09:04:09--  http://ftp.drupal.org/files/projects/drupal-7.21.tar.gz
Resolving ftp.drupal.org (ftp.drupal.org)... 140.211.166.134
Connecting to ftp.drupal.org (ftp.drupal.org)|140.211.166.134|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3163798 (3.0M) [application/x-gzip]
Saving to: `drupal-7.21.tar.gz.2'

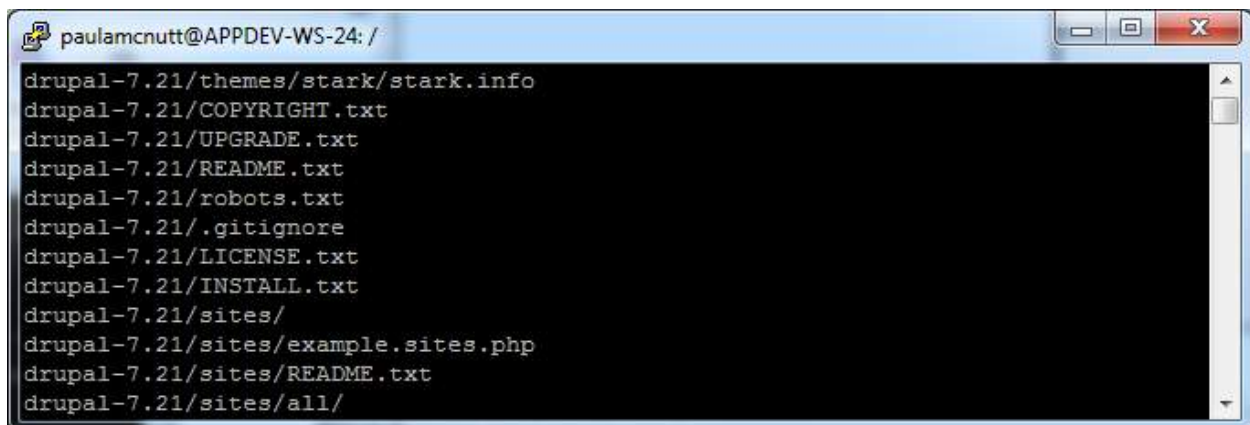
100%[=====>] 3,163,798  1.27M/s  in 2.4s

2013-11-21 09:04:11 (1.27 MB/s) - `drupal-7.21.tar.gz.2' saved [3163798/3163798]

paulamcnutt@APPDEV-WS-24:/$
```

Then run the following command which will decompress the file (the screenshot below shows what you can expect to see as the command is being run):

```
sudo tar -xvzf drupal-7.21.tar.gz
```



```
paulamcnutt@APPDEV-WS-24: /
drupal-7.21/themes/stark/stark.info
drupal-7.21/COPYRIGHT.txt
drupal-7.21/UPGRADE.txt
drupal-7.21/README.txt
drupal-7.21/robots.txt
drupal-7.21/.gitignore
drupal-7.21/LICENSE.txt
drupal-7.21/INSTALL.txt
drupal-7.21/sites/
drupal-7.21/sites/example.sites.php
drupal-7.21/sites/README.txt
drupal-7.21/sites/all/
```

Run the following commands below one by one (where nscctruro is the name of the directory where the installation will go). For your installation directory you should use a name like “drupal” instead of nscctruro or something that is more suitable to the name of your site. (There is a screenshot below showing these six commands being run)

These commands mostly are just moving files/folders around.

```
sudo mkdir /var/www/nscctruro
```

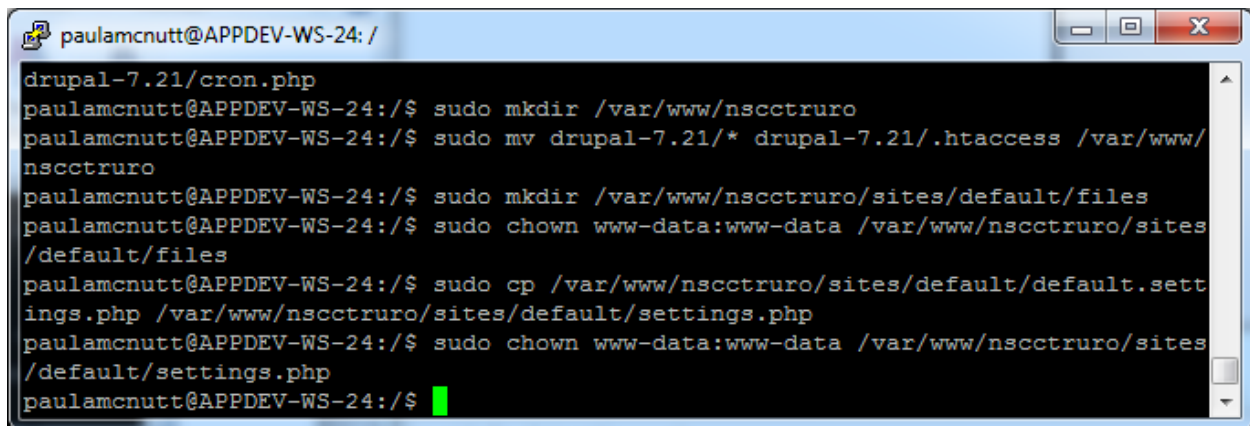
```
sudo mv drupal-7.21/* drupal-7.21/.htaccess /var/www/nscctruro
```

```
sudo mkdir /var/www/nscctruro/sites/default/files
```

```
sudo chown www-data:www-data /var/www/nscctruro/sites/default/files
```

```
sudo cp /var/www/nscctruro/sites/default/default.settings.php  
/var/www/nscctruro/sites/default/settings.php
```

```
sudo chown www-data:www-data /var/www/nscctruro/sites/default/settings.php
```

A terminal window titled 'paulamcnutt@APPDEV-WS-24: /' showing the execution of the commands listed above. The output shows the files being moved and directories created successfully. The prompt is now 'paulamcnutt@APPDEV-WS-24:/\$' with a green cursor.

```
paulamcnutt@APPDEV-WS-24: /  
drupal-7.21/cron.php  
paulamcnutt@APPDEV-WS-24:/$ sudo mkdir /var/www/nscctruro  
paulamcnutt@APPDEV-WS-24:/$ sudo mv drupal-7.21/* drupal-7.21/.htaccess /var/www/  
nscctruro  
paulamcnutt@APPDEV-WS-24:/$ sudo mkdir /var/www/nscctruro/sites/default/files  
paulamcnutt@APPDEV-WS-24:/$ sudo chown www-data:www-data /var/www/nscctruro/sites  
/default/files  
paulamcnutt@APPDEV-WS-24:/$ sudo cp /var/www/nscctruro/sites/default/default.sett  
ings.php /var/www/nscctruro/sites/default/settings.php  
paulamcnutt@APPDEV-WS-24:/$ sudo chown www-data:www-data /var/www/nscctruro/sites  
/default/settings.php  
paulamcnutt@APPDEV-WS-24:/$
```

Now you have drupal files prepared to be installed!

Creating Database for Drupal Installation

Now you just need to set up a database ☺

Where I have nscctruro below it is the name of the database you want to use. For this example I named my database “nscctruro” although a standard name would be “drupal”. If you intend on creating multiple drupal sites though you will have to make sure your database has a different name than other installations databases.

```
mysqladmin -u root -p create nscctruro
```

Then enter your password mysql password.

Troubleshooting Drupal Database Creation : If the command above doesn't work for you (`mysqladmin -u root -p create nscctruro`) it is possible that you may already have a database with the name you specified created.

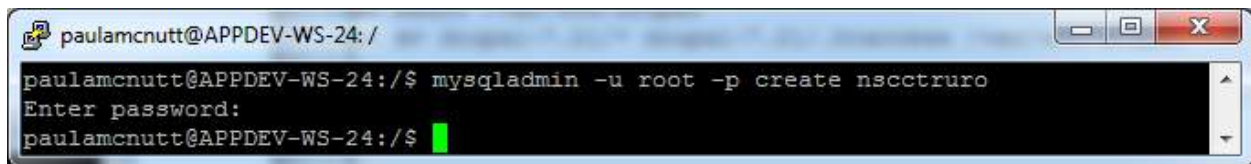
Setting up Drupal in your Web Browser

Now that you have drupal installed and a database setup for it you can visit your site at the URL formatted like this:

Ipaddress/directory where you installed drupal

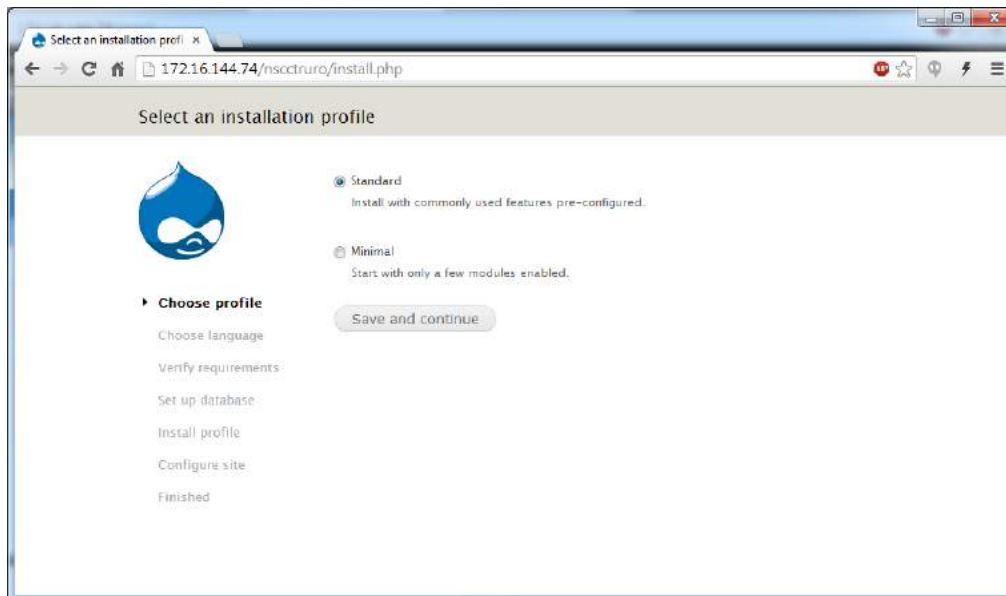
So for me the URL is:

172.16.144.74/nscctruro

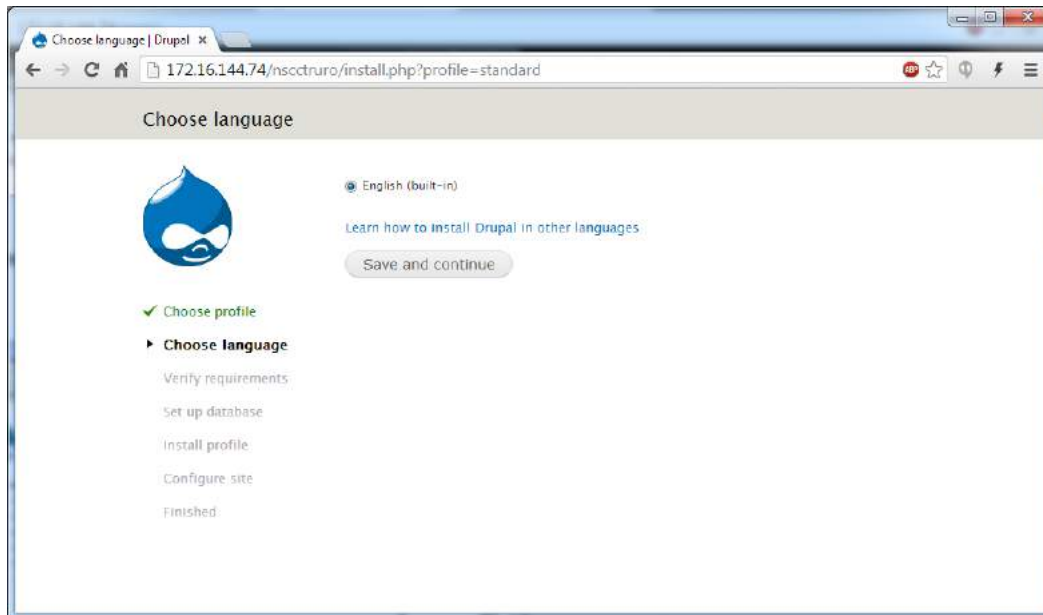
A terminal window titled 'paulamcnutt@APPDEV-WS-24: /' showing the command 'mysqladmin -u root -p create nscctruro' being entered. The prompt 'Enter password:' is visible, and the command has been executed, returning to the shell prompt 'paulamcnutt@APPDEV-WS-24: /\$'.

This will redirect you to the install.php (as shown below)

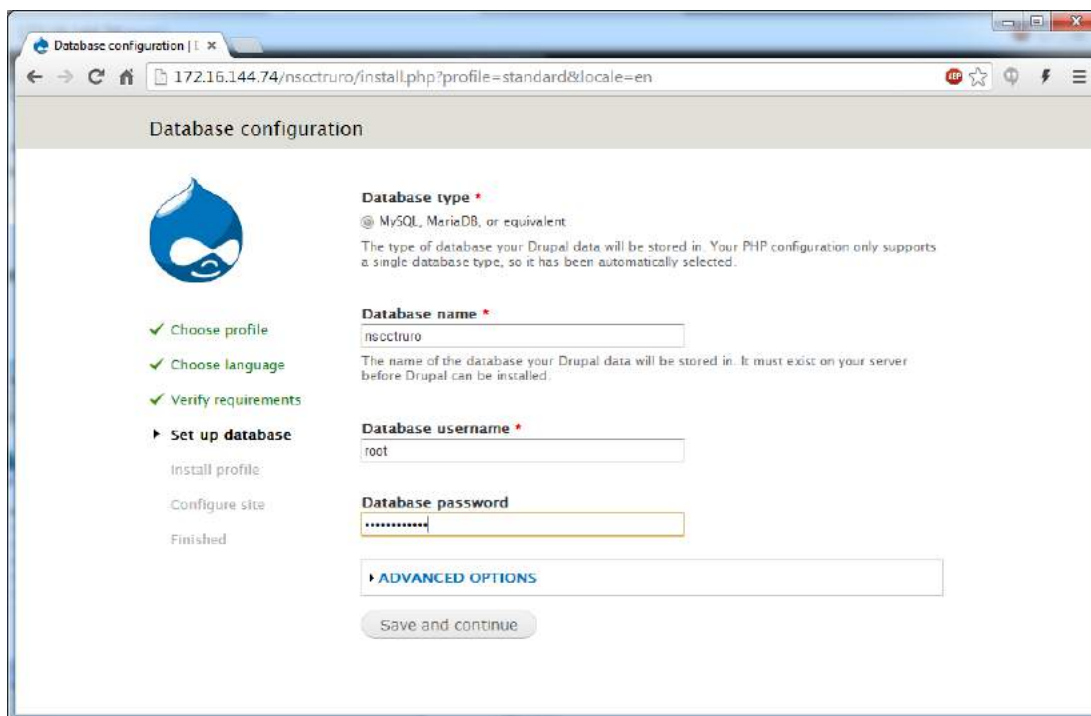
By default “Standard” is selected, and this works for our installation so click the “Save and continue” button.



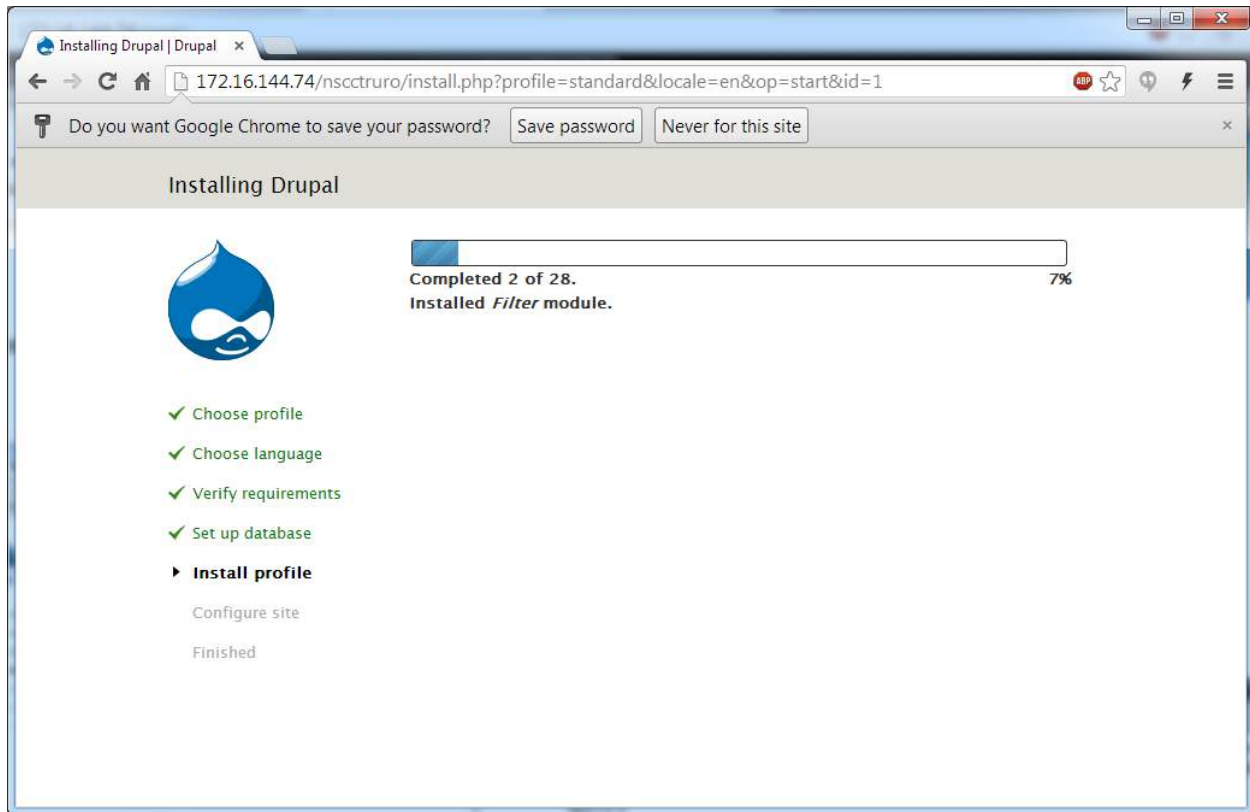
By default language is set to English, so click the “Save and Continue” button.



Enter your database name, in this example it is “nsccruro”, your database username (your mysql username), and database password (your mysql login password). Then click the “Save and continue” button.



Now Drupal will install.



Now it is time to configure site details for your install through the form shown below.

Site name: (this is what the name of your site will be on your website, this can be changed later)

Site e-mail address:(email address you wish to use configure to be used for your site. It would follow the format example@domain.ca)

Username: (the username you want to use to login to your drupal site. Make sure you don't forget this username)


Email: (your email)

Password: (the password you want to use to login to your drupal site. Make sure you don't forget this password)

Confirm Password: (reenter password)

Default country: (your country)

Default time zone: (set your time zone)



- ✓ Choose profile
- ✓ Choose language
- ✓ Verify requirements
- ✓ Set up database
- ✓ Install profile
- **Configure site**
- Finished

SITE INFORMATION

Site name *
172.16.144.74

Site e-mail address *
email@email.ca

Automated e-mails, such as registration information, will be sent from this address. Use an address ending in your site's domain to help prevent these e-mails from being flagged as spam.

SITE MAINTENANCE ACCOUNT

Username *
paulmcnutt

Spaces are allowed; punctuation is not allowed except for periods, hyphens, and underscores.

E-mail address *
email@email.ca

Password *
[masked]

Password strength: **Strong**

Confirm password *
[masked]

Passwords match: yes

To make your password stronger:

- Add punctuation

SERVER SETTINGS

Default country
Canada

Select the default country for the site.

Default time zone

At the bottom of the screen click “Save and continue”

▸ **Configure site**
Finished

Username *
paulmcnutt

Spaces are allowed; punctuation is not allowed except for periods, hyphens, and underscores.

E-mail address *
email@email.ca

Password *
[masked]

Password strength: **Strong**

Confirm password *
[masked]

Passwords match: yes

To make your password stronger:

- Add punctuation

SERVER SETTINGS

Default country
Canada

Select the default country for the site.

Default time zone
America/New York: Thursday, November 21, 2013 - 09:30 -0500

By default, dates in this site will be displayed in the chosen time zone.

UPDATE NOTIFICATIONS

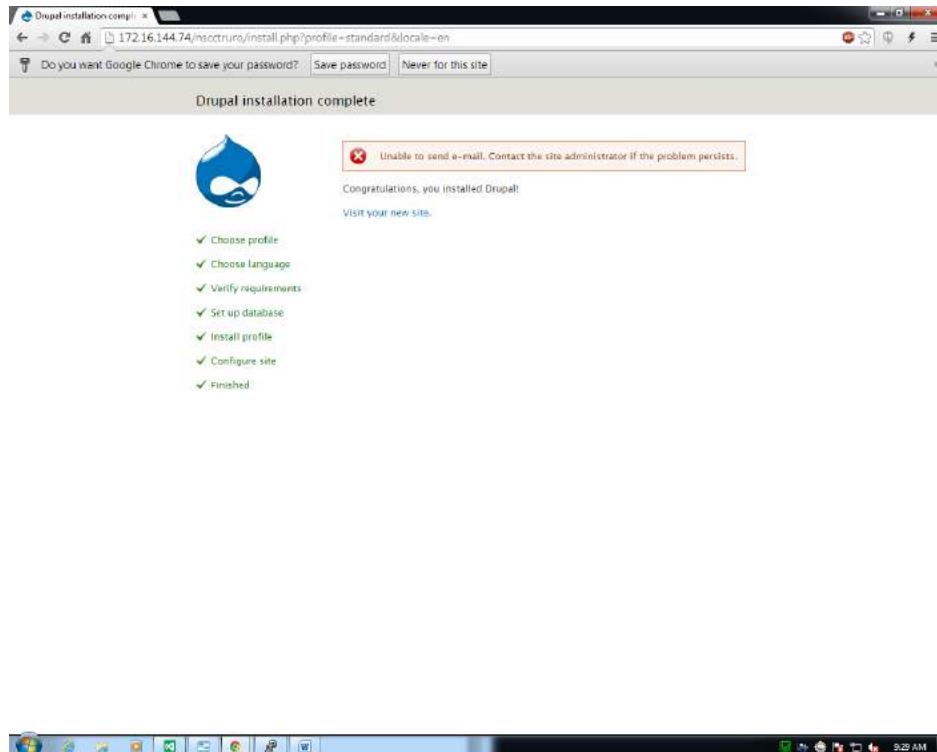
☒ Check for updates automatically

☒ Receive e-mail notifications

The system will notify you when updates and important security releases are available for installed components. Anonymous information about your site is sent to Drupal.org.

Save and continue

You will get an error message saying “Unable to send e-mail....” Which you can just ignore and click “Visit your new site.”



Troubleshooting Drupal Setup in Web Browser:

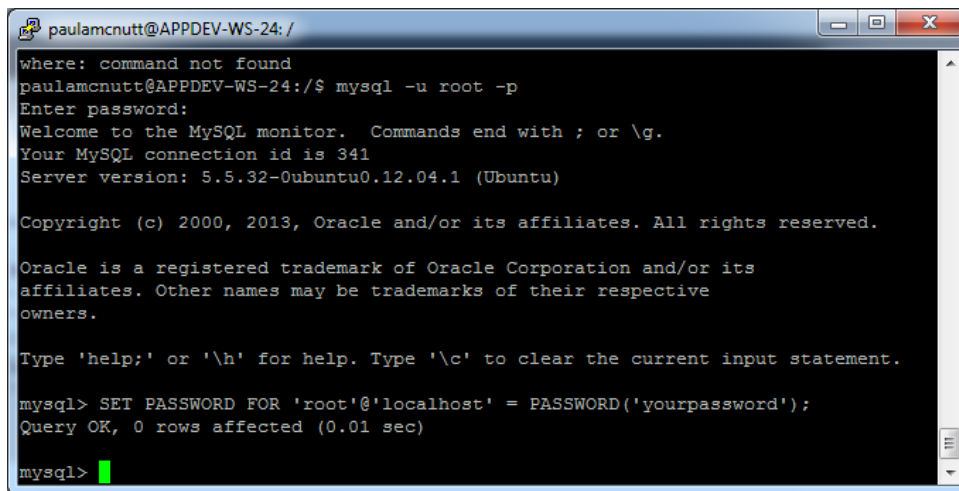
If you are having any difficulty with accessing your mysql at any time, or if you are finding it hard to remember your password you can reset your password by running the following command where root is the username:

(In the commands below 'root' is the username and 'yourpassword' is the desired password)

```
mysql -u root -p
```

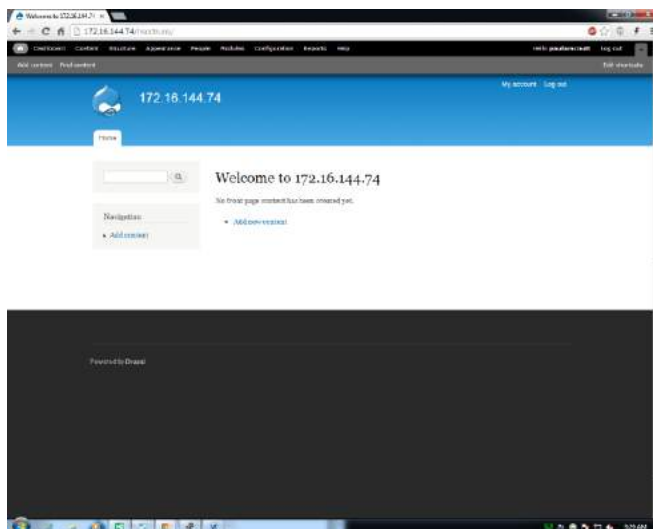
```
SET PASSWORD FOR 'root'@'localhost' = PASSWORD('yourpassword');
```

This is good for if you have been playing guessing games with your mysql password and just need to set the password to something you can remember. Also if you have never set a password for a specific username like root you can also utilize these commands to set an initial password for the username.

A terminal window titled 'paulamcnutt@APPDEV-WS-24: /' showing the execution of the MySQL command. The prompt 'where: command not found' is visible. The user enters 'mysql -u root -p' and is prompted for a password. After entering the password, the MySQL monitor welcome message is displayed, including the connection ID (341) and server version (5.5.32-0ubuntu0.12.04.1). The user then enters the command 'SET PASSWORD FOR 'root'@'localhost' = PASSWORD('yourpassword');' and receives the response 'Query OK, 0 rows affected (0.01 sec)'. The prompt returns to 'mysql>'.

```
paulamcnutt@APPDEV-WS-24: /  
where: command not found  
paulamcnutt@APPDEV-WS-24:/$ mysql -u root -p  
Enter password:  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 341  
Server version: 5.5.32-0ubuntu0.12.04.1 (Ubuntu)  
  
Copyright (c) 2000, 2013, Oracle and/or its affiliates. All rights reserved.  
  
Oracle is a registered trademark of Oracle Corporation and/or its  
affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
mysql> SET PASSWORD FOR 'root'@'localhost' = PASSWORD('yourpassword');  
Query OK, 0 rows affected (0.01 sec)  
mysql>
```

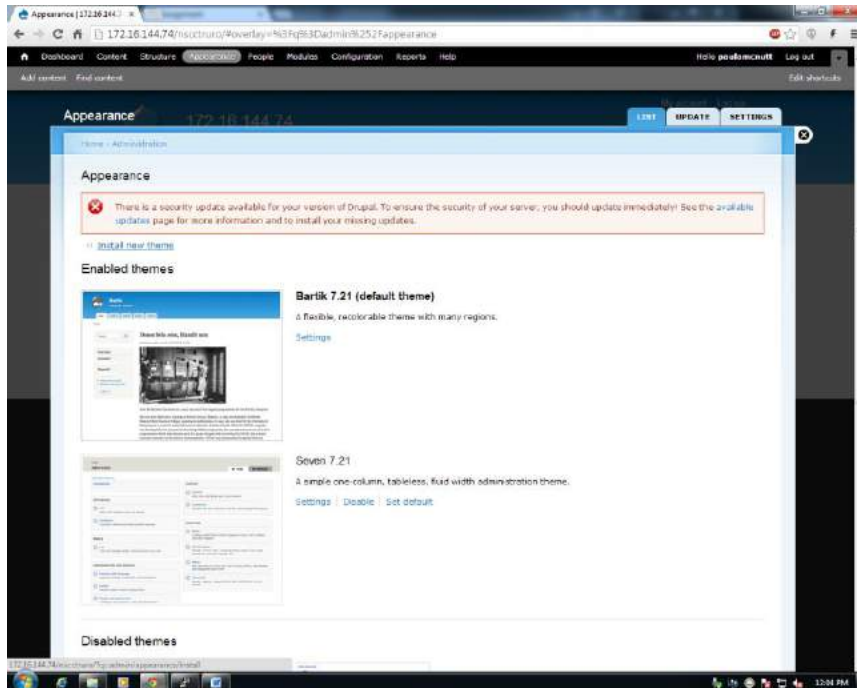
Now you have your site ready to setup.



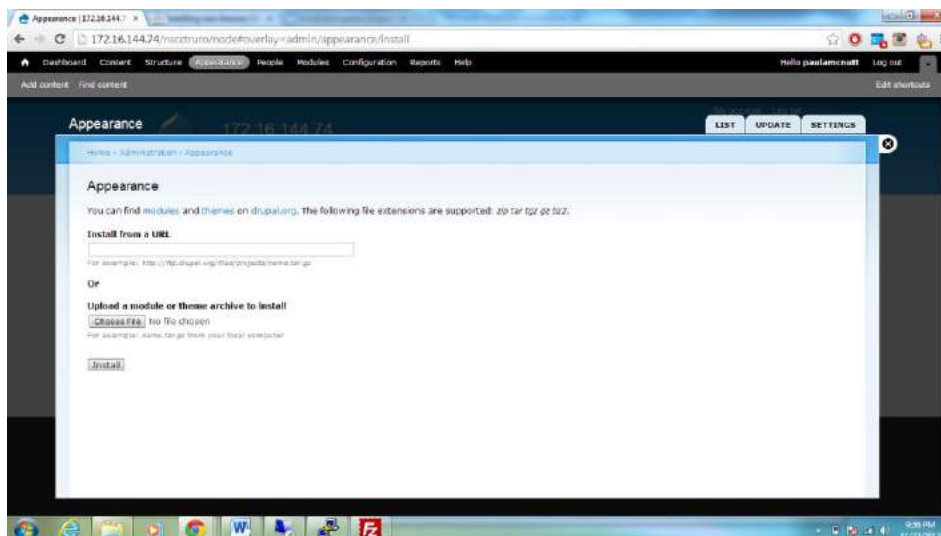
Setting a Different Drupal Theme

To change theme click on “Appearance” on the top toolbar

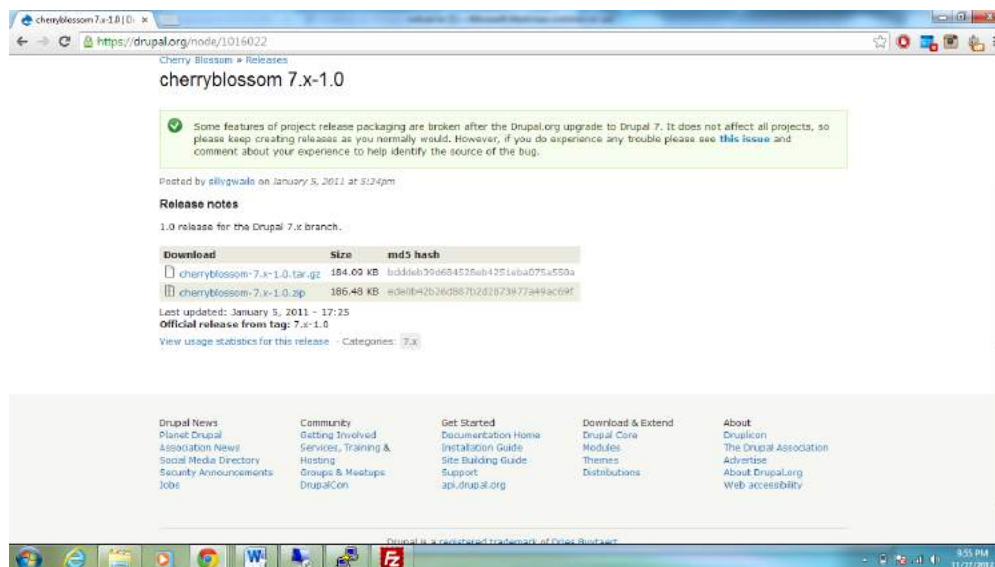
Then click “Install New Theme”



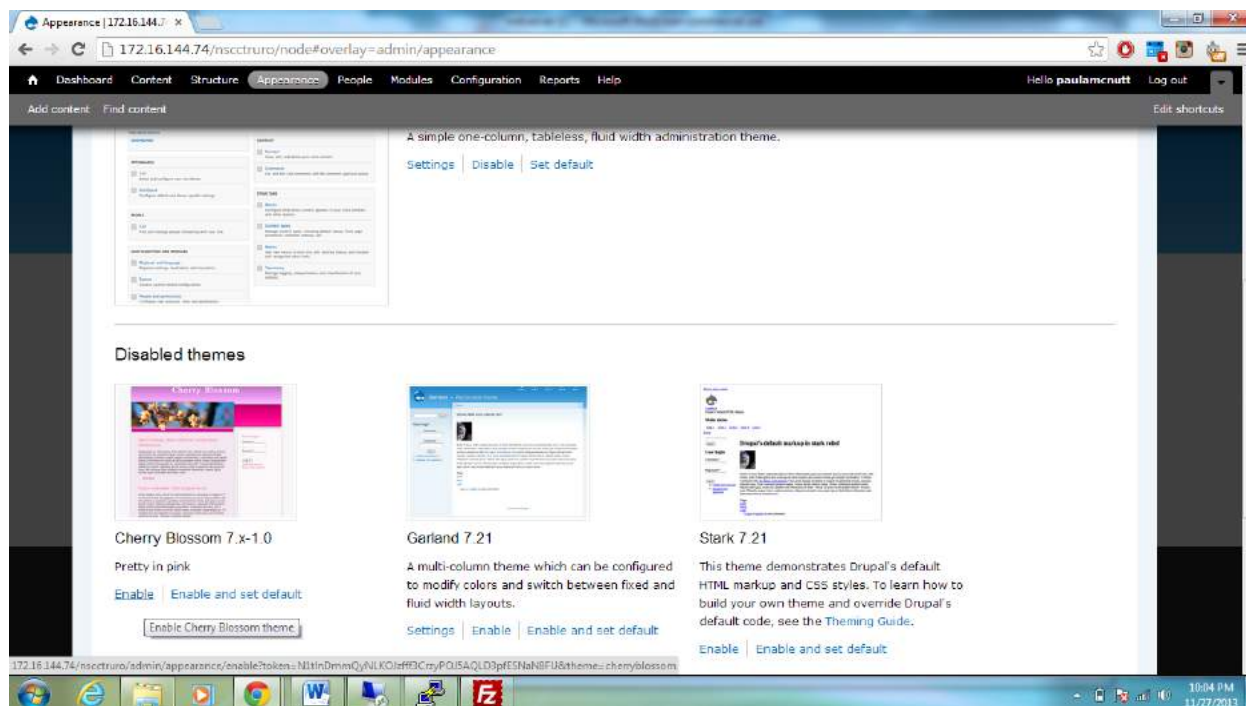
For this example I am using a theme called CherryBlossum which I found by browsing themes online. Unlike Wordpress Drupal needs you to either insert a URL ending with “tar.gz” or download a file and upload it with that extension. Make sure whatever theme you choose is compatible with your version of drupal (in this example Drupal7)



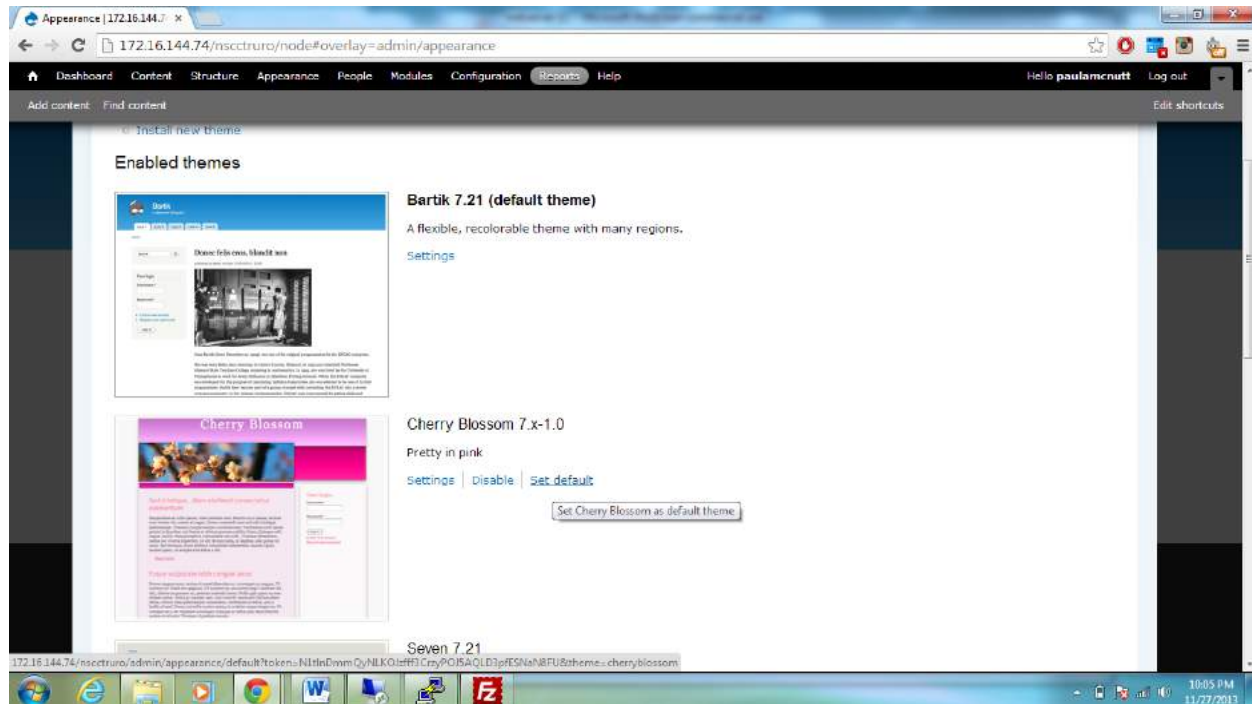
Here is a screenshot below showing a standard theme download page. I clicked on “cherryblossom-7.x-1.0.tar.gz” to download the theme. Then I uploaded it on the screen shown above and clicked “Install”.



Now that the theme is installed you must go back to your themes and click “Enable” to enable the theme.

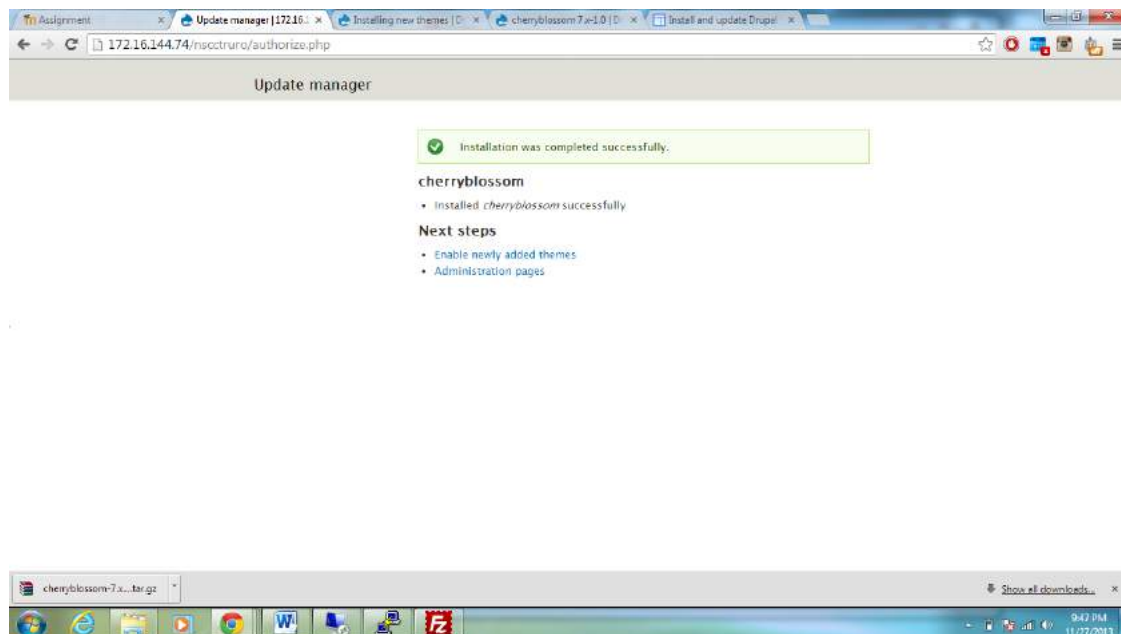


Now click “Set Default”



Troubleshooting Installation of Drupal Themes and Modules: If you receive a message requesting FTP login information for your server you can run the following command on your linux server which will make it so that ftp login isn't required y granting the proper permissions for adding themes or modules:

```
sudo chown -R www-data:www-data /var/www
```



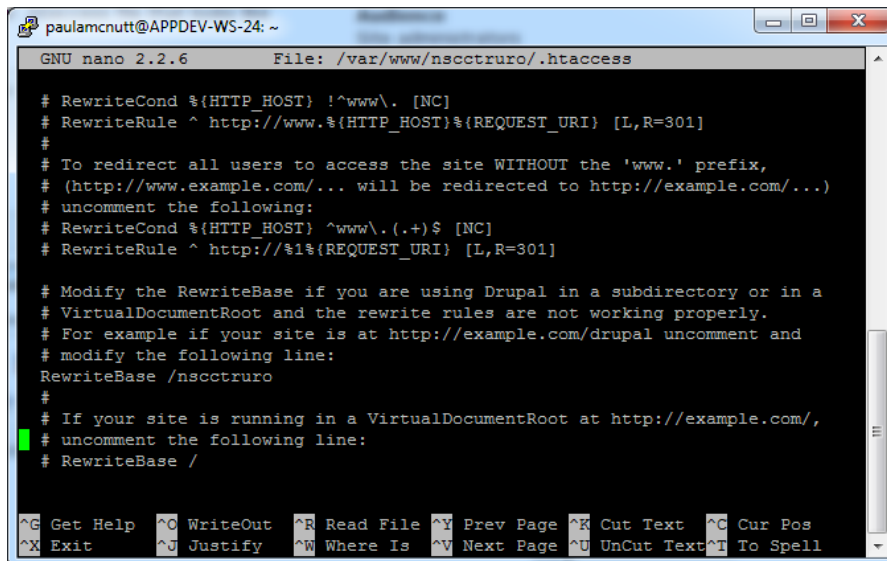
Enable Clean Drupal URLs

At the command prompt type in the following line (where nscctruro would be the directory for installation your Drupal installation):

```
sudo nano /var/www/nscctruro/.htaccess
```

In the text editor uncomment the line “RewriteBase /drupal” by removing the “#” sign.

Then change the word “drupal” to the name of the directory where you installed Drupal (in my case “nscctruro”). If you can’t find this line you can leave everything the way it is and just type it in without uncommenting anything.



The screenshot shows a terminal window with the title bar "paulamcnett@APPDEV-WS-24: ~". The window contains the GNU nano 2.2.6 text editor editing the file "/var/www/nscctruro/.htaccess". The editor's content is as follows:

```
# RewriteCond %{HTTP_HOST} !^www\. [NC]
# RewriteRule ^ http://www.%{HTTP_HOST}%{REQUEST_URI} [L,R=301]
#
# To redirect all users to access the site WITHOUT the 'www.' prefix,
# (http://www.example.com/... will be redirected to http://example.com/...)
# uncomment the following:
# RewriteCond %{HTTP_HOST} ^www\.(.+)$ [NC]
# RewriteRule ^ http://%1%{REQUEST_URI} [L,R=301]

# Modify the RewriteBase if you are using Drupal in a subdirectory or in a
# VirtualDocumentRoot and the rewrite rules are not working properly.
# For example if your site is at http://example.com/drupal uncomment and
# modify the following line:
RewriteBase /nscctruro
#
# If your site is running in a VirtualDocumentRoot at http://example.com/,
# uncomment the following line:
# RewriteBase /
```

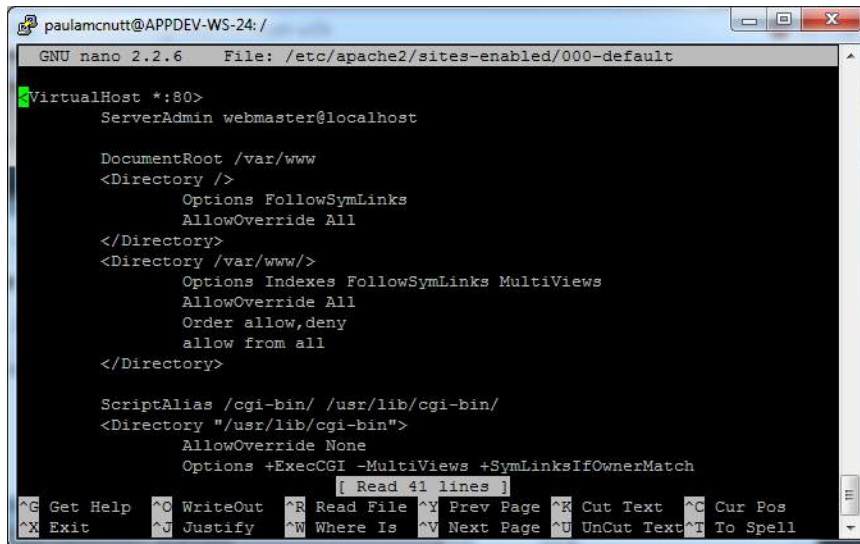
The bottom of the window shows the nano editor's command shortcuts: ^G Get Help, ^O WriteOut, ^R Read File, ^Y Prev Page, ^K Cut Text, ^C Cur Pos, ^X Exit, ^J Justify, ^W Where Is, ^V Next Page, ^U UnCut Text, ^T To Spell.

Press Ctrl + X, then press Y, and then Enter, to save your changes.

Now run the command: `sudo nano /etc/apache2/sites-enabled/000-default`

Then enter your root password.

This opens the text editor. Change all instances of “AllowOverride None” to “AllowOverride All” (as shown below).



```
GNU nano 2.2.6 File: /etc/apache2/sites-enabled/000-default

VirtualHost *:80>
  ServerAdmin webmaster@localhost

  DocumentRoot /var/www
  <Directory />
    Options FollowSymLinks
    AllowOverride All
  </Directory>
  <Directory /var/www/>
    Options Indexes FollowSymLinks MultiViews
    AllowOverride All
    Order allow,deny
    allow from all
  </Directory>

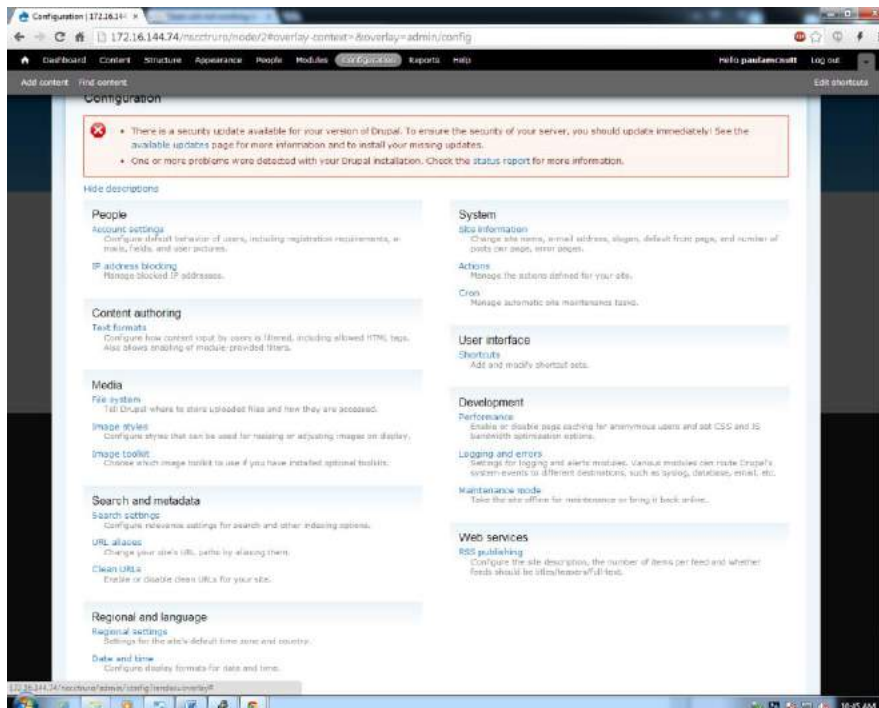
  ScriptAlias /cgi-bin/ /usr/lib/cgi-bin/
  <Directory "/usr/lib/cgi-bin">
    AllowOverride None
    Options +ExecCGI -MultiViews +SymLinksIfOwnerMatch
  </Directory>

[ Read 41 lines ]

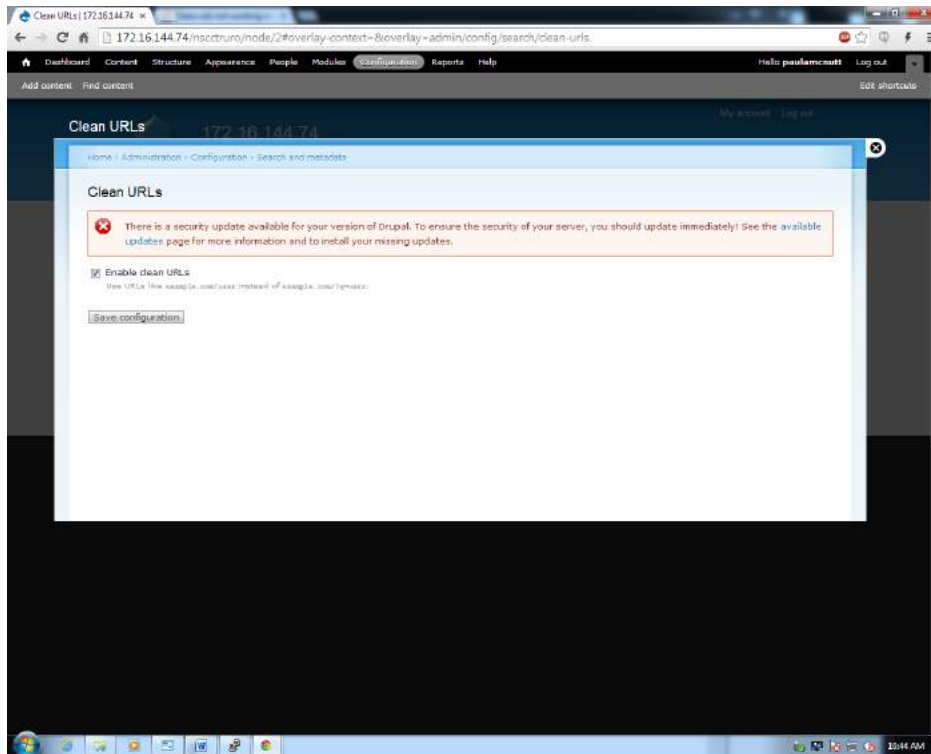
^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page  ^K Cut Text   ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page  ^U UnCut Text ^T To Spell
```

Press Ctrl + X, then press Y, and then Enter, to save your changes.

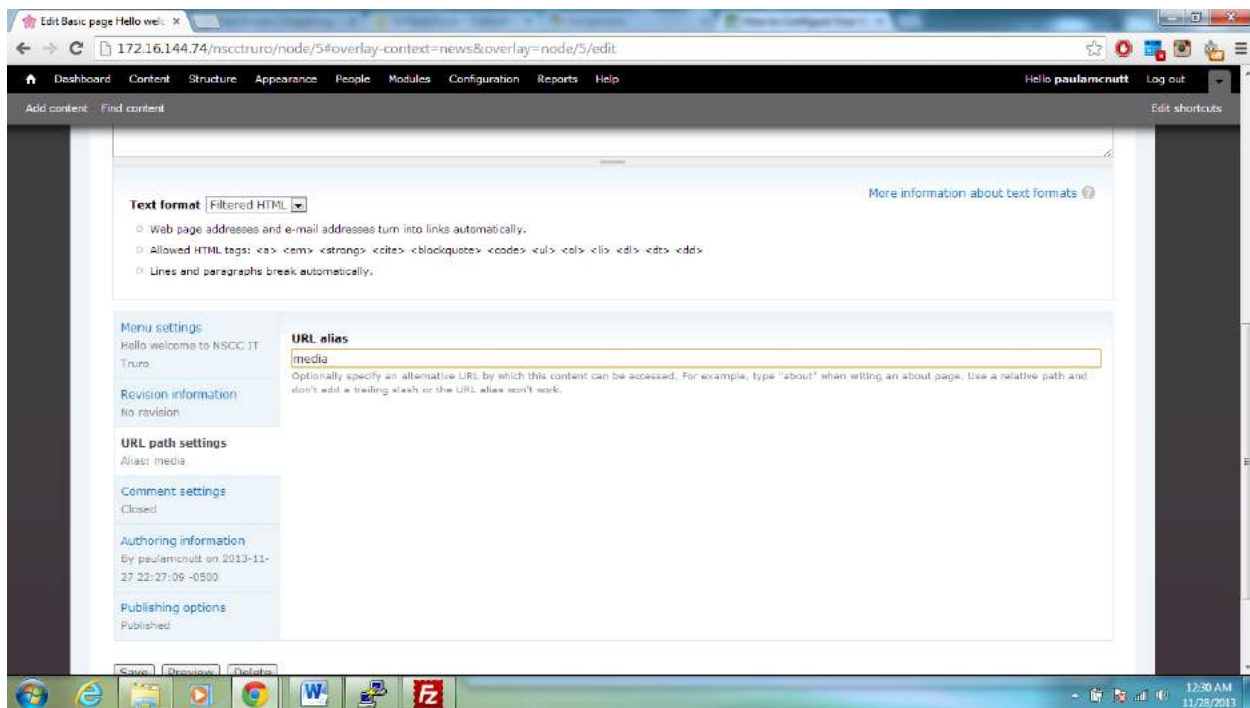
Return back to your site in your browser and click on Configuration in the top menu bar and then under the heading “Search and metadata” click “Clean URLs”.



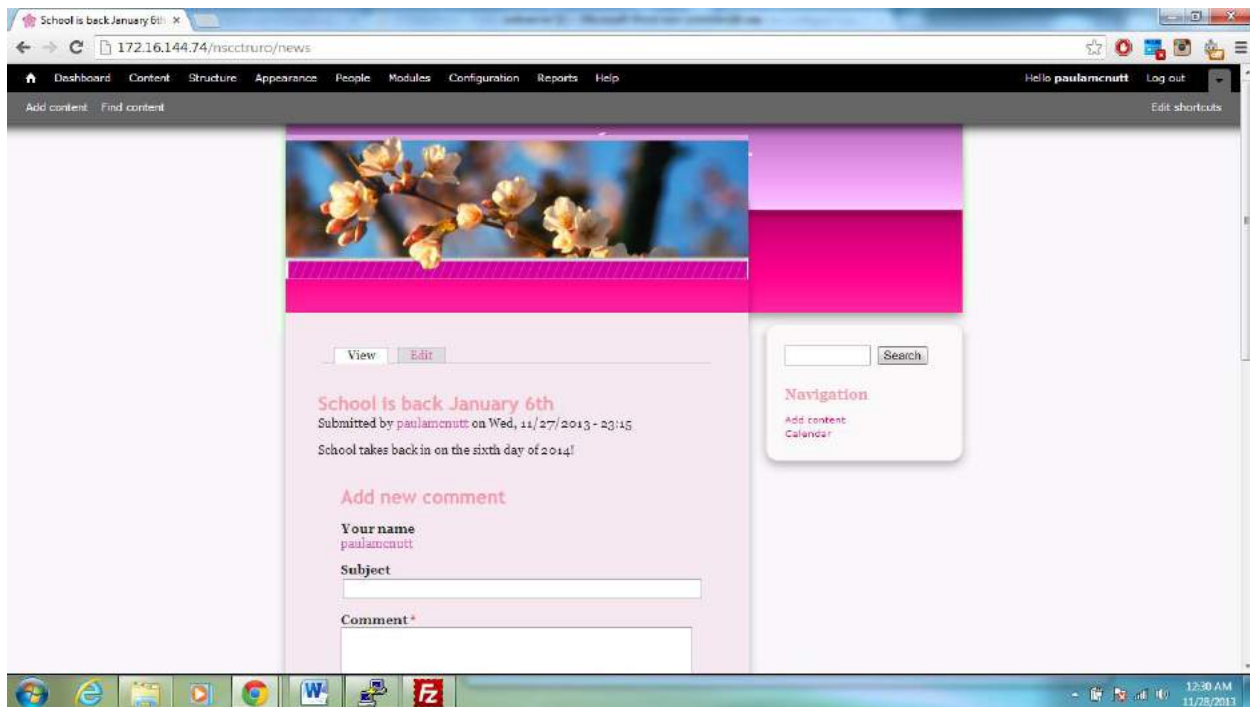
Check off the box to “Enable Clean URLs” (as shown below).



Now you can set your URL aliases manually at the bottom of each page when you create it or edit it, as shown below:

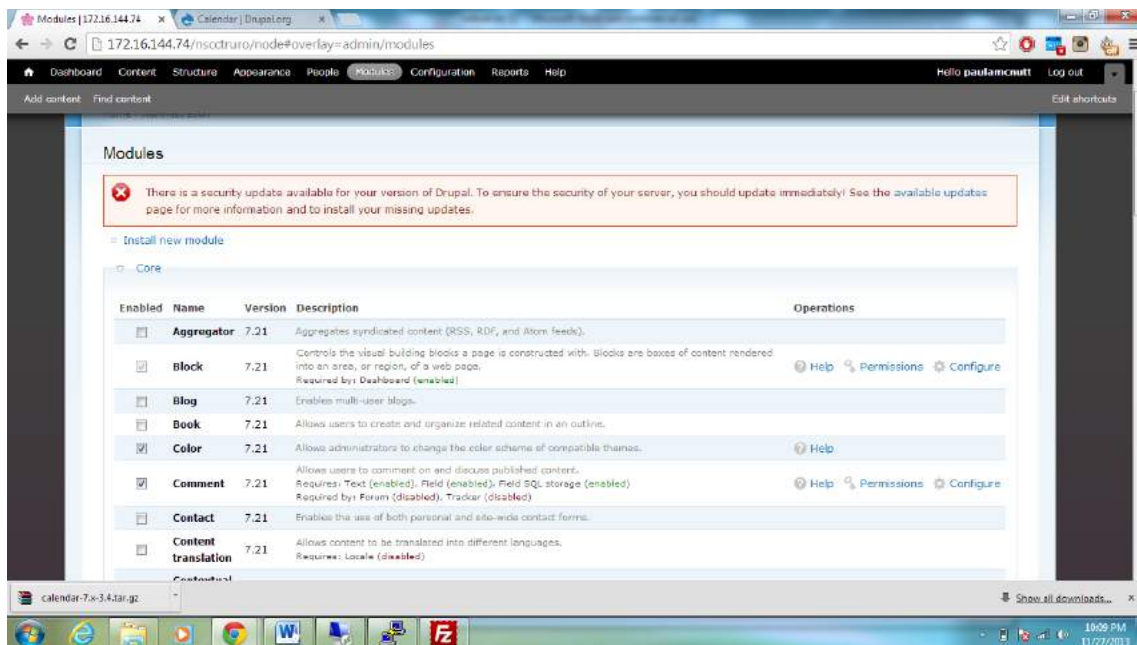


Now the URLs for your site are clean!

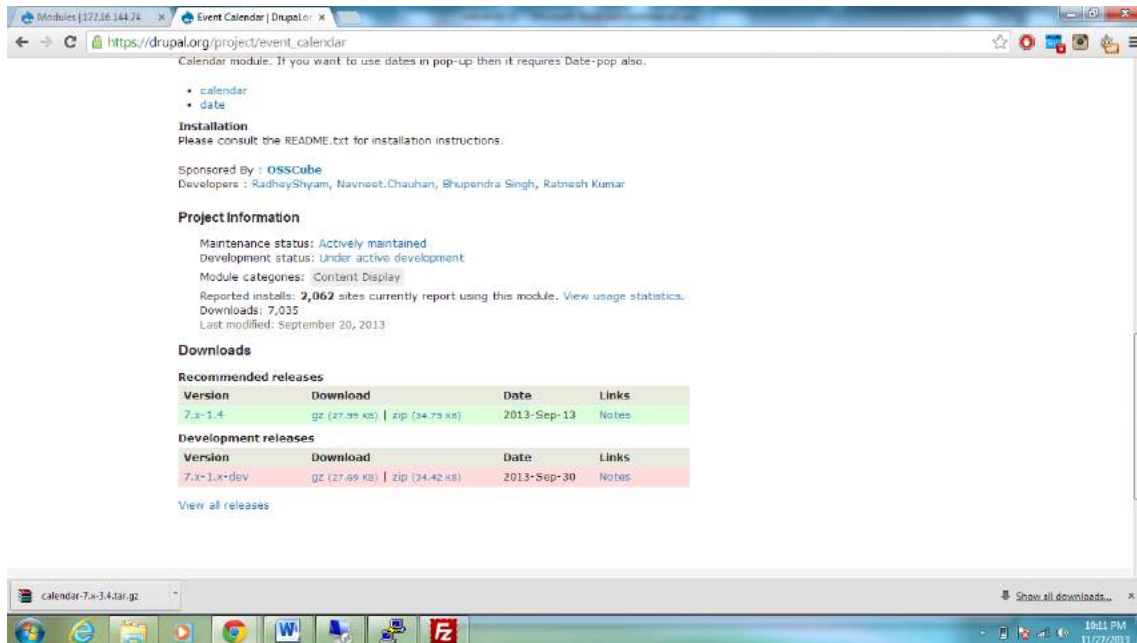


Adding Full Page Calendar to Drupal:

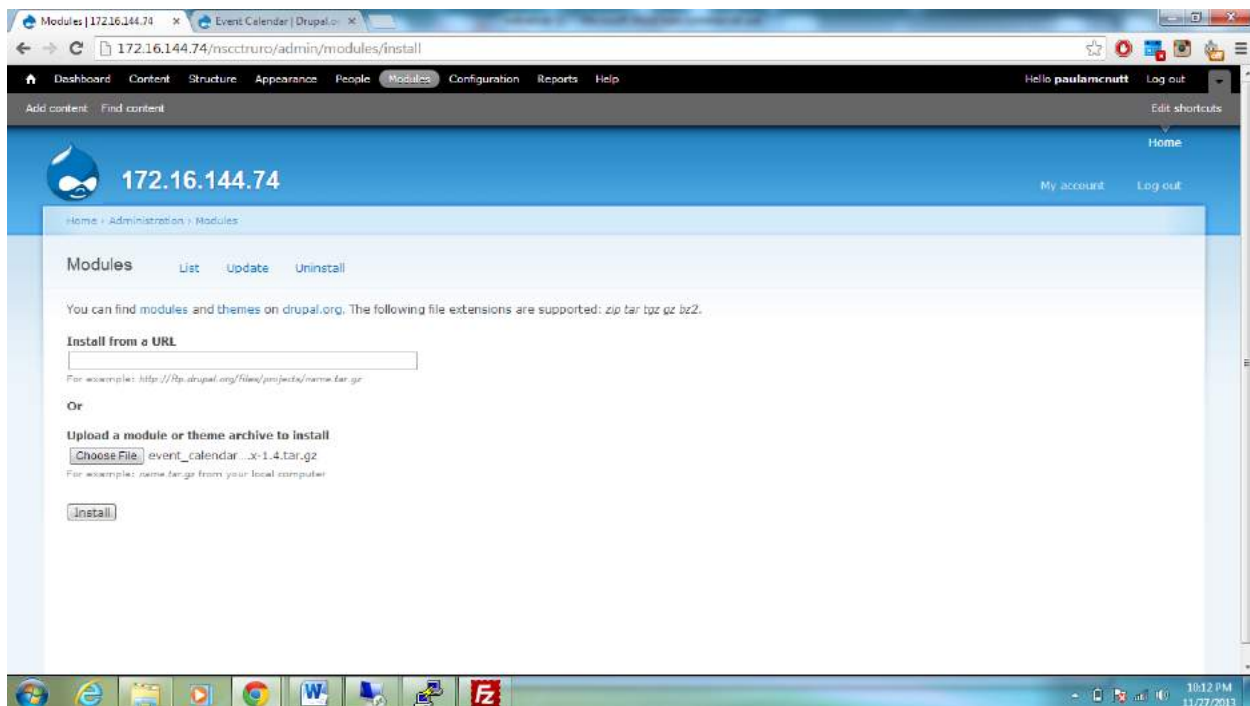
Click to “Modules” on the top menu and then click on “Install New Module”



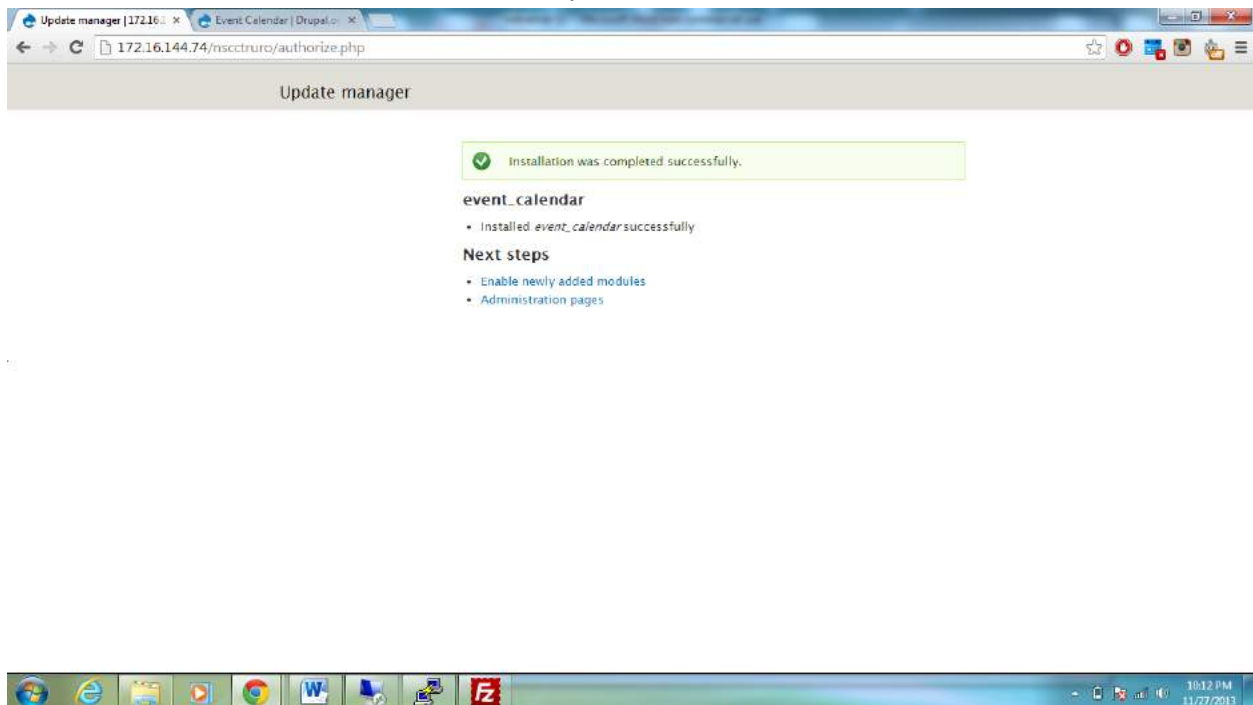
Find the module you want to install in a separate tab and download the module from this page. Download the file with the .gz extension as you would when installing a theme on drupal. Also make note in the module description of any required dependencies for the module because they will also have to be installed using this process.



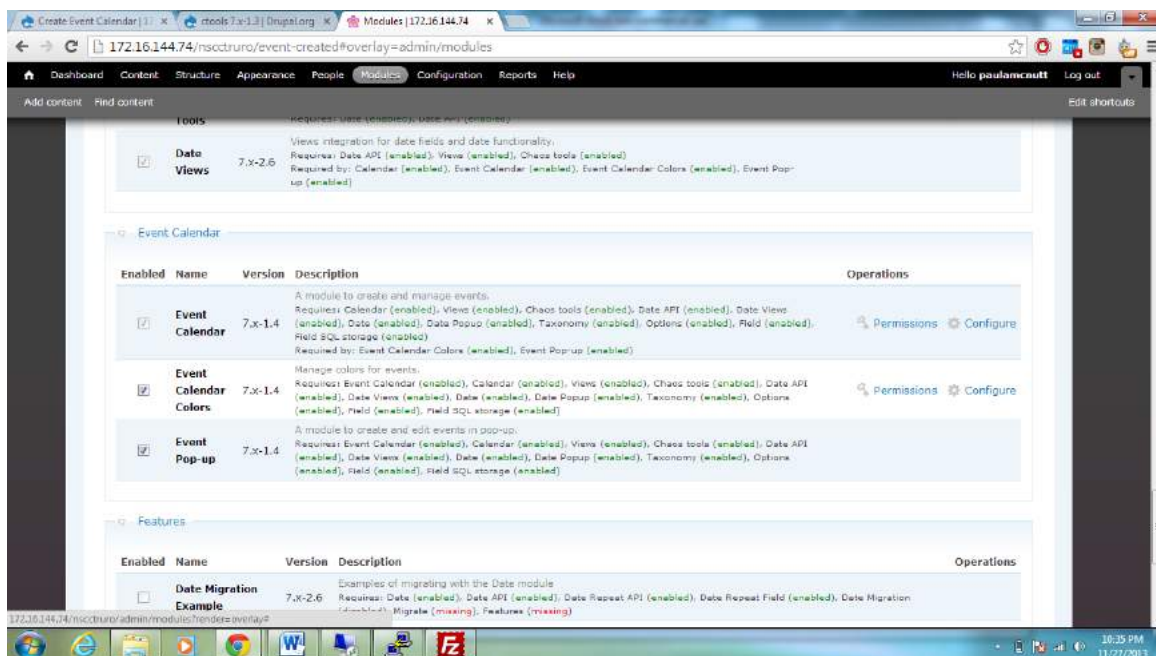
Upload the module by clicking “Choose File” and selecting the module you want to install, then clicking “Install”



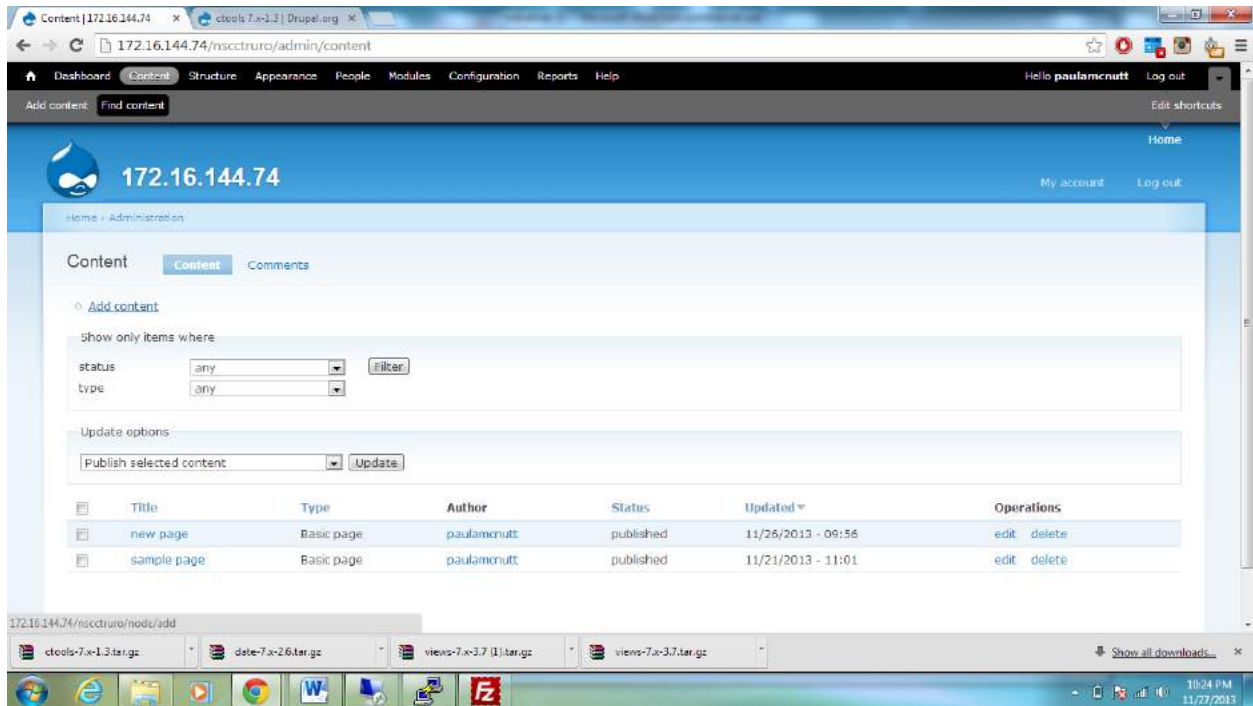
Once the module is installed click “Enable newly added modules”



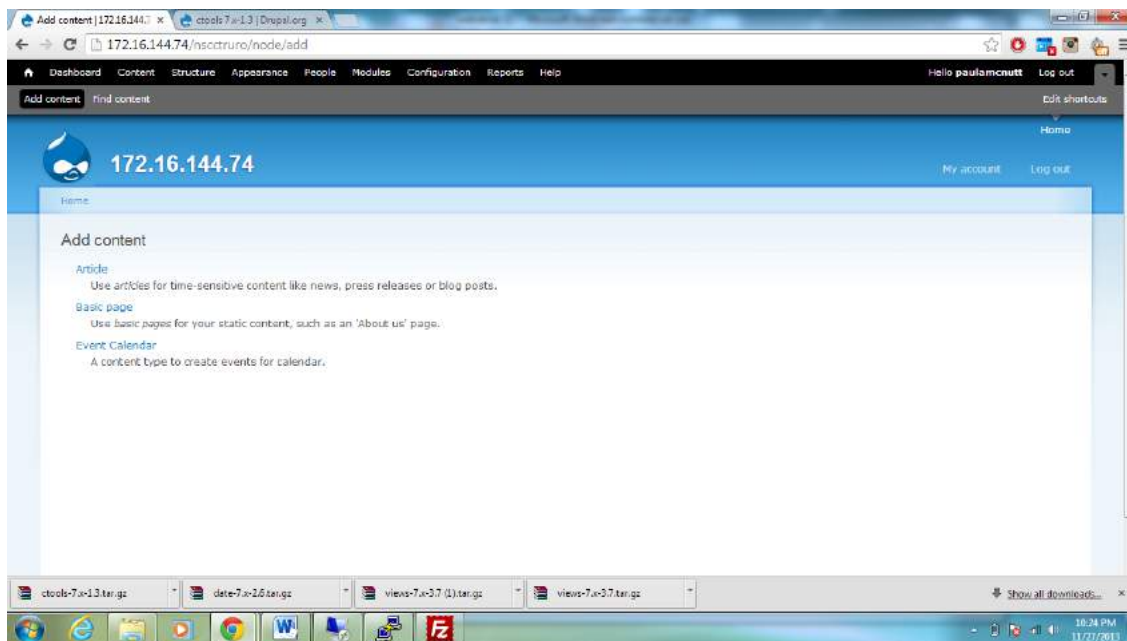
If under Modules you are seeing the word “Disabled” by your newly added module instead of “Enabled” as shown below then visit the [troubleshooting modules not enabling](#) section below.



Now to add events to your calendar click on “Content” on the top menu.



Then click on “Event Calendar”



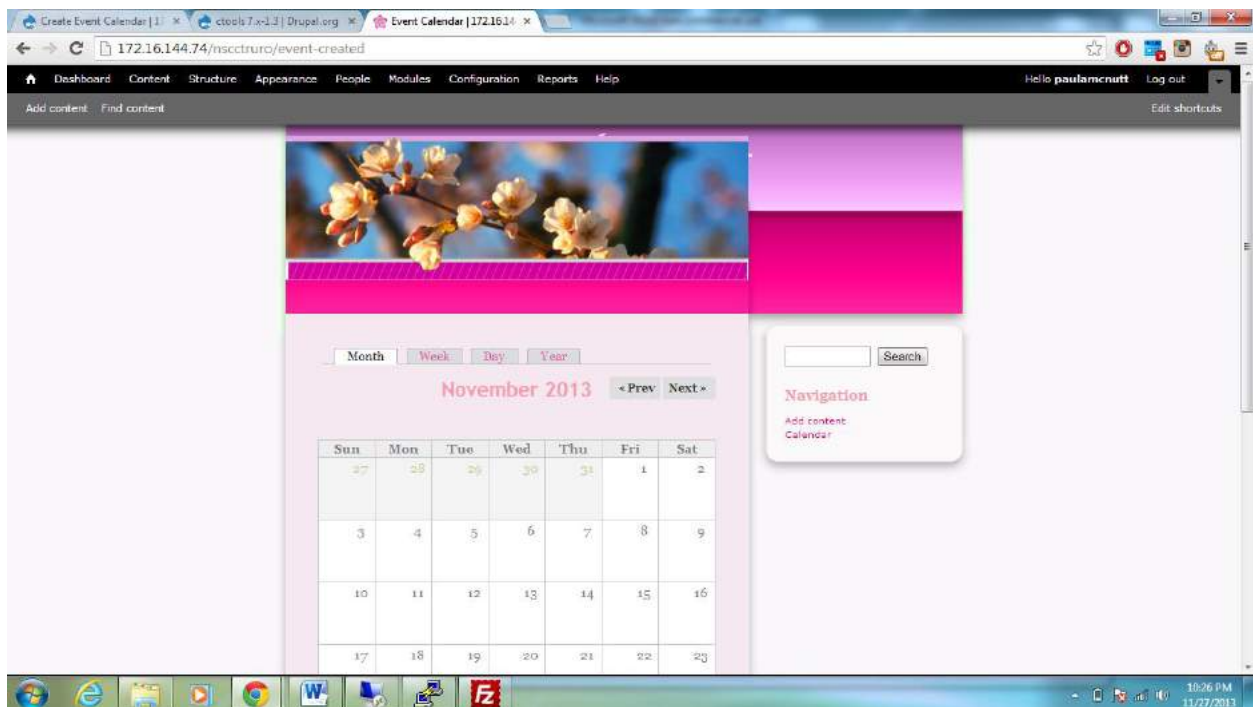
Now you can set events by specifying titles, dates and time, and optionally a description.

The screenshot shows the 'Add Event Calendar' form in a Drupal 7.x environment. The browser address bar shows the URL '172.16.144.74/nscctruro/node/add/event-calendar'. The Drupal navigation menu is visible at the top, and a success message states 'Event Calendar 7file has been created.' The form includes the following fields:

- Event Title ***: A text input field.
- Dates**: A section with the instruction 'Select the start and end dates for this event.' and a checked checkbox for 'Show End Date'.
- Date**: A text input field containing '11/27/2013'.
- Time**: A text input field containing '21:30'.
- Event Description**: A large text area for the event description.
- Menu settings**: A section with a checkbox for 'Provide a menu link'.

The bottom of the screen shows the Windows taskbar with various application icons and the system clock indicating 10:26 PM on 11/27/2013.

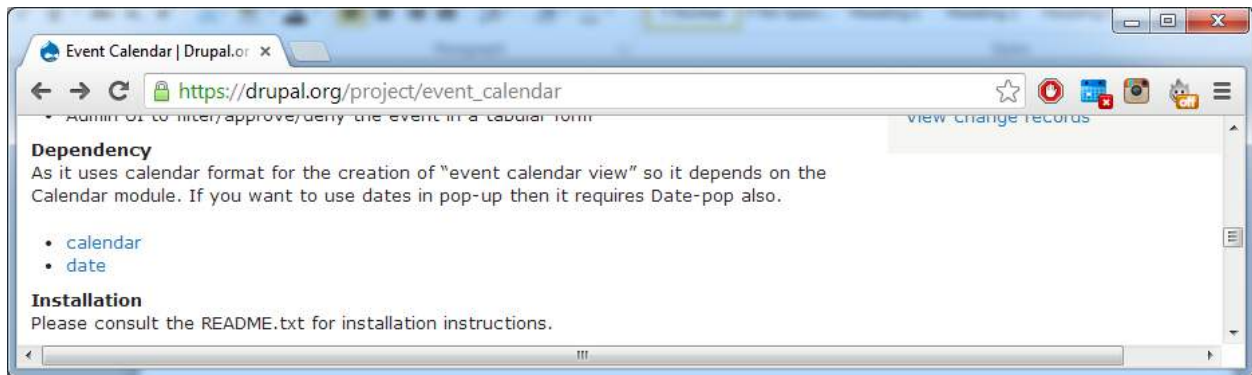
Now your events will be viewable as a full page on your site.



Troubleshooting Drupal Modules Not Enabling:

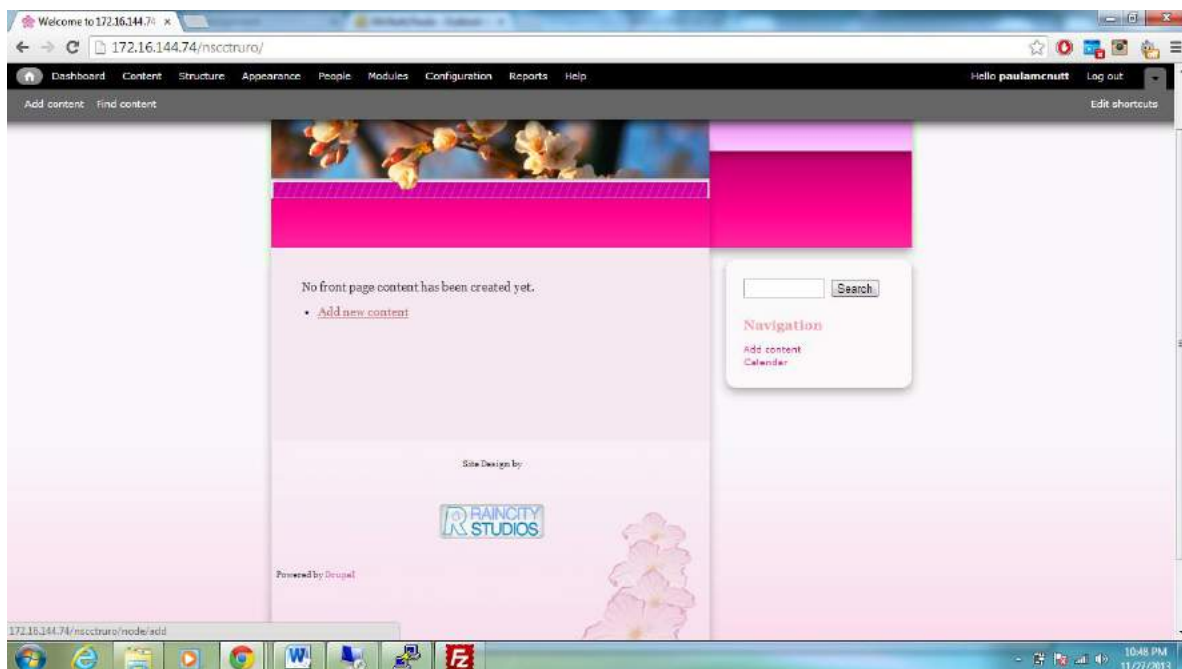
In the module information make note of any dependencies and make sure to install those modules as well as this one by going through this same process. Even your dependencies can have dependencies so just ensure that all of the dependencies listed for a module are installed prior to that module. And then once all dependencies are installed and enabled, you can install the module you are trying to activate. For this example I had to install the date api module as well as the views module and their corresponding dependencies.

Modules that require dependencies will have a section as shown below to indicate which other modules are required.

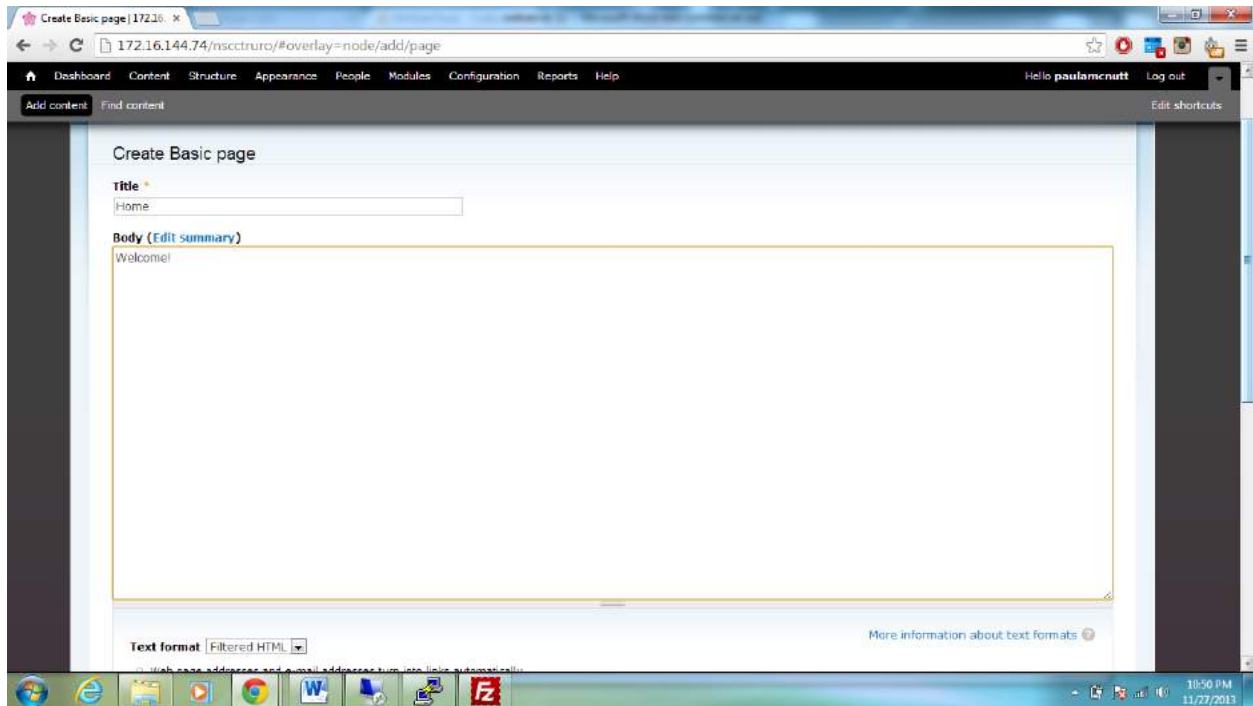


Creating a Home Page for a Drupal Site

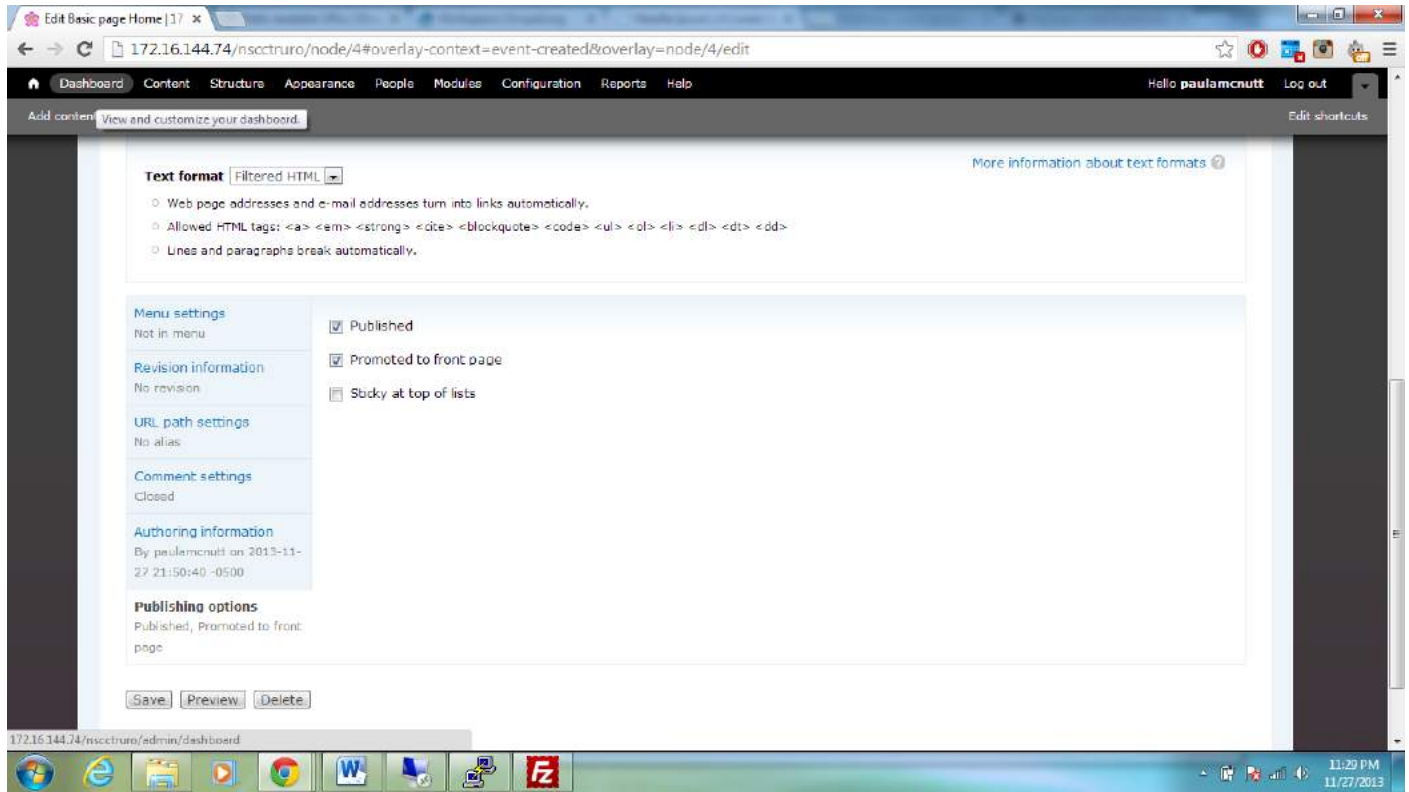
To create a homepage for a drupal site all you have to do is go to your landing page (base domain) and click on "Add New Content"



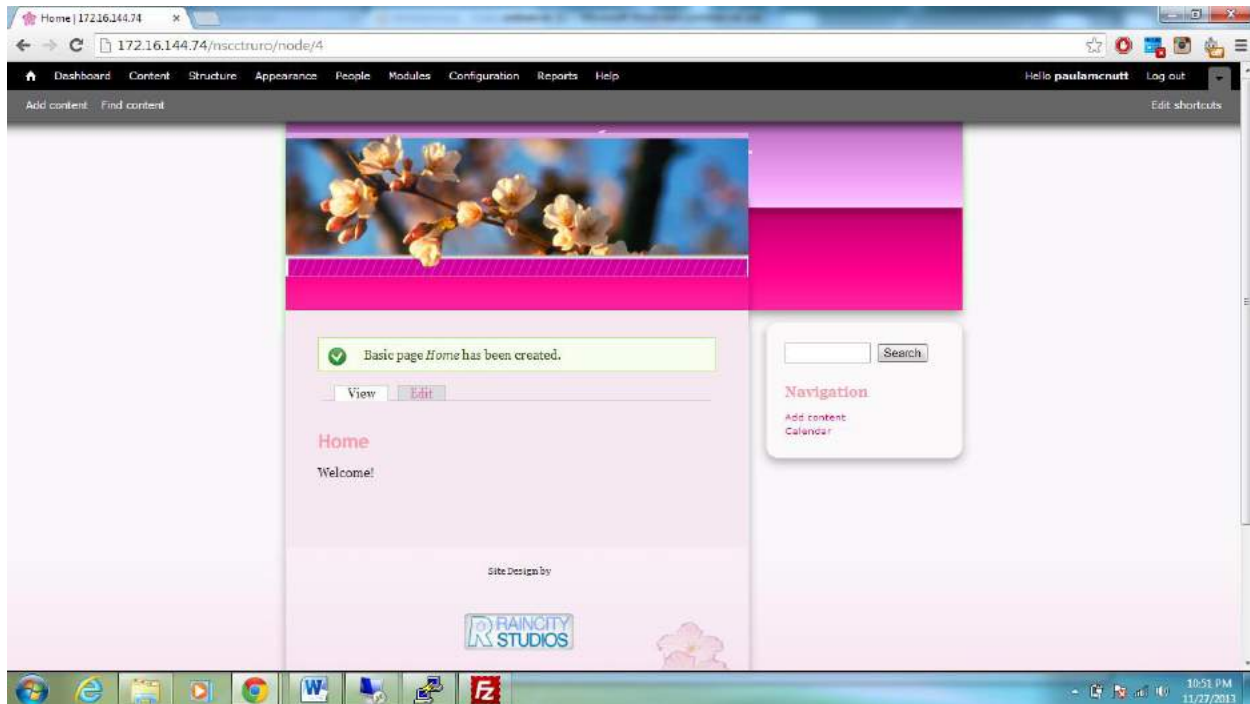
This will allow you to enter any information you want to be featured on the home page as shown below:



At the bottom of the screen select “Publishing Options” and check off “Promoted to front page”

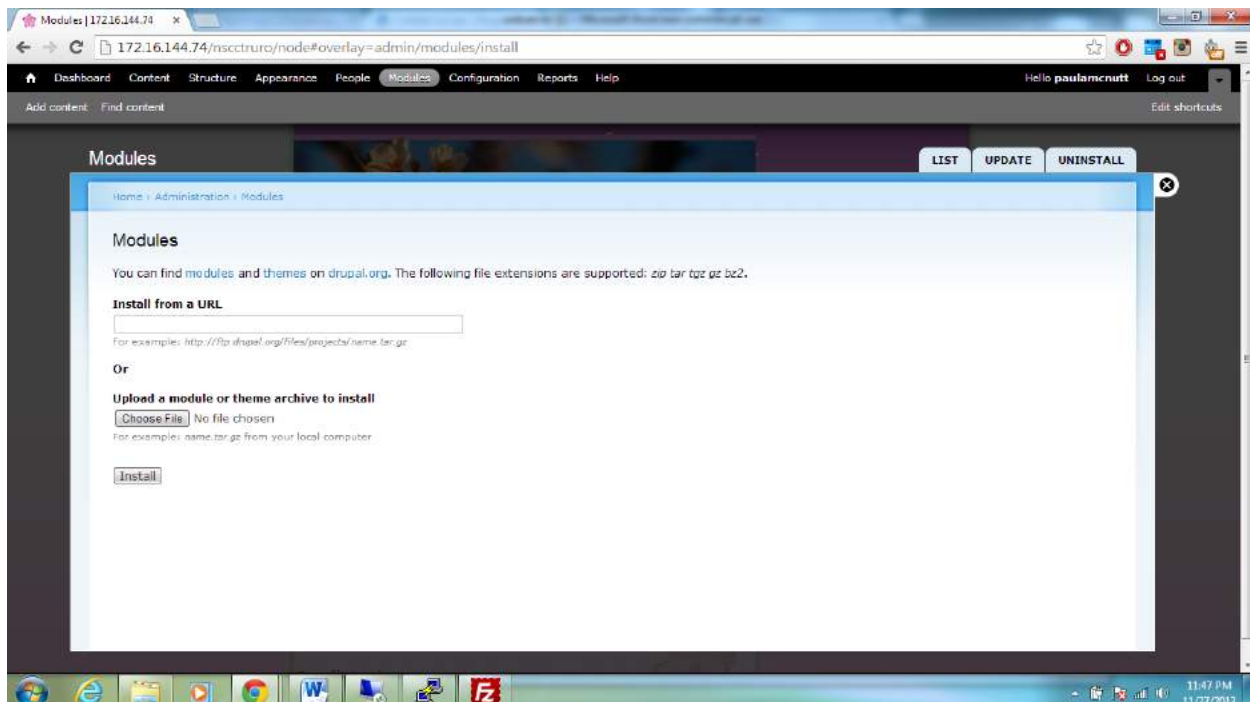


Once you save your changes your content will be displayed on the homepage as you set it to be in the previous step:



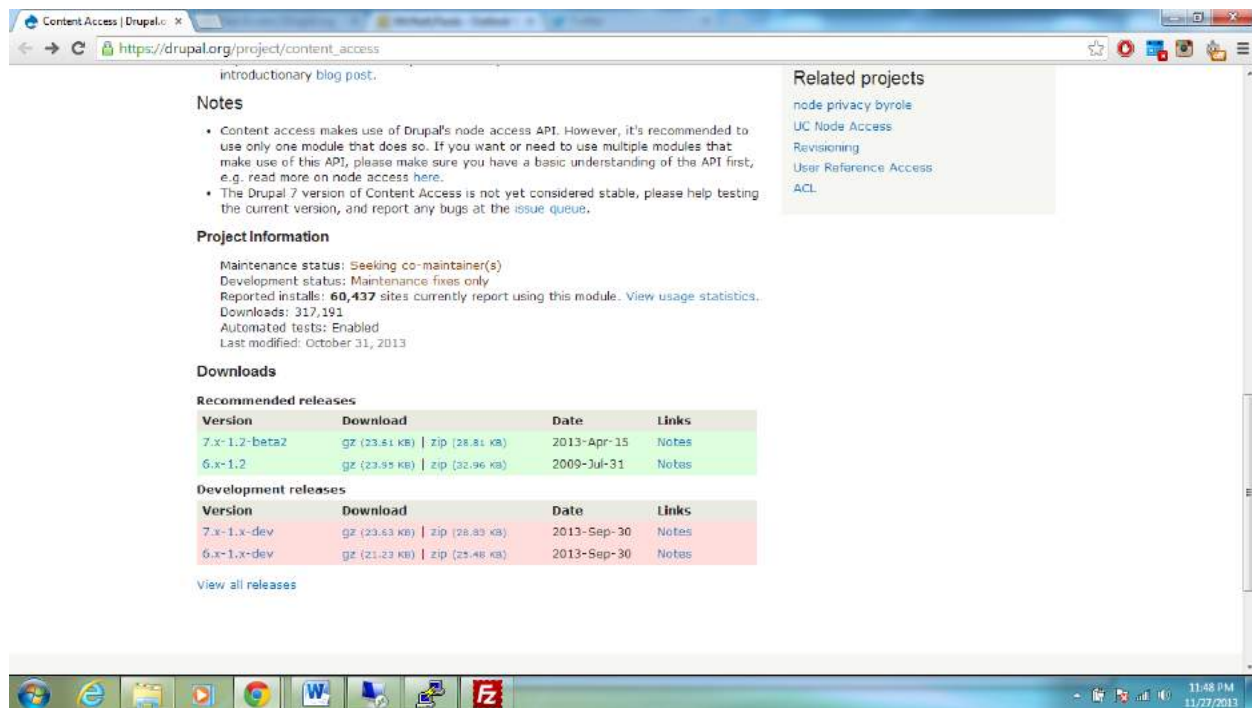
Setup Drupal Users with Customized Permissions

Click on Modules on the top menu bar and then select "Install New Module".

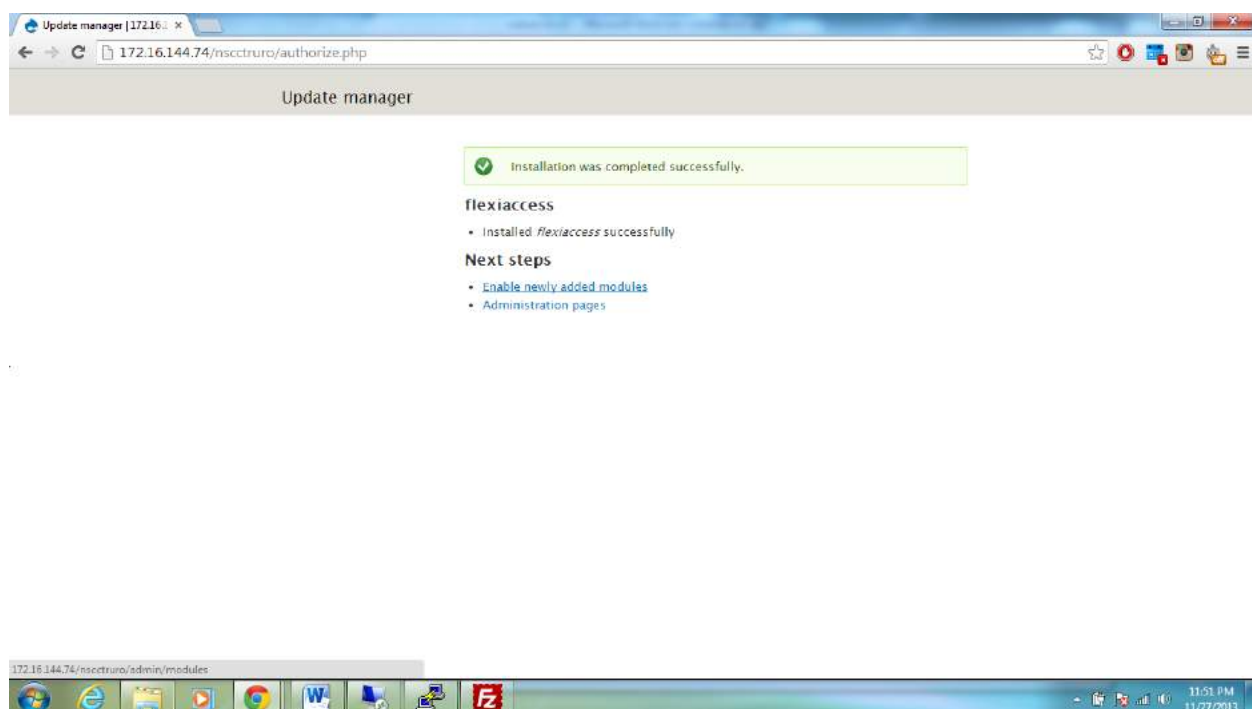


For this example I downloaded the Content Access module at:

https://drupal.org/project/content_access

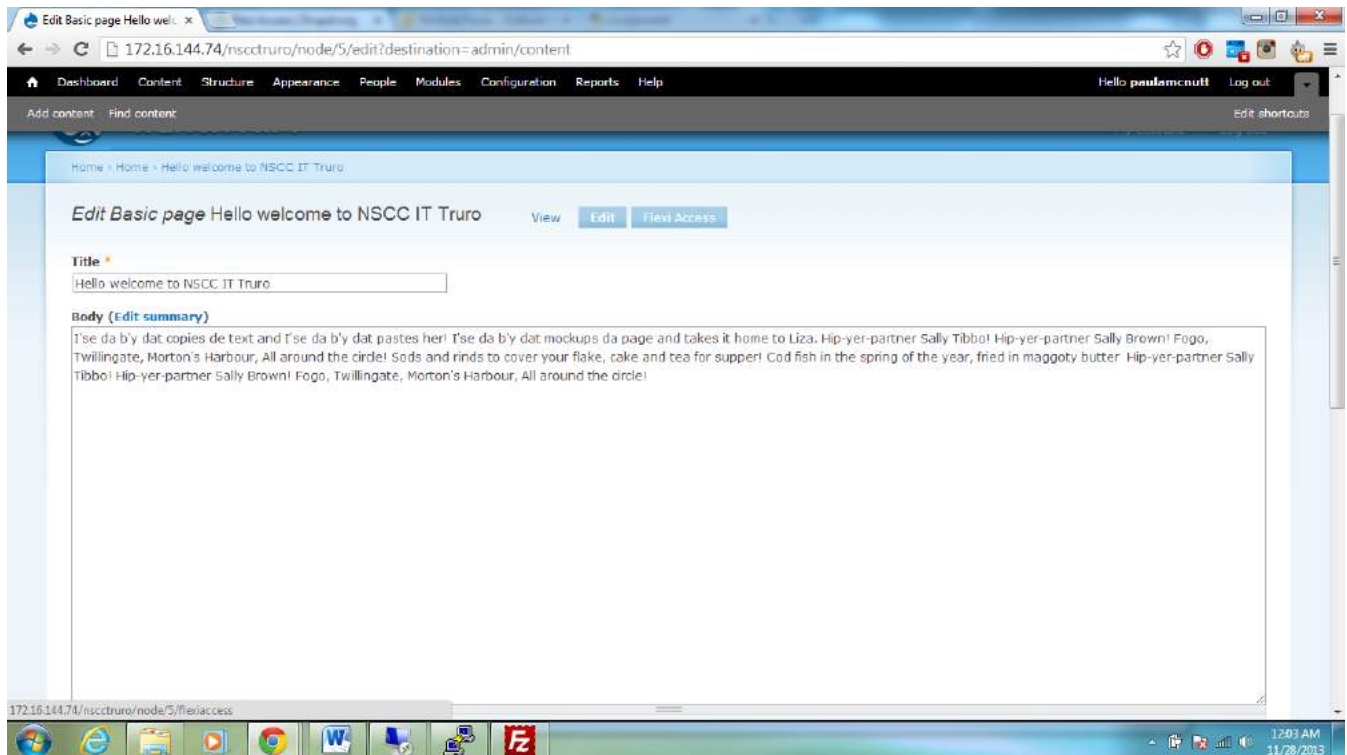


Click “Choose File” and upload the Content Access module and click “Install”. Once the module is installed click “Enabled newly added Modules”.

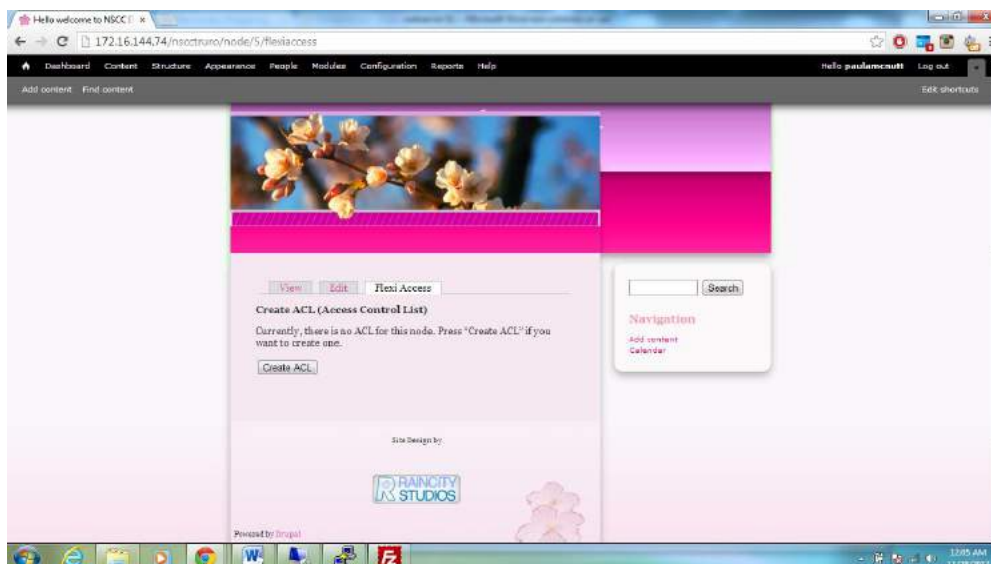


One of the dependencies of this module is ACL so that module also must be installed from: <https://drupal.org/node/1353266> through the same process. Once the dependency is installed make sure to manually enable both modules.

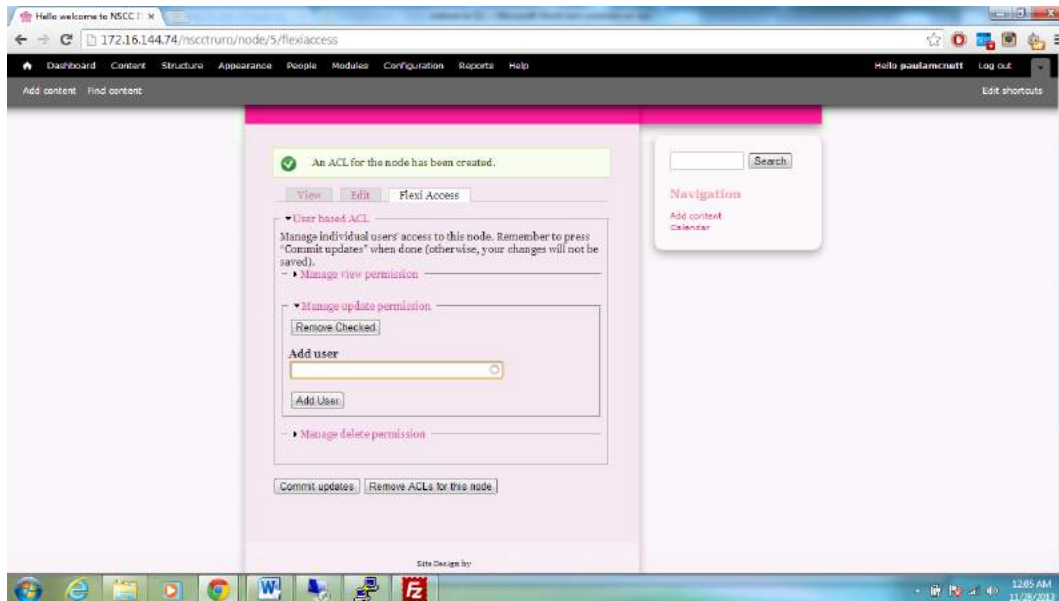
Once both modules are enabled click on configure next to Content Access Module and select “Basic Page”, now when you create/edit a page there will be a button that reads “Flexi Access” at the top. Click on this button.



Click “Create ACL”



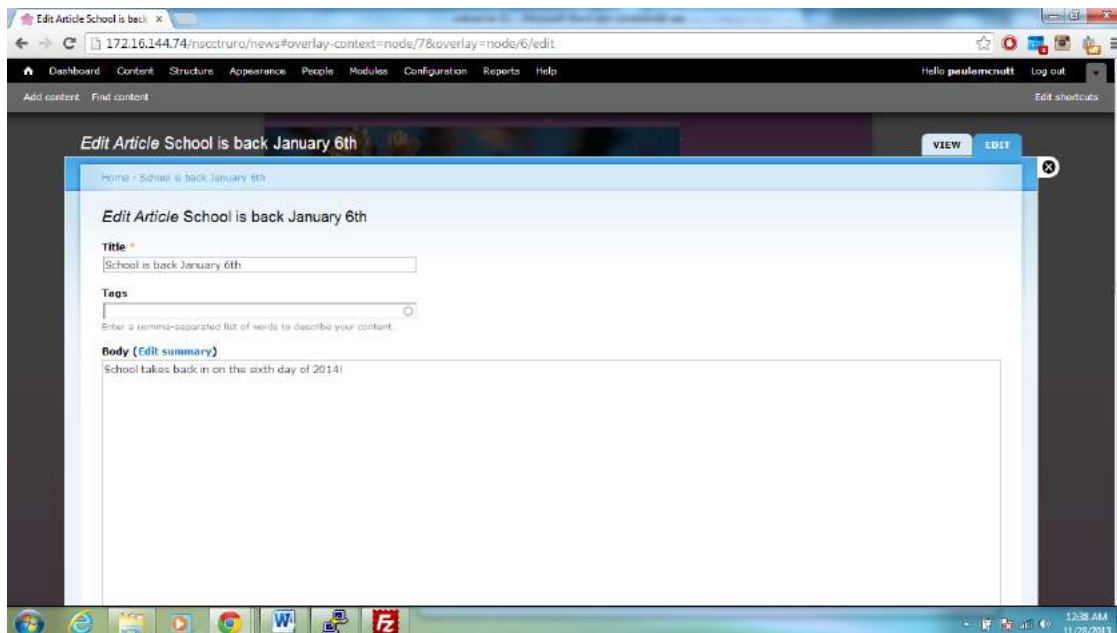
Click “Manage Update Permission” and specify only the users that you want to give editing permissions to and then click “Commit updates”.



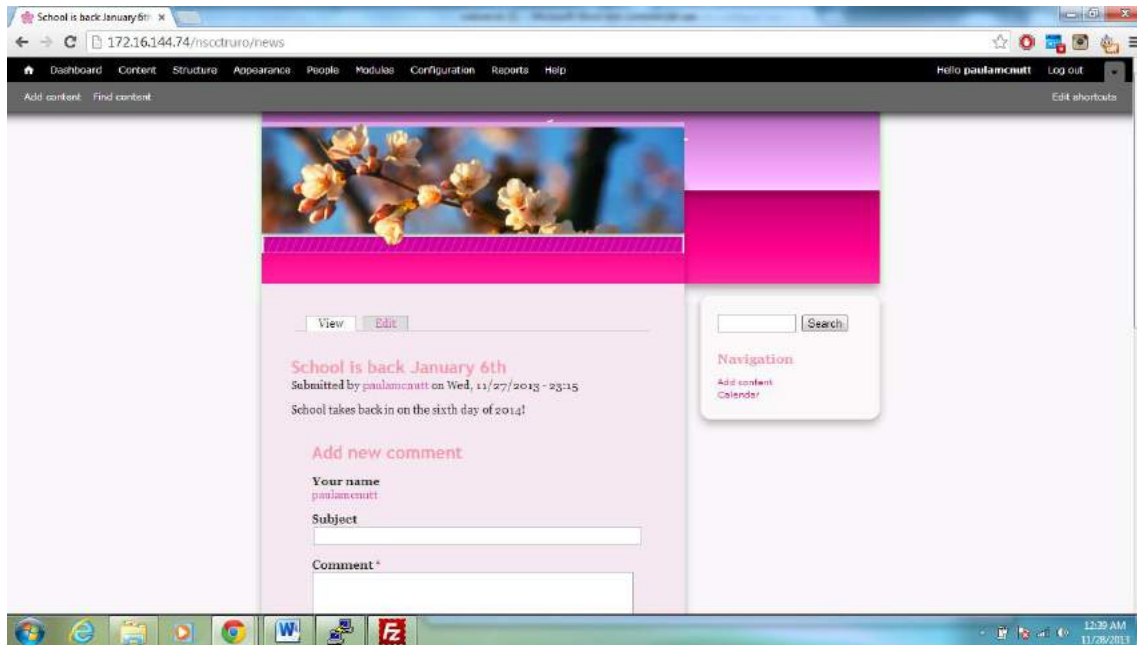
This can be done for all pages to restrict user permissions on a page to page basis.

Create News Page in Drupal

To create a News Page in Drupal you can click on “Content” on the top menu and click “Add Content”. Click “Article”. Fill in the content to the page and then specify a URL Alias of “News” at the bottom of the page.

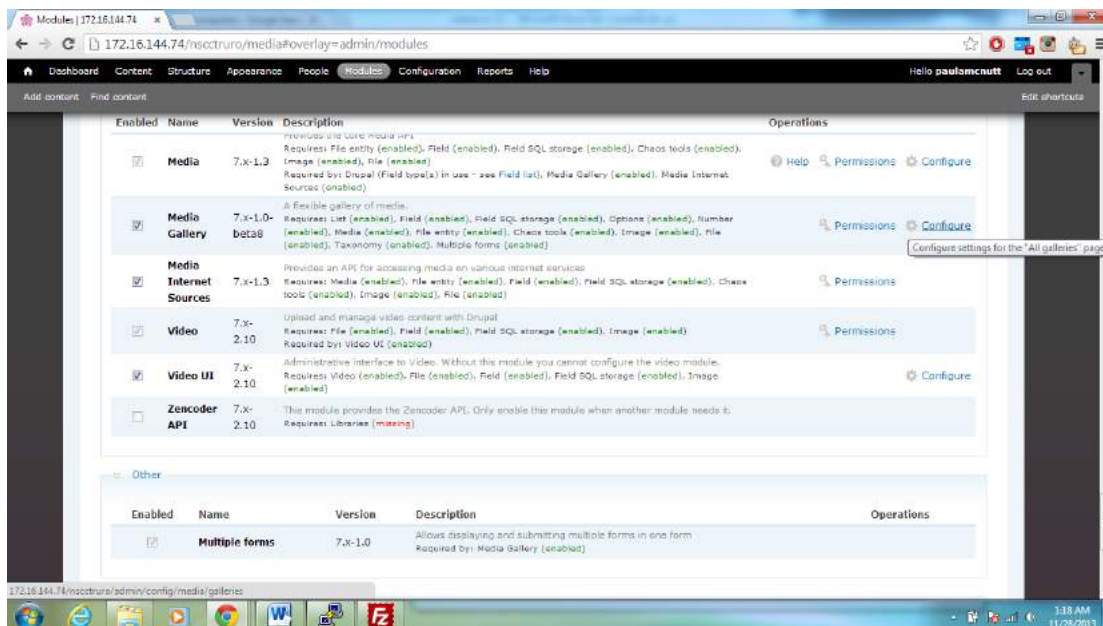


The news page should will appear at the specified alias on a page of its own as shown below:

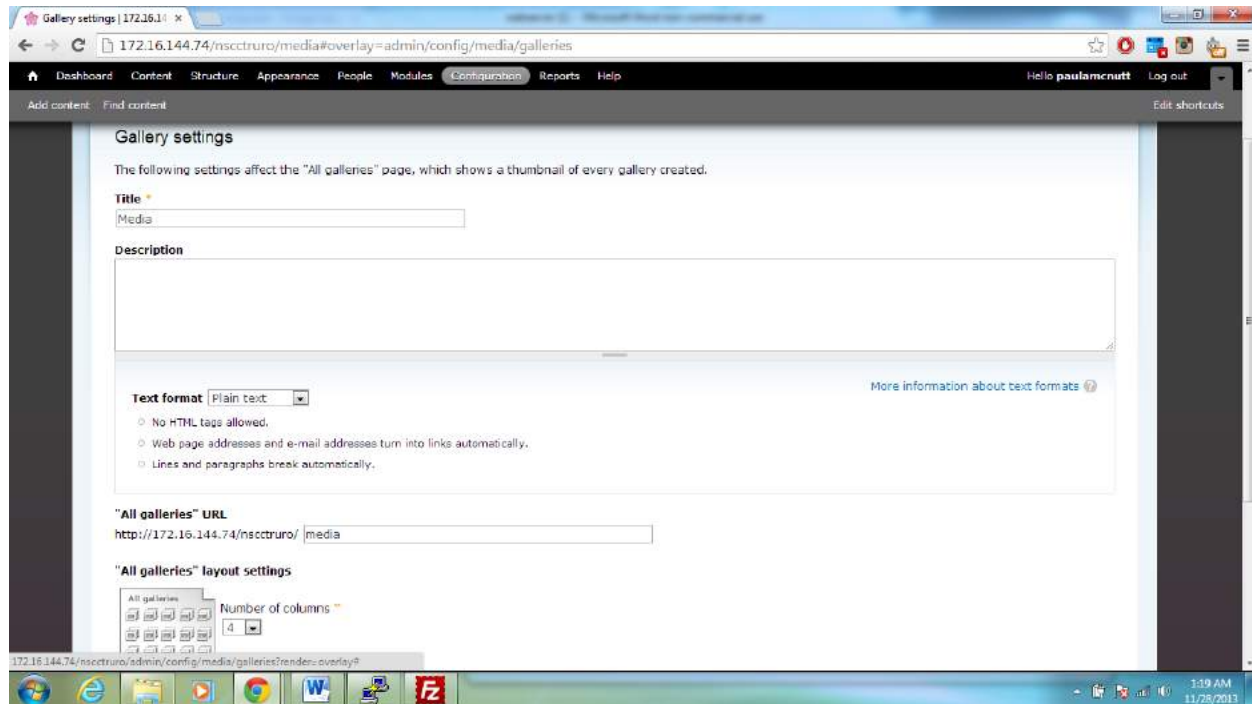


Create a Drupal Media Page

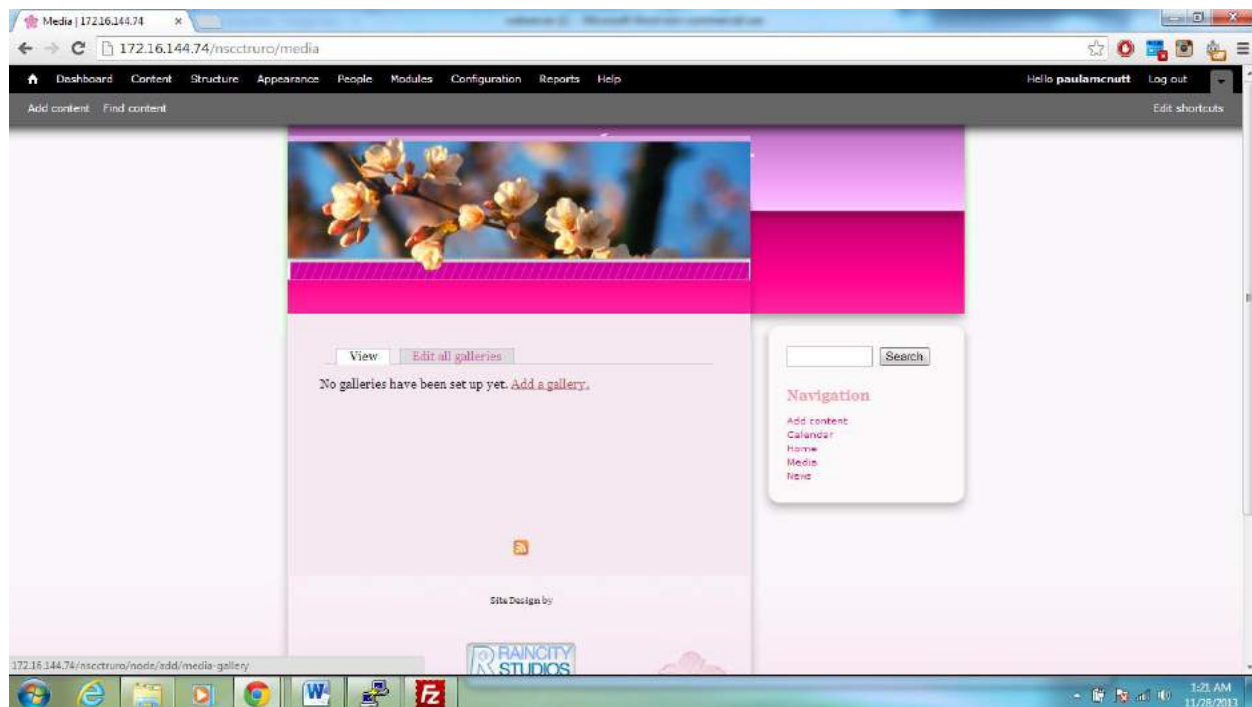
To create a media page you can download the module for this example at https://drupal.org/project/media_gallery and install it (the process of downloading and installing a module can be found at: the [how to create a full page calendar in Drupal](#) section). You must also download and install the following module (<https://drupal.org/project/multiform>) as well. Once both of these are enabled you can click on “Configure” by the Media Gallery module (as shown below)



Here you can set a title, description, as well as a URL (in this case the alias “Media” is specified) where the users can view the Media Page. Once everything is set to the preferred settings click “Save”.



Now when you visit the site URL you will have the option to “Add a Gallery”



Now you can add pictures and videos and this page will display them in your browser in an organized gallery.