Contents

What is an Asset Tracking System & why should I use it?

An Asset Tracking system such as this is used to track the many different assets that a business currently has in their possession. Assets can include any type of equipment such as routers, switches, televisions, phones, etc. It can also include software.

There are many different products in the market that do asset tracking for you. For example Microsoft Access as a template to use for this. The only issues with some of these systems are that they are too costly for what the organization or industry needs to use or they do not provide essential safety measures. The Microsoft Access template does not have different user permissions so anyone can go in and add, modify or even remove assets.

This asset tracking software provides such security to allow only certain users the ability to add, modify and remove assets from the database. The current tracking system utilizes many different technologies. These technologies include but are not limited to Apache web server, PHP, JavaScript, AJAX, Cascading Style Sheets and MySQL server/databases.

You might ask yourself why you should invest in a tracking system such as this. The answer is very simple. A system like ours will benefit your company by having all information stored in a centralized database. It can also assist you in searching for certain assets.

For example let's say you work for a school district hat has four elementary schools, one middle school and one high school. You probably have over 100 computers. With this system you can store information in one central location. Also you would be able to quickly search for anything you may deem "Surplus" that you have to get rid of. Also you can note what specifications certain equipment has or whether or not that the district or a grant paid for the assets.

This guide will help you walk yourself through our system. If you encounter any bugs please contact Michael Brown, at michaelbrown2009@gmail.com. When this system is in place there should be a link provided to report bugs or error reports.

Requirements

This system does not have a lot of requirements but it does have a few. We will discuss each one in more detail.

The requirements are:

- Apache HTTPD 2.2.11 +
- OpenSSL
- PHP 5.28 +
- MySQL 5.1.30+
- Configured and Working mail Server
- Permissions to run PHP scripts
- Asset Tracking Administrator

Apache

Apache is used to run the web application itself. Without Apache the application would be worthless to run. Currently Apache HTPD 2.2.11 is being used to develop the application. At this time the application needs version 2.2.11 to run correctly. Any version below this version may cause unexpected errors.

As new versions become released it may be necessary to update the Apache Web Server due to changes in the code. Any changes in the code due to updated versions of Apache HTTP Server project will be noted through communication between the Developer(s) and the district asset tracking admin.

OpenSSL

OpenSSL is a protocol used to secure data transmission. SSL stands for Secure Sockets Layer v2 or v3. This system requires OpenSSL to run whether that certificate is self signed or signed through a corporation like VeriSign. This allows “encrypting” the data and securing it between the browser and the server. This should never be an issue since the District Network Team keeps the Intranet secure.

The system will only be able to be accessed via an https address. If a person tries to access it via a regular http address it will give the user an error.

The actual address will be up to the desecration of the Web Admin and the Network Administrator for the district. It could be as easy as https://assettracking.wasd.k12.p.us. http://assettracking.wasd.k12.pa.us would not give any information and would not forward you to the https address.

PHP

PHP stands for Hypertext Preprocessor language. If PHP is not installed on the web server the application will not run due to the system being written in PHP. If you do not have PHP please visit php.net and click on downloads on the top.

Currently you need PHP 5.28. It is also recommended that if you update PHP at any time that you update it to a stable version. Also if you currently have version 5.27 or below please upgrade to 5.28, there is a security concern in PHP V5.27.

MySQL

SQL stands for structured query language. MySQL is a database management software package. We have set up a MySQL database to store the information for each different asset, users, users online and banned members. We have five tables. These include equipment, software, users, users online, and banned users.

Mail Server

This system requires a mail server be installed with the web server and have it working. The mail server allows you to send e-mail using the PHP mail function that is called in many of the documents that are being utilized.

Currently there are e-mail addresses already listed on who to send to the reports to. This documentation will show you how to edit the different files to specify the current e-mail addresses.

Correct Permissions

Depending on the web server configuration the user who wants to run the PHP scripts may not have full permissions. In this case the server administrator will have to change the permissions so they can run the scripts or modify the files permissions.

It is recommended that the files do not have permission 755 or 777. This allows for anyone to run the scripts also known as Global Permissions. Due to security issues that may arise it is recommended that the user who wants to run them is in the group or owns the files. In addition the file permissions should be set to 664.

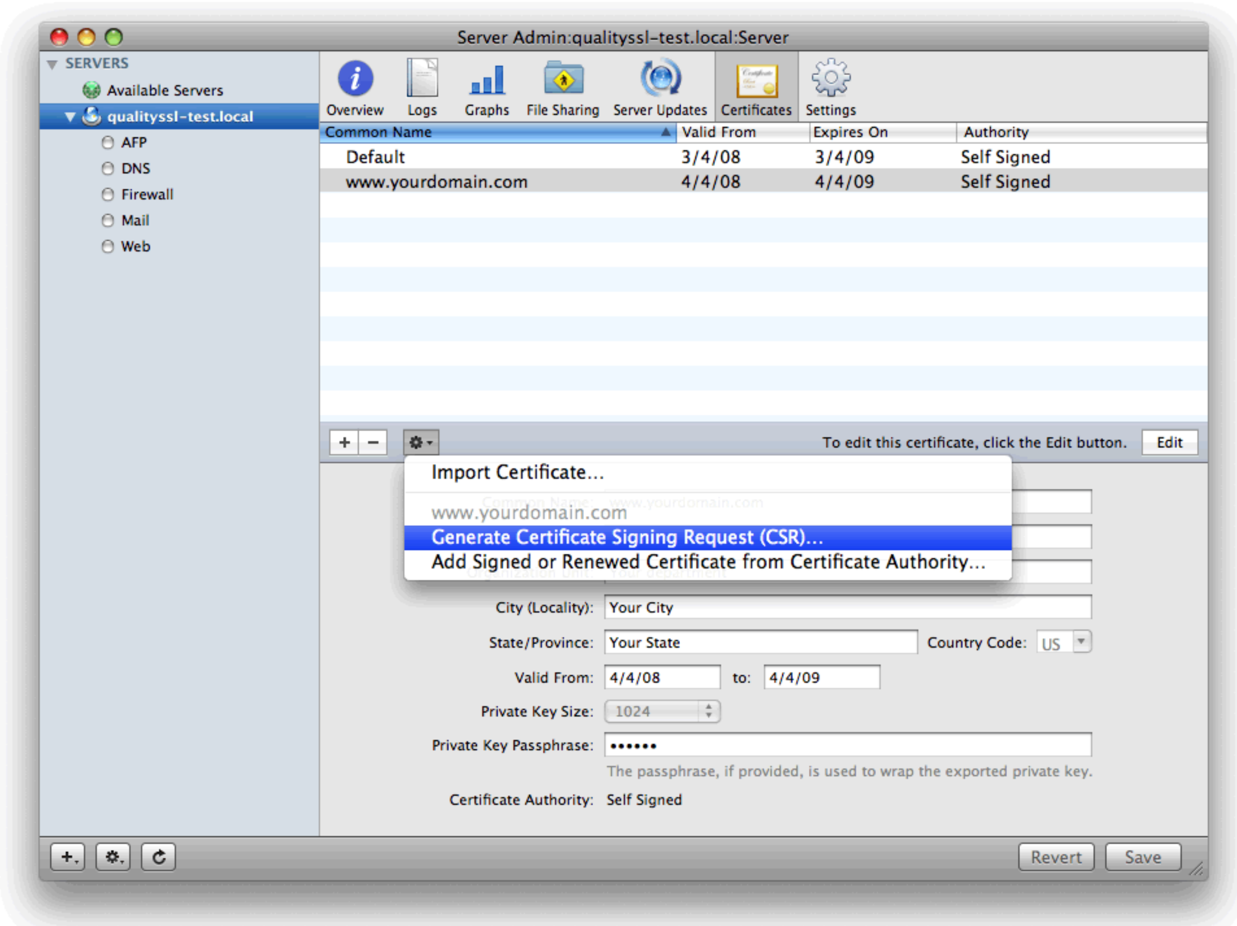
Asset Tracking Administrator

An Asset Tracking Administrator is necessary maintain permissions and the security of the system. This person would need to know some things about web design in case the system would need to be changed, specifically PHP and MySQL.

The Asset Tracking Administrator will be the main contact person for the system, with any bug reports, etc. Any of the major bug reports or feature requests can be directed to the Designer.

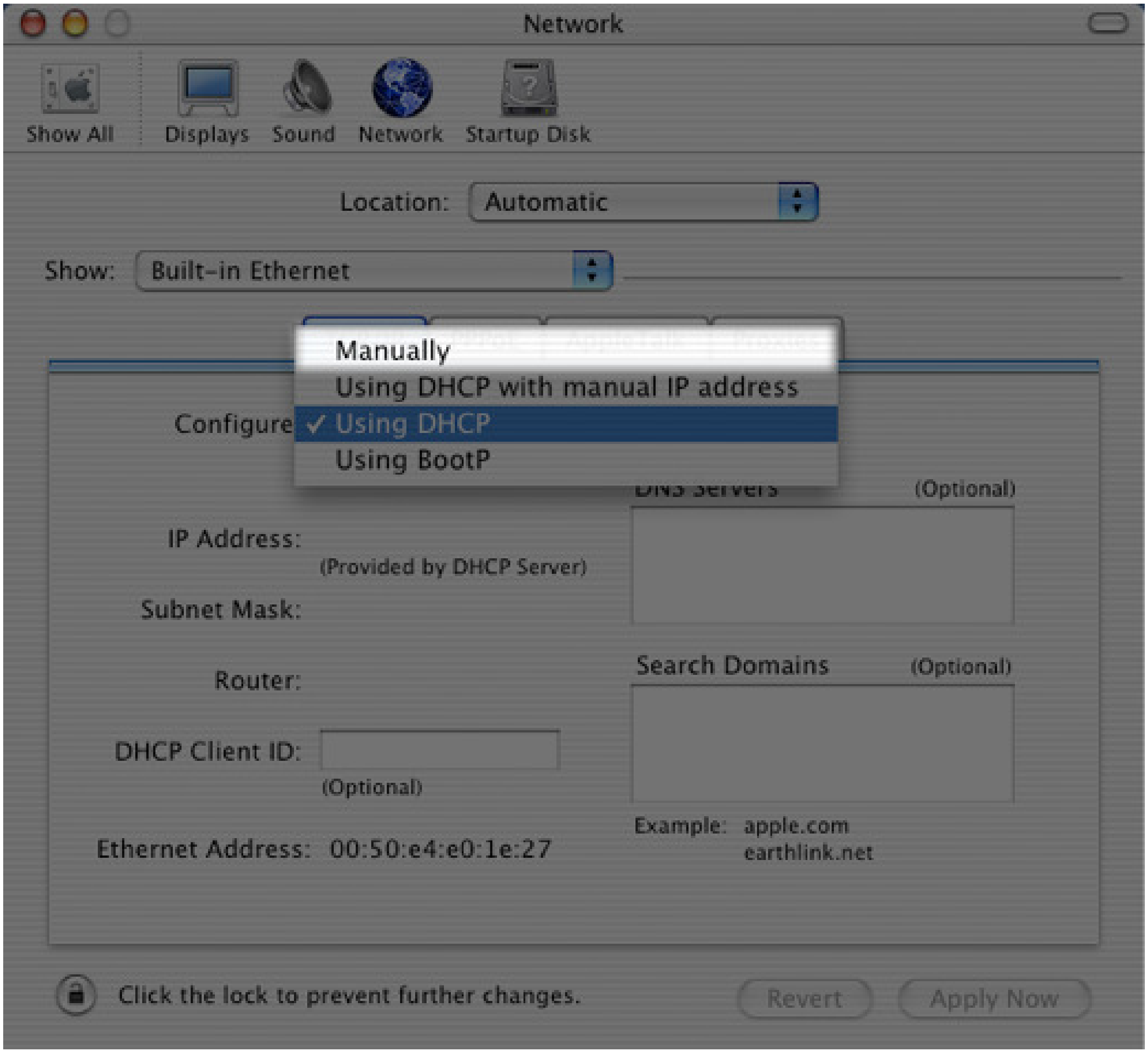
Before you start

Before you start you need to set up some things on the server side. You need to set up OpenSSL. OpenSSL is used for the encrypted traffic between the browser and the server. This creates a secure line. The certificate may be signed by VeriSign. Allowing the certificate to be signed by VeriSign or a similar company that allows for certificate validation creates a more secure environment and a trusted connection. Here is an example of what the set up on the Mac Server OS X looks like:



You can also self sign the certificate. If you self sign a certificate you must create a new one every 365 days. Also a self signed certificate will be reported to the user that it is not validated.

Next you will have to set up a static Internet Protocol (IP) Address. This IP Address will be used to access the Asset Tracking System. If you are not the Network Administrator you will have to make sure you check with the Network Administrator what IP Address you can use. Below is the screen you will see when you set up your static IP Address.



First you want to click on Show and select Built – in Ethernet. Next you want to select manually below that. This will allow you to set up your static IP address. The Information that is needed next such as the IP Address, Subnet Mask and any other details concerning setting up a static IP address must be received from the Network Administrator if the network Administrator is not setting this up.

Lastly we need to modify the php.ini file. This file is the configuration for PHP. Below is the area that we need to change.

```
; Print out errors (as a part of the output).  For production web sites,
; you're strongly encouraged to turn this feature off, and use error logging
; instead (see below).  Keeping display_errors enabled on a production web site
; may reveal security information to end users, such as file paths on your Web
; server, your database schema or other information.
display_errors = on
```

By default this setting is turned to on. You need to change it to off. This will provide increased security in case there are any PHP errors, they will not be displayed to the user. If they would be displayed to the user, they might be used to compromise the system. After you change it should look something like this:

```
; Print out errors (as a part of the output).  For production web sites,
; you're strongly encouraged to turn this feature off, and use error logging
; instead (see below).  Keeping display_errors enabled on a production web site
; may reveal security information to end users, such as file paths on your Web
; server, your database schema or other information.
display_errors = off
```

In addition you will have to restart Apache when this is done. Since you changed something in the configuration for it to take affect the server needs to be restarted. Restarting Apache is not difficult. If you do not have an option to restart it then have Apache stop wait five seconds and then start the service back. During the five seconds of down time, anything on the web server will not be accessible since Apache needs to be running. Ideal times to run this are when you have a decreased amount of people are visiting your website.

Finally, phpMyAdmin should be installed on the web server. Currently you have to run everything through a command prompt. This is not the best course of action as it is not completely user friendly.

Instructions and downloads can be found at http://www.servercodex.com/archives/2003/07/02/phpmyadmin-on-mac-os-x/. The instructions listed on this page are an addendum of this help document. You can download phpMyAdmin directly from phpmyadmin.net in .zip, .gz, .bz2 and in .7z. There should only be three lines that need to be edited in config.inc.php:

$cfg['blowfish_secret'] = ''; /* YOU MUST FILL IN THIS FOR COOKIE AUTH! */

$cfg['Servers'][$i]['controluser'] = user;

$cfg['Servers'][$i]['controlpass'] = 'password';

The main thing for phpMyAdmin is to create a config.inc.php. When you download it from phpmyadmin.net it comes with config.inc.sample.php. You need to change the contents of it and rename it. I found it was easier to create one manually. The documentation in the compressed file you downloaded should have all the necessary instructions.

Setup

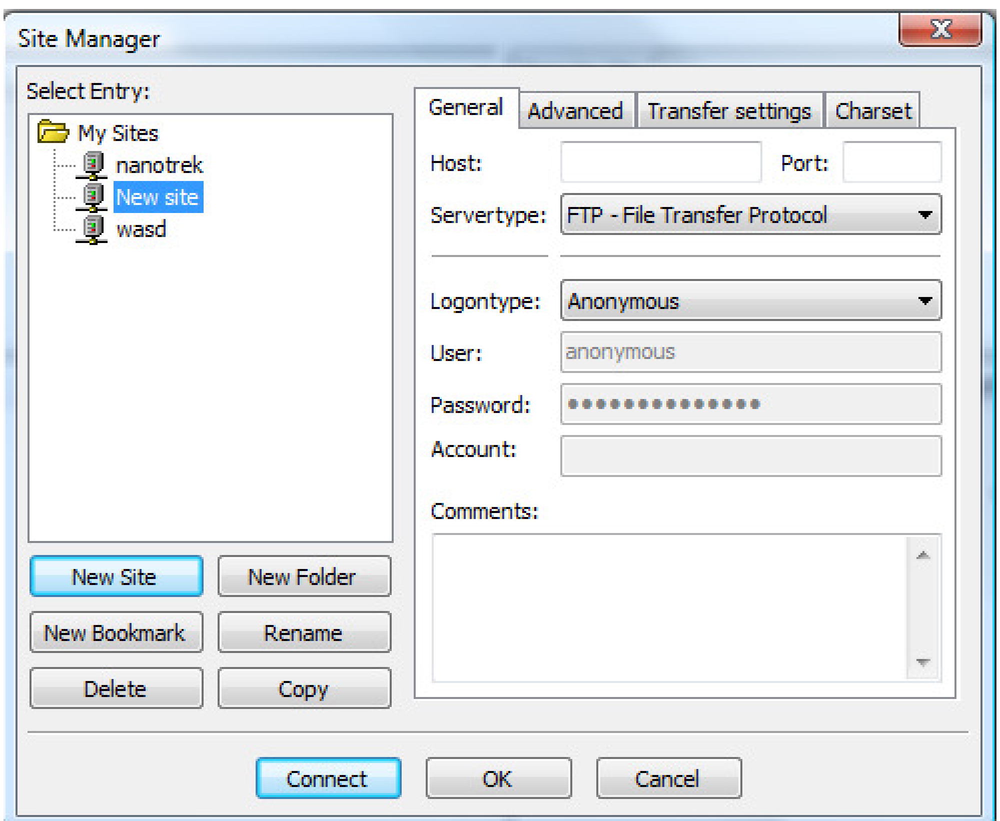
There are still a few things that need to bet set up. These are relatively simple. First off make sure you know where the setup.sql file is located. This file will be needed here shortly.

FTP/Upload

With the initial system download or CD you will be given a .zip, .7zip file. This file you will have to extract using a tool such as Winzip, Izarc, or 7Zip. You will want to extract it to a location that you can remember.

Next you will want to use a program known as an FTP Client. You will want to set up a site that will be for the asset tracking system. I use File Zilla.

You will want to set up a new site.



You will want to fill in all the information, such as host, port, server type, logontype, user, password and account. Servertype is whether or not the server is running some type of secure FTP environment. You will have to specify it there.

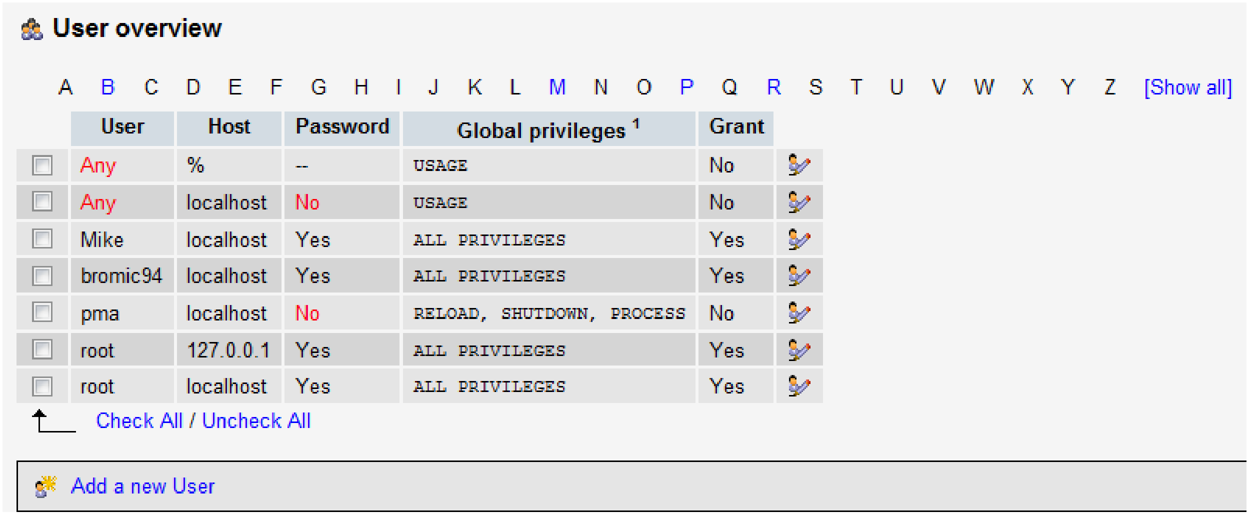
```
Status:      Resolving address of [redacted]
Status:      Connecting to [redacted]...
Status:      Connection established, waiting for welcome message...
Response:    220-----------------------------------------------------------------------------
Response:    220-This is the "Banner" message for the Mac OS X Server's FTP server process.
Response:    220-
Response:    220-         FTP clients will receive this message immediately
Response:    220-         before being prompted for a name and password.
Response:    220-
Response:    220-PLEASE NOTE:
Response:    220-
Response:    220-     Some FTP clients may exhibit problems if you make this file too long.
Response:    220-
Response:    220-----------------------------------------------------------------------------
Response:    220-
Response:    220 www.wasd.k12.pa.us FTP server ready.
Command:     USER [redacted]
Response:    331 Password required for [redacted]
Command:     PASS **********
Response:    230-----------------------------------------------------------------------------
Response:    230-This is the "Welcome" message for the Mac OS X Server's FTP server process.
Response:    230-
```

This shows that we have connected to the server. All we have to do is to find the correct directory to upload the files to. When you do find those select all the files on your end and then hit the enter key to start uploading them.

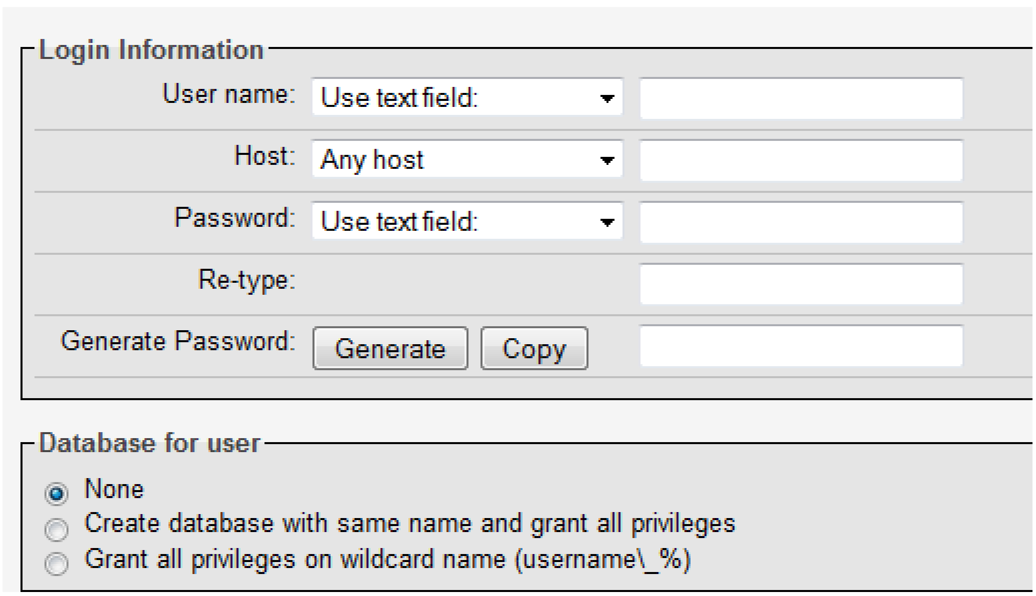
Database

The next thing you want to do is to upload the .sql file that we discussed earlier. This file has the information pertaining to the database. Locate the setup.sql file again. After you have located it navigate to your phpMyAdmin portion on the web server. Usually it is something like http://server/phpmyadmin. You will see many options.

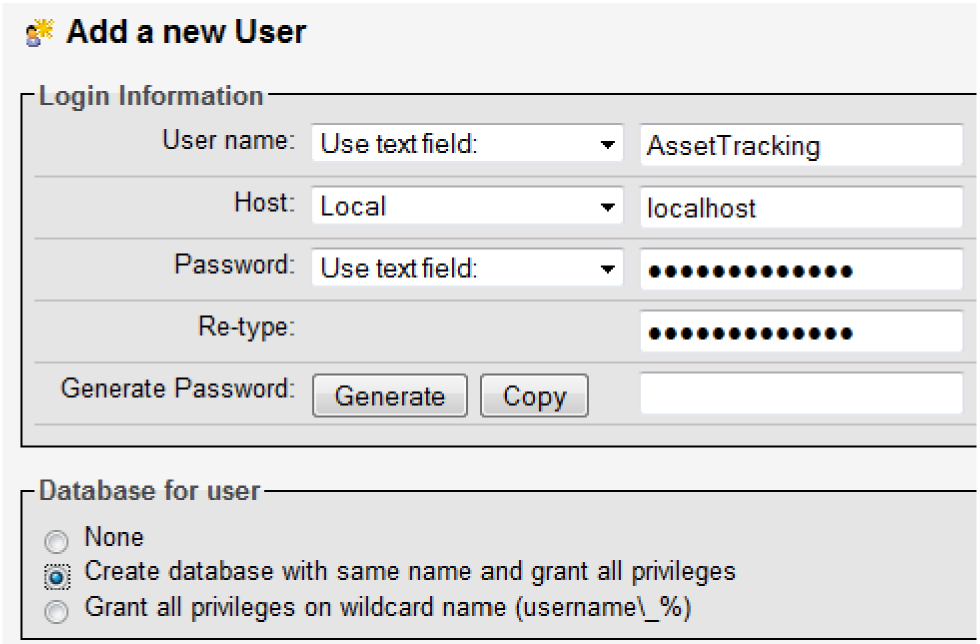
You will want to go to the tab that says "Privileges." When you click that you will see a page that looks like the following:



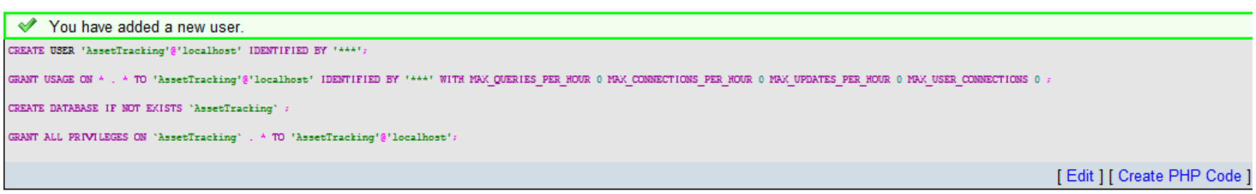
At this screen you want to create “Add a new User.” When this screen loads will see the next screen below.



At this screen add the details for the user that you want. We entered AssetTracking, localhost, assetTracking and assetTracking for the user name, host, password and the re-type areas. At this point then you want to select the second radio button that says “Create database with same name and grant all privileges. This screen should look like something like the following:



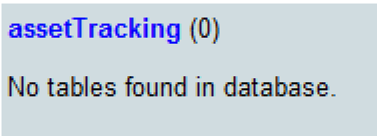
At this point you need to scroll down to the bottom. You will see information about Global Permissions. Please disregard this because you are not allowing the new user to have global permissions. These permissions would allow the database user to access every database. We only want the new user or in our case the AssetTracking user to have access to the assetTracking database. This is done as a security parameter. When you click go you will see a confirmation.



You will see this screen after you click on “Go.” It is confirming that the new user was created and that the new database which is matching the username has been created if there is no database yet. In our case this database has not been created before so it is created in the above sql code. Remember where you put that setup.sql

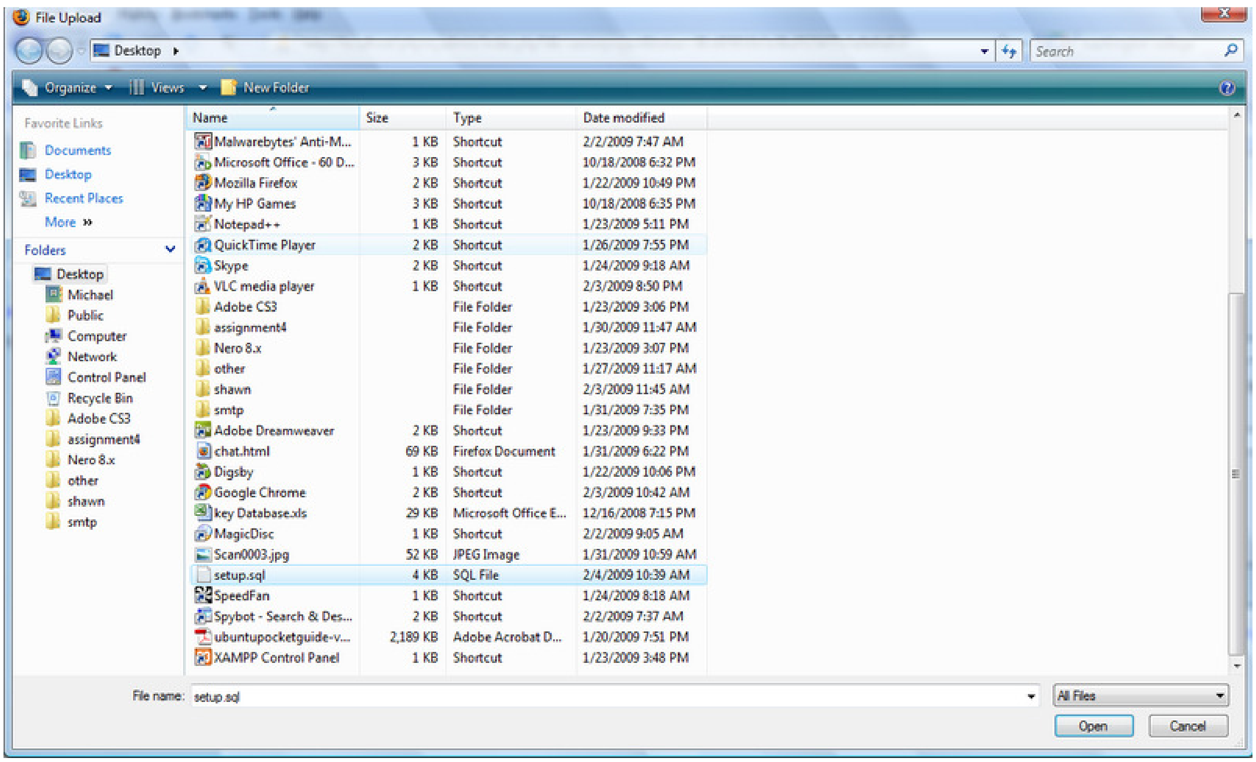
This above where it states “You have added a new user” is your confirmation that the user and the database were created successfully.

When you choose the assetTracking database from the drop menu on the left hand side this is what you see.

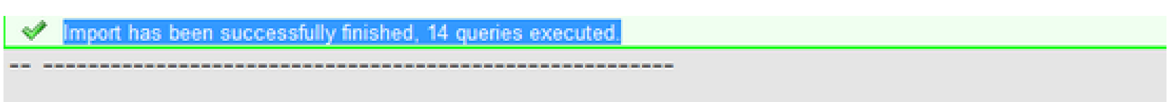


On the top, it will give you "links" for Structure, SQL, Search, Query, Export, Import, Designer, Operations, Privileges and Drop.

You will have to click on import. This will allow you to upload the file that we have included in the package.



You will want to select the setup.sql file. We have saved it to the desktop so we have navigated there and selected it. Next we will click "Go." After clicking "Go" you should get a screen that states whether or not the script ran successfully. If it ran successfully it should look something like this:



You can see in this it says about the table structure for table "banned." The "error" message that we have received is that the MySQL returned an empty result set (e.g. zero rows). This is due to that there are no entries in the banned table and that we selected DROP TABLE IF EXISTS when we created the .sql file. This is an okay warning. At the top you see that the Import has been successfully finished fourteen queries executed.

Connection Script

There are two connection scripts files. These are called /includes/connect.php and /administration/config.php. The second connection script is for banning IP Addresses. I decided to allow this one just for the sake of recoding parts of the banning script. This can be adapted to use the main one which is the one in the "includes" directory.

```php
<?php

$db = mysql_connect('server','username', 'password') or die("Unable to connect to MySQL");
mysql_select_db( 'database' ,$db) or die("Could not select database");

if (!$db)
{
     die('Could not connect: ' . mysql_error());
}


?>
```

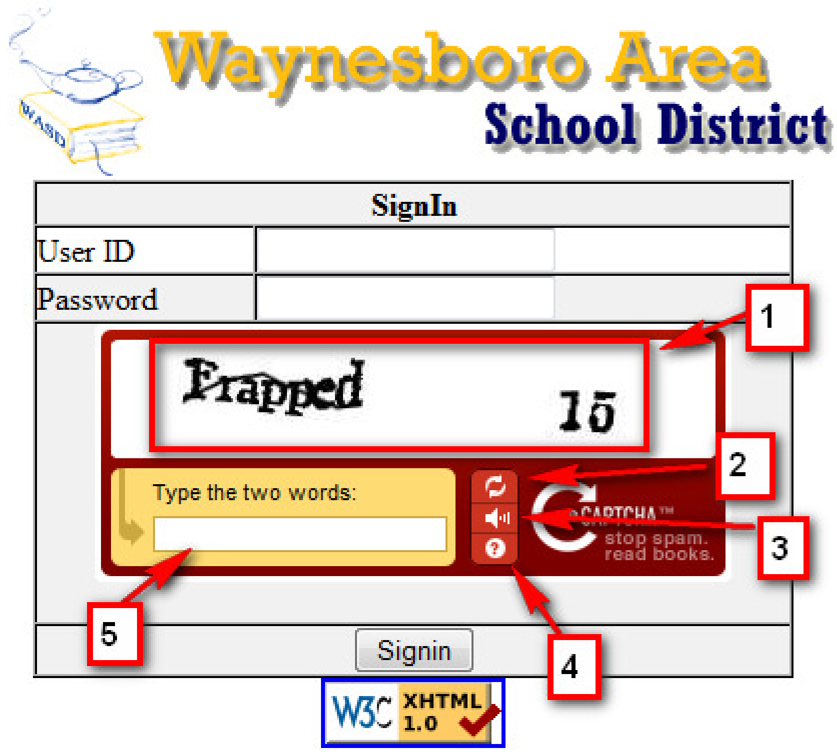
This shows the contents of the /includes/connect.php file. As you can see we took out the server, username, password and the database that is currently being used for security purposes. The two do or die statements can be modified by editing what is in the quotes. The first error message is connecting to the server because the username and password are incorrect and the second one is because the database is not there or could not be selected.

```php
<?php
// config
$config['host'] = ""; // host name of your mysql server
$config['user'] = ""; // your mysql username
$config['pass'] = ""; // your mysql password
$config['db'] = ""; // the database your table is in.

 $admin_email = "";
 $admin_email .= ", " . "";

// the @ sign is an error supressor, meaning we can use our own error messages, this connects and selects db
@mysql_connect("$config[host]","$config[user]","$config[pass]") or die("There was an error connecting to the database, MySql
 said:<br />".mysql_error()."");
@mysql_select_db("$config[db]") or die("There was an error connecting to the database, MySql said:<br />".mysql_error()."");
?>
```

This image shows the connect script that is used for the ban IP script. I do not foresee an issue with this because it is very easy to get a new IP address unless you are banning IPs that are on the school network. You can see the server, username, password and the database are the same setup as before. As well as the two do or die statements.

Logging into the system

Currently you have to log into the system to do anything. If you try to access any page that requires you to log in you will be redirected to the log in page. Before the system is completely implemented at the school district there is one master user account. This account cannot be removed due to security reasons.

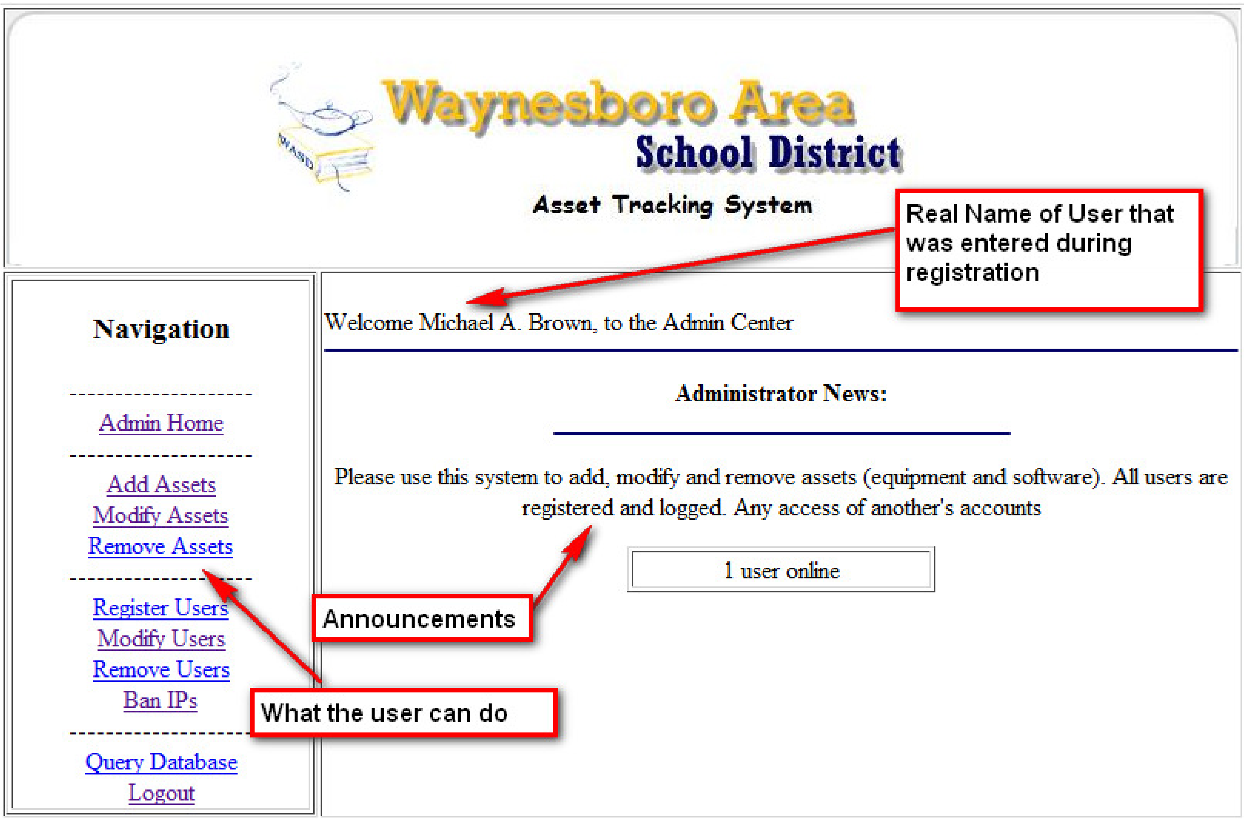


This image shows you the log in system. It requires you to enter your username and password. Also for security purposes you have to enter two random words. If you cannot read these words you can hit the "get a new challenge button." Below describes numbers 1-4.

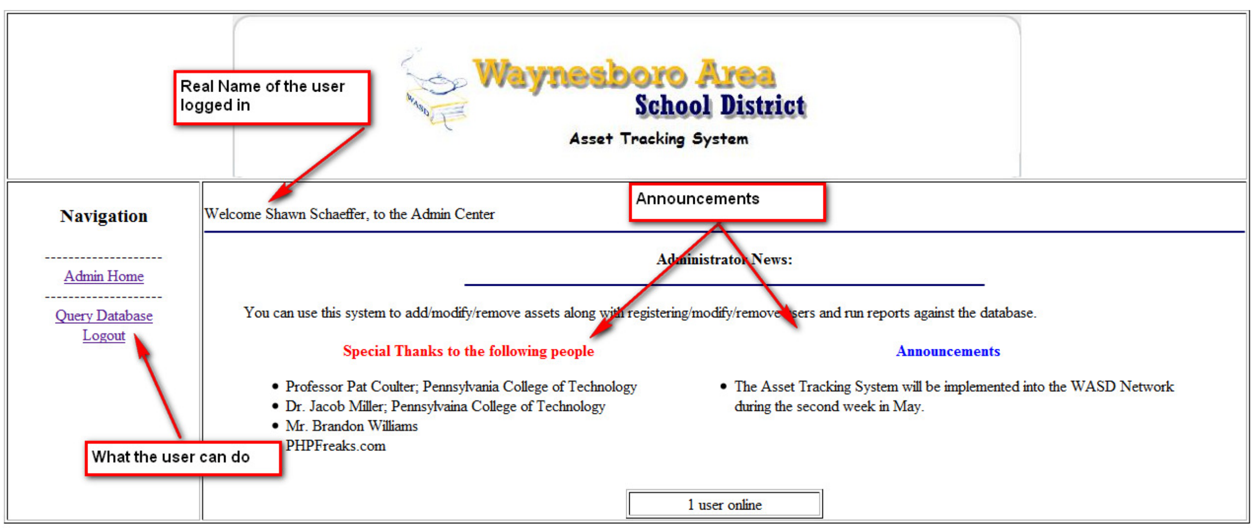
1. This is the area that shows you the words that you have to enter. For this example you would have to type in "Frapped" and "15".
2. This button you can click to get a new challenge. This will change what is in Section 1.
3. This button when clicked allows you to hear the audio for the words
4. This button you click if you have questions or need help related to entering the words.
5. This is where you type the words in.

This script was added to the log in process in case a bot or another computer would get your username and password it cannot log into your account. Since this changes every time you log in a bot or a computer would not be able to enter the requested information.

When you log into the system successful you see the screen below or the one below it based on your user group.



User group: Super Administrator

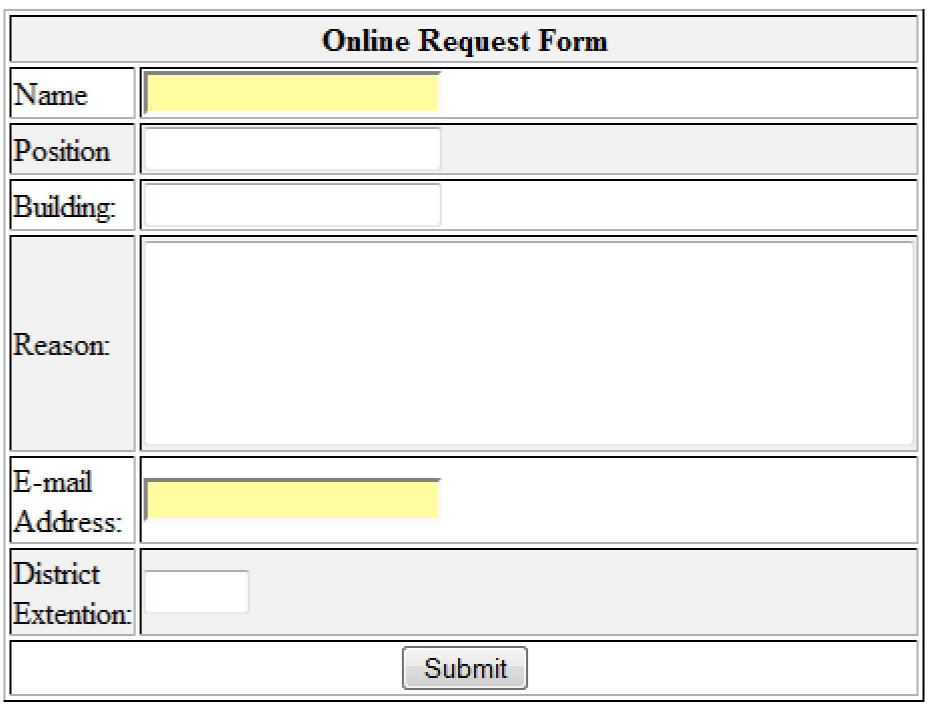


User group: User

This screen is the main administrator page. The news will be included in the area underneath where it says Administrator News. The navigation on the left hand side will be based off of your user group. Only “Super Administrators” can access Add, Modify & Remove Assets, Register, Modify and Remove Users and Ban IPs. The “User” user group will have access to the Query Database. The “Super Administrator” group has the majority of the permissions. As stated above a “Super Administrator” account that cannot be removed. That account is usually the first account that was ever a Super Administrator. This is required for security purposes.

Requesting Access

If you do not have access to the system you can request access to it. Currently this system is only working to alert the Administrators of the system or the IT Team. It can be expanded to alert the user who wants to have access of what the next steps will be if they get access or if they don’t get access. This feature can be added very easily with understanding of the PHP mail function. The form looks like the following:


Online Request Form
Name
Position
Building:
Reason:
E-mail Address:
District Extention:
Submit

The e-mail address that this form comes to will have to be configured in the mailing.php file in the mailer subdirectory. Below is that line.

```
//Mailer------------------------------------------------------------->
$to  = 'test@example.com' . ', test1@example.com'; //testing to multiple
```

You can change the information in between the ‘signs. If you want more than one e-mail address for this to be sent to such as this you need to do have the PHP concatenation symbol of, the “.”. If you would like to send it to test1@wasd.k12.pa.us and test@wasd.k12.pa.us the above highlighted line would look like the following.

$to = ‘shawn_schaeffer@wasd.k12.pa.us’ . ‘,test2@wasd.k12.pa.us’;

Please remember to include the comma and a space before actually including the second e-mail.

The e-mail that is sent to email addresses above. It will look like the following:

From: WASD Asset Admin [sysadmin@wasd.k12.pa.us]
To: Michael Brown
Cc:
Subject: WASD Asset Tracking Access Request

Test User, has requested access to the asset tracking system. Below is the information

Name: Test User

E-mail Address: michaelbrown2009@gmail.com

District Ext: 1293

Position: Building Tech

Building: Hooverville

Reason: This is a test

Referrer: http://localhost/seniorProject/mailer/mailer.php

Do not reply to this e-mail. It is not monitored.

Also in the code below you can enter the same e-mail addresses in where it says To:

```
// Additional headers
$headers .= 'To:' . "\r\n";
$headers .= 'From: WASD Asset Admin <sysadmin@wasd.k12.pa.us>' . "\r\n";
$headers .= 'Cc:' . "\r\n";
$headers .= 'Bcc:' . "\r\n";
```

If you add e-mail address in the first line of the headers then it will only display those in the "To:" field in the actual e-mail. We had for testing purposes an e-mail address in this area. In the picture above, the actual e-mail above in the "to" field has only one e-mail address, which was test@example.com because that is what was entered in the headers. If you do not add anything here the "to" field in the actual email will say undisclosed recipients.

Side Note: Any e-mail sent from this system is e-mailed from sysadmin@wasd.k12.pa.us. The e-mail clearly states not to respond to this e-mail because this is an unmonitored e-mail address. **It has only been created for this system.**

Administration

There are many things that you can do while in the administrative portion of the website. Currently you can Add, Modify and Remove Users as well as add, modify and remove assets. All users of the system can run reports from the administrative portion of the system.

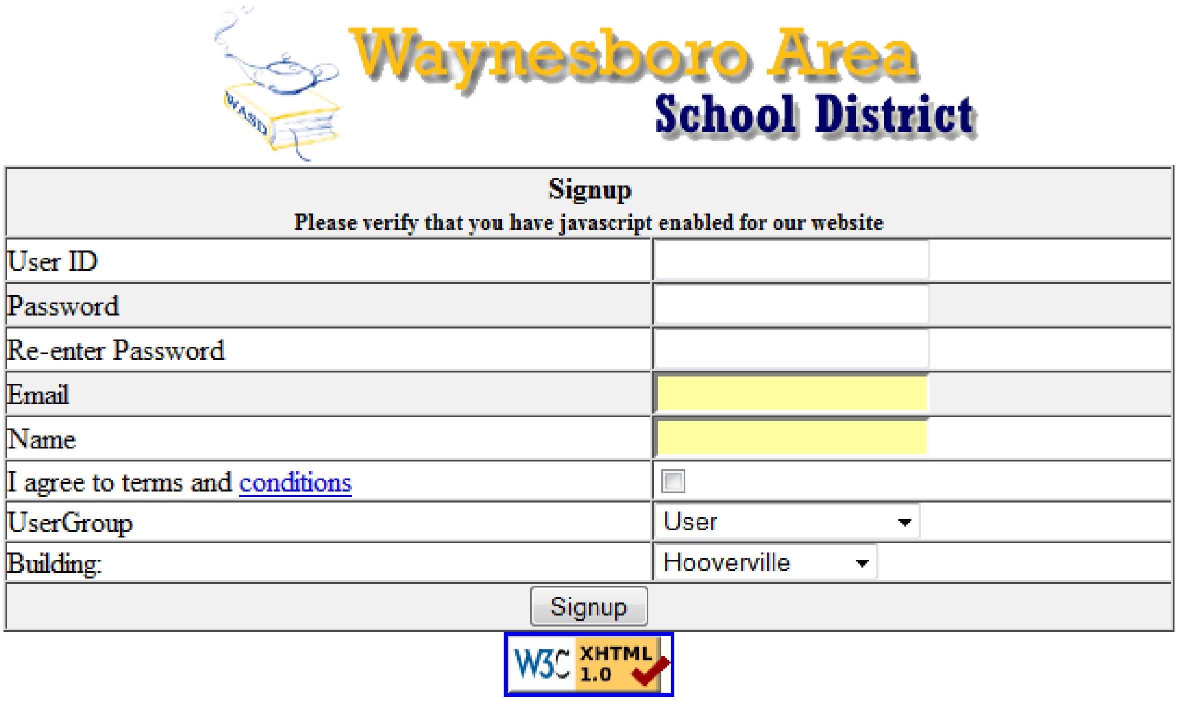
Next we will go through each portion of this and how to do it. Only Super Administrators can add, modify, remove users and add, modify and remove assets.

Users

To access the system you must have a username and password. If a person wants access to the database then they have to talk to the administrator of the asset tracking system.

Adding Users

This feature is only available for Super Administrators. If you do not know what user group that you are in please contact the Administrator of the system. You have to log in to the system and then click on “Register Users.” When you click on that your page should look like this:



This screen shows you what you have to enter for each user. You can only register one user at a time. Before you register a user you must have an e-mail stating that they agree to the terms and conditions. This is so if something happens to their account then they are held responsible. Enter the above information. If you have Google Toolbar then some inputs might be in a yellowish color. This is only signifying that it can be entered by the quick fill feature from the Google Toolbar. After you have entered everything and chosen the user group and the building that the person works in or is based out of please hit the Signup button.

Error Messages

Please enter a longer username. Usernames must be between 5 and 20 characters

Your userID and your password can not be the same

You might see something like this at the top right under where it states you are and who is logged in. If this is the case then the form will still be there with the information that you entered.

If you enter information correctly and you receive no error messages you can receive the following message informing you of two things.

1. You successfully registered a new user
2. The details are being e-mailed to that user

Thank you Test user, for registering on our Asset Tracking System.Your log-in information is listed below and has also been sent to you
Username: testuser
Password: testuser1

As you can see you get a screen here that tells you what the user name and password are for the user. It will also be e-mailed to the specified users e-mail account. Currently the system is set up to verify that the format of the e-mail address is correct (only has one @ sign).

We are working on checking to make sure that the e-mail address at least has a proper MX or mail server with it. For example if you put in testuser@gmail.com it will be okay because we know if you entered test.com it would not allow you to register that user because it would see that the test.com domain does not have an MX record or a mail record.

If you would like to verify to see what users have access to the database you can click on view users that is below the Register users' link. That screen looks like the following:

Main Admin can not be removed

ID	Registration Date	User		Building	Name	User Group
1	2/1/2009	admin	michaelbrown2009@gmail.com	WASHS	Super Administrator	Super Administrator
3	02/03/2009	sschaeffer	shawn_schaeffer@wasd.k12.pa.us	WASHS	Shawn Schaeffer	User
6	02/12/2009	testuser	testuser@test.com	Hooverville	Test user	User

This page only shows you the information provided about each user. If you want to edit it you must go to the Main Administrator page and click on Modify Users. This is just an overview so you can see who all has access.

Modifying Users

Modifying Users sometimes is necessary. The information that is stored in the database does not all get changed because some of the information will always remain the same. We have only allowed you to edit the following information per each user.

- Username
- Password
- Building
- E-mail
- Name
- User group

You will see ID, Date and Agreed. You may not change this information because this information is dependent on whether the user can access the system and how much they can view.

The main modify users page looks like the below image.

chan?	ID	Date	User Name	Password	Building	E-mail	Name	Agreed	User Group
☐	1	2/1/2009	admin	142dfaaf62e5	WASHS	michaelbrown2009@gmail.com	Super Administrator	Y	Super Administrator
☐	3	02/03/2009	sschaeffer	8aaee0548eb	WASHS	shawn_schaeffer@wasd.k12.pa.us	Shawn Schaeffer	Y	User
☐	6	02/12/2009	testuser	bc51a83eea0	Hooverville	testuser@test.com	Test user	Y	User

Total records: 3

Submit Query

You can see the information it gives you. Like I stated before ID, Data and Agreed cannot be changed. They are all read only areas.

To edit a user you need to choose which one(s) you would like. Then you need to click the checkbox for each user that you want to edit. Then go through each user's information and change it. After you are done you can click the Submit Query. When you click this it will show the following information:

You have updated 1 records(s)

This will show that you have updated on user. If you have an error it will show errors and say "You have updated 0 record(s)." You can modify multiple users at one time. If you wish you can modify every user in the database.

If you get an error it will look like something like the following:

Error Messages

Your e-mail address is wrong

Special Notice 1: *Please be sure who receives the Super Administrator Access. This permission given out blindly could cause issues with who can remove other users, etc. Also you can enter "User" or "Super Administrator" as the user group.*

Removing Users

Removing users should only be done at certain times. Users will always be removed when they have access to the system and have a person leaves the district or is fired. The main Remove user page looks like the following:

Remove	ID	User Name	Name	E-mail	User Group
☐	1	admin	Super Administrator	michaelbrown2009@gmail.com	Super Administrator
☐	3	sschaeffer	Shawn Schaeffer	shawn_schaeffer@wasd.k12.pa.us	User
☐	6	testuser	Test User	user@test.com	Super Administrator
Submit Query					

This is the page that will display when you click on the "Remove Users" link on the main Administrator page. If you want to remove a user you can click the checkbox beside the user and then click on Submit Query. All the information in the text boxes is "read-only". Like the modify user page you can as many users as you would like

Special Notice 2: *The account that has ID of 1 cannot be removed. The system is designed to have one "Super Administrator" in the system. This is for security reasons to always have one account that can do everything in the system.*

Test User's account has been removed
1 user(s) deleted

This is the screen that you will see if the remove user script was successful. You will see the accounts first and last name. It will also state the number of accounts that were removed. To verify this information you can click on the View Users link on the main Administrator page.

ID	Registration Date	User Name	E-mail Address	Building	Name	User Group
1	2/1/2009	admin	michaelbrown2009@gmail.com	WASHS	Super Administrator	Super Administrator
3	02/03/2009	sschaeffer	shawn_schaeffer@wasd.k12.pa.us	WASHS	Shawn Schaeffer	User

As you can see the Test User account is **not** listed anymore. This verifies that the account has been removed.

Assets

Assets are in two different categories, Equipment and Software. This system can track both and be expanded to include others. There is one central page that can be used to add both.

Adding Assets

If you point your browser to http://tracking.server.com/administration/addassets.php if you are logged in you can see the page that you will use to add assets. This page has two forms, one for equipment and one for software. In the future if there is room for expansion of the different assets that you can add. The forms will be moved around.

Equipment

You can add equipment assets very easily. Currently we do not have a bar code scanner implemented yet. This feature can be added because the bar code scanners act like a keyboard.

After you log in, you will click on the “Add Assets” link. This page should look like the following:

You have to add the district ID and the serial number first. Each record will have a unique numbers for the both of these entries. Not all fields are required. Currently the Type 1, Grant, and specifications, Worked on and Surplus are not required. You can go in and edit them at a later time if you wish.

After you have entered in all the information you may click submit. If you completely screwed this up you can do one of two things.

1. If you have already submitted it to the database and it has been verified then you have to go and remove that asset. Remember the district ID, serial number and the ID it gave you.
2. If you have not clicked submit you can click the reset button.
3. If you have submitted it and there are errors then you have nothing to worry about.

After you click the submit button you may see errors. If you do have any errors, please correct those. If you have corrected them and still receiving them please submit a bug report and the developer will look into the issue.

District ID: 987654321
Serial Number: 987654321
Item Name: Test Item 1
Type: Desktop
Other: N/A
Model: HP
Date of Purchase: 02 / 02 / 1998
Grant: None
Building: WASHS
Room: 202
Status: In Use
Specifications: None
Worked On: No
Surplus: Yes

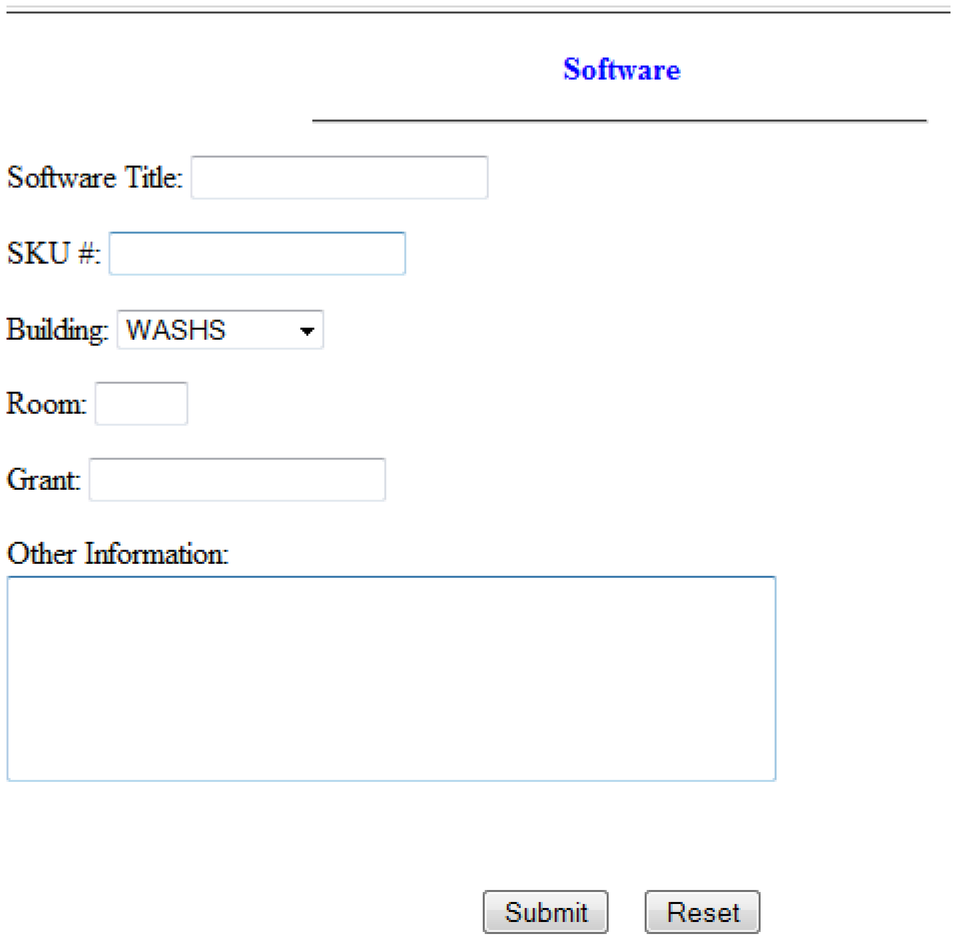
You will see this screen if you do not have any issues. It summarizes all the information that you have included in this record. As you can see as a test I indicated "None" on the grant and the specifications.

This record has been added to the database. If you would of had received errors you would have them displayed on the top of the page with the form. In the form it would contain the information you entered that caused the errors.

Special Notice 3: The form can have additions made to it and have the database table add more columns for the new information in the form very easily.

Software

Software is the next type of asset that you can add. The submission form is similar to the equipment form. Below is what it looks like.



Software

Software Title:

SKU #:

Building: WASHS

Room:

Grant:

Other Information:

Submit Reset

As you can see it has the same buttons as the Equipment form. They still operate the same as the other form. This form is expandable to add more fields. If you add more fields you will again have to add validation and more columns in the database. What is required for this form is as follows:

- Software Title
- SKU #
- Building
- Room

The Grant and the Other Information is not required. If the software package that you have is a district wide software package such as volume license of Microsoft Office 2007 you will have to add “District Wide” or “Volume License” in the Other Information. The building and room will be where the CD/DVDs are stored.

Also if copies are made for ease of use and doing so does not violate federal or state law you can enter those in the asset tracking system as well. For the Software Title just put the software title in but also add "-burned copy". In the "Other Information" you can add that this is a burned CD/DVD for ease of use. This will help you keep all knowledge where all copies of your software are. If you do not have the original CD/DVD and only a copy or you downloaded the ISO offline you can add nine nine's in the SKU which will specify that there is no SKU number available.

If you get errors it will bring the form with the information in the form that you already entered. You will just have to edit the errors and then resubmit them.

Special Notice 4: If you correct errors and it still gives errors please submit a bug report to the developer. More Information will be provided for this later in the documentation.

If you click on submit and it adds it to the database you will see a message like the following:

This is what you have entered

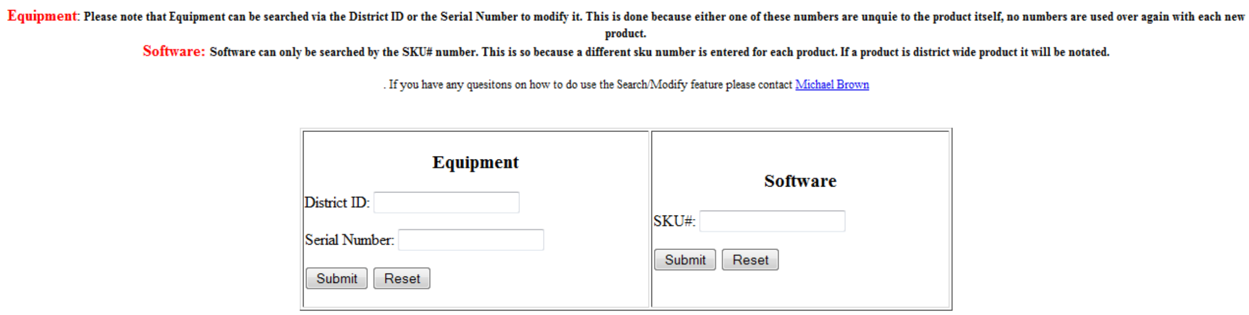
Software Title: Test Item 100
SKU #: 999991
Building: WASHS
Room: 201
Grant: None
Other Info: None

This is your verification that it was entered into the database. If you would like to verify this manually you can go back to the main administrator page and click on Query Database. Enter the SKU# that you entered and see if it added it.

This process is not necessary because if it did not enter it into the database it would have stated some sort of error when you tried to submit it for validation.

Modifying Assets

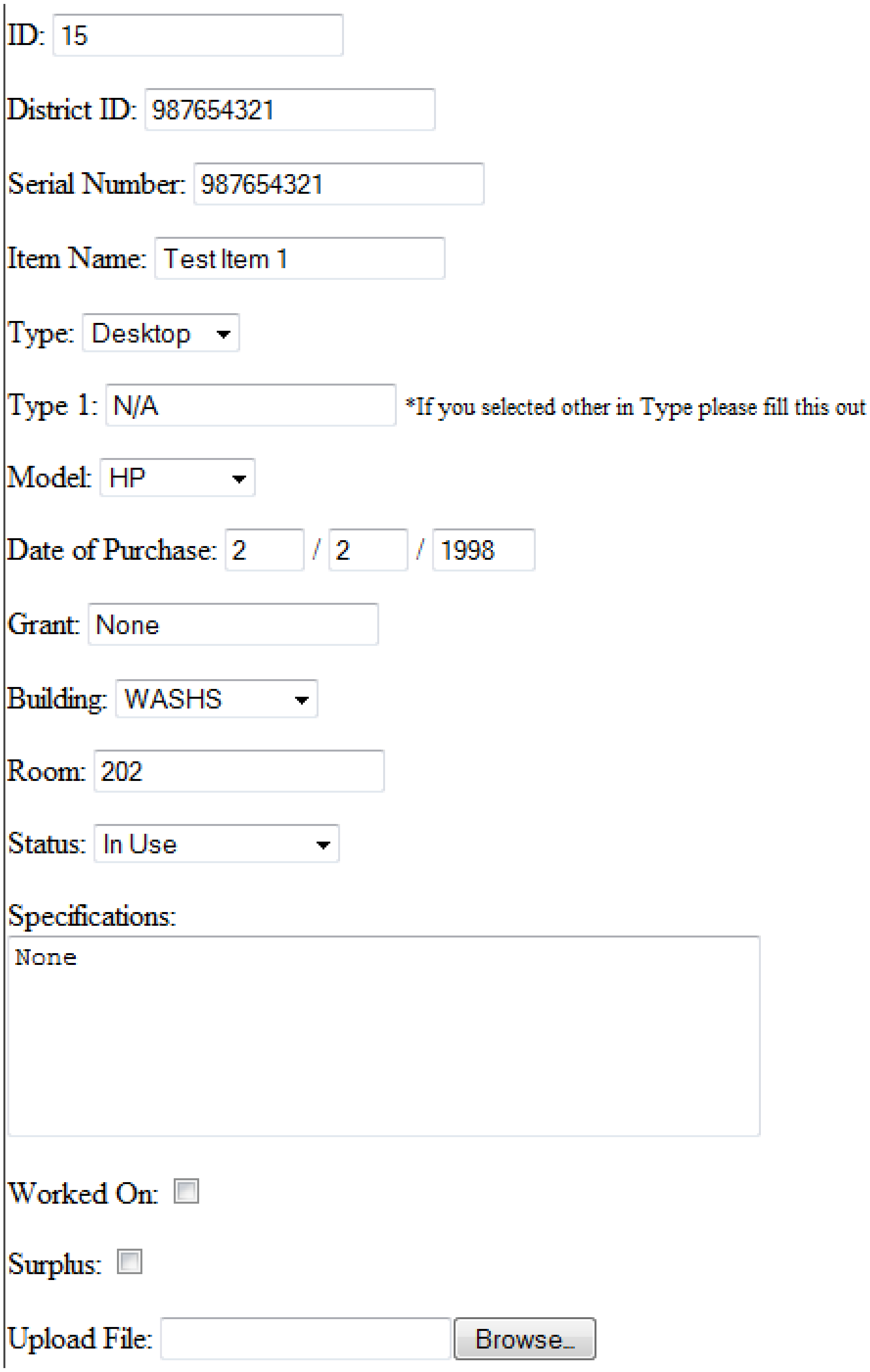
You can modify assets very easily with this system. Unfortunately you can only edit one asset at a time. When you click on Modify Assets on the main page then you see the following screen:



You can edit one asset at a time whether it is an equipment or software asset. You will need to know the District ID or the Serial Number of the equipment or the SKU# from the software.

Equipment

After you click on the submit button when using the Equipment Asset Modify Form you should get a screen that looks like the following. What happens when you click submit the form searches the database for a record with the district id or the serial number that you entered. If it came back with anything it will display something if not then it will just tell you that the asset with the district id or serial number that you entered does not exist.


ID: 15

District ID: 987654321

Serial Number: 987654321

Item Name: Test Item 1

Type: Desktop

Type 1: N/A *If you selected other in Type please fill this out

Model: HP

Date of Purchase: 2 / 2 / 1998

Grant: None

Building: WASHS

Room: 202

Status: In Use

Specifications:

None

Worked On:

Surplus:

Upload File: Browse...

This page shows you everything that you entered. As you can see the “Worked On” or “Surplus” checkboxes are not checked. We originally did not select these so they are not selected. If you do select them when you modify you will need to check them again due to how we have the information in the database. You can change any information on here that you want. After you are done editing it you can click the submit button. If there any errors you will be prompted if not it will update the information in the database. You will get the following message if no errors were detected:

You have updated Record with District Tag 987654321 .

This is your validation that it was updated.

Software

The software assets do not have the same amount of information to edit. The unique identifier other than the ID that it is given when it is submitted to the database is the SKU#. This is what you have to search for. If it is requested more search options can be added. After entering the SKU# number if a search is found then a form like the one show in for the Modify Equipment is shown and you can edit it. If you do not receive any errors you will be able to submit it to the database.

If you do a search and the search returns nothing then the screen will give you this message:

You have entered a SKU number (123) that is not entered in our database. Please go back to the Main Modify Assets Page

If you receive errors you will get the following warning:

Please enter a SKU# 5 or more numbers
To correct these errors please click the back button in your browser

Just follow the instructions and you should be able to correct the mistake. You will have to say Yes when you click your back button on your browser. It will ask you if you want to resend the request.

Removing Assets

You might have entered an asset and sent to the database when you really did not want to or you mistyped something in the information. You can remove assets with this system without utilizing phpMyAdmin or MySQL commands. The picture below shows you what you see when you get to the main remove assets screen.

Equipment

Software

You have to choose which one that you would like to remove. Each button is its own form.

Equipment

Removing Equipment or Software Assets are very easy. Just click the button in the following picture.

Equipment

This will take you to a screen that will show you the equipment assets. The screen will look like the following picture:

Waynesboro Area
School District

Remove	District Tag	Serial Number	Item Name	Building	Room	Status	Surplus
☐	987654321	987654321	Test Item 112	WASHS	202	In Use	
☐	123	123	hp laptop	WASHS	202	End of Life (EOL)	Yes
☐	123456789	123456789	Test Item 2	WASHS	201	In Use	No
			Submit Query				

At this screen you will see certain information about each asset. You will see in this example that the first asset does not say if it is surplus or not. That is because it was that asset was put in the system before some modification of the coding was done.

You can only actually click on two buttons. These are the checkbox for each asset that you want to remove and the Submit Query button. Select the assets that you will want to remove and then click Submit Query.

When you click the button it will go through select that one from the database and remove it. Since there is no validation to this part it should not take long. You will receive the following message when the asset is removed from the database.

Record with District Tag 987654321 has been removed

1 asset(s) deleted

It states that the Record with a certain District Tag number has been removed. It also states only one record has been removed. You can if you wish to go on and verify it has been removed. This is your confirmation that it has been.

District Tag Number you entered, 987654321, was not found in the database

As you can see there is no longer an asset with district tag '987654321'. It has been removed.

Software

You remove software assets the same as equipment assets. You just click on the “Remove Assets” page and then click on software like below

Software

This will take you to a page that has all the software assets listed. The page will look like the following:

Waynesboro Area School District

Remove	ID	Software Title	SKU#	Location	Room	Other Info
☐	3	Test Item 2	12345	WASHS	202	Volume Licensee
☐	4	Test Item 99	99999	WASHS	202	none
☐	5	Test Item 100	999991	WASHS	201	None

Submit Query

You can see currently there are three records in here. Like the removal of equipment assets you can only click the checkboxes and the “Submit Query” button. Everything else is set to read only.

Select the checkboxes of those assets you want to remove. Then click the “Submit Query” button.

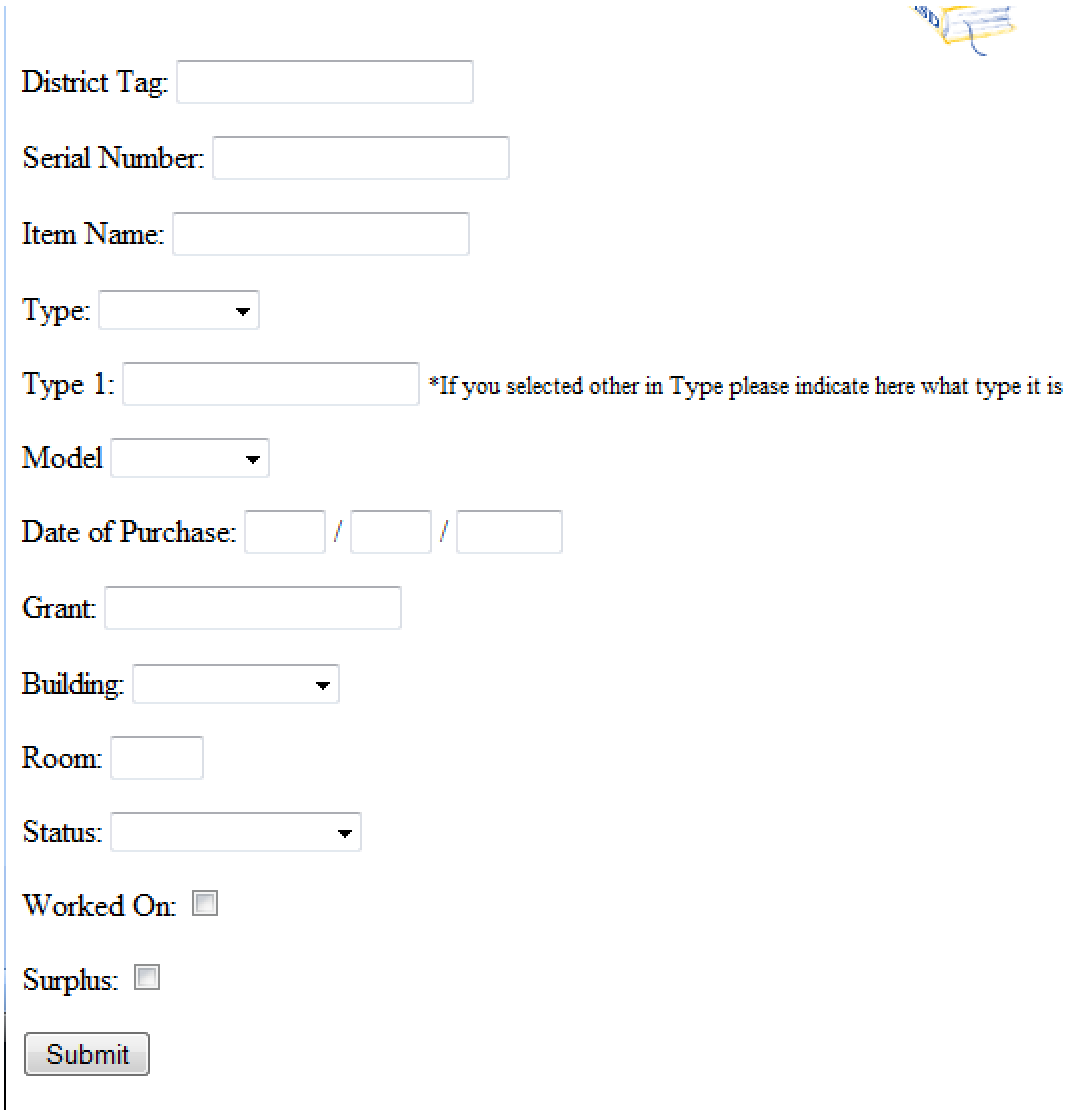
Record with SKU# 99999 has been removed
1 asset(s) deleted

This is your verification that the software asset with the above SKU# has been removed. If you would like you can go back and search for the SKU number that was removed if you would want another form of verification.

Reports

On the main Admin Home page you can click on the Query Database link. When this page loads it will be similar to the page that you see when you want to remove assets. You have to choose equipment or software.

The page for equipment looks like the following:



District Tag:

Serial Number:

Item Name:

Type:

Type 1: *If you selected other in Type please indicate here what type it is

Model

Date of Purchase: / /

Grant:

Building:

Room:

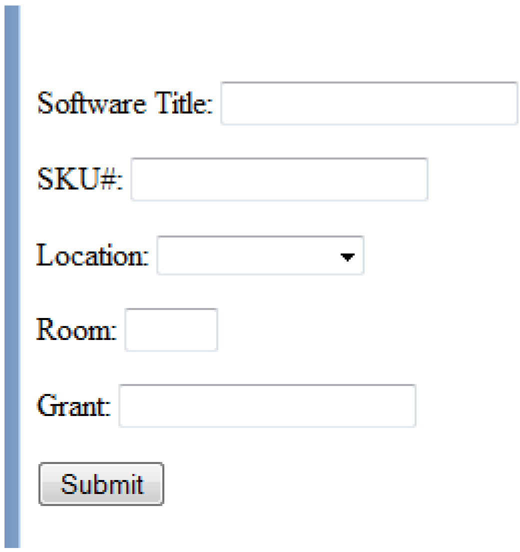
Status:

Worked On:

Surplus:

Submit

The software page looks similar but has fewer options to search for



Just enter the information that you want to search for. If you want to search to see if the equipment is designated as Surplus or if it has been worked on then just click the checkbox.

If there no entries that match your query it will show you this warning:

Your query was: SELECT * FROM `software` WHERE Room = '1'

ID	Software Title	SKU#	Location	Room	Grant	Other Info
There are no records in the database that meet your criteria						

It will show you the query that you ran and that "There are no records in the database that meet your criteria." At this point use the navigational bar on the top to go back to your asset type search. This will take you back to the form to do searching.

Your query was: SELECT * FROM `software` WHERE SKU = '12345'

ID	Software Title	SKU#	Location	Room	Grant	Other Info
3	Test Item 2	12345	WASHS	202	None	Volume Licensee

You can do a search once again. I searched for SKU# 12345. This came up with a record. It will show you all the information that is in the database for that record. You can then go and print the reports off to show to a supervisor or for your records.

Bug Reporting

Along with the Asset Tracking System it comes with a bug tracking software package. This will be used to submit bug reports to the team in charge of the Asset Tracking System and the developer if necessary.

You will be able to get to the bug reporting site by going to http://tracking.webserver/bugs or http://ipaddress/bugs. This way it is easier to access the bug tracking software.

Each user will have to add and register an account themselves. Bugs can be reported by any user who is currently utilizing the Asset Tracking System.

The system that we will be using a system called Flyspray. This system is a nice. Instead of closing each issue or request, you can add [FIXED], [IMPLEMENTED] in the Summary area. Below is how the screen is when you add a new task.

The options on the side are the following:

- Task Type
  - Bug Report
  - Feature Request
- Category
  - Backend / Core
- Status
  - Unconfirmed
  - New
  - Assigned
  - Researching
  - Waiting on Customer

    - Requires Testing
- Assigned To:
- Operating System
    - All
    - Linux
    - Windows
    - Mac
- Severity
    - Low
    - Medium
    - High
    - Critical
- Priority
    - Low
    - Normal
    - High
    - Urgent
    - Immediate
    - Flash
- Reported Version
    - Development
- Due in Version
    - Undecided
- Due Date
- Private (checkbox)

All of the information above can be modified or have options added to them.

You also have the summary which is like a title and then the details. In addition you can add a file. Each file can only be 32MiB. By default the checkbox for Notify Me whenever this tasks changes. You can change this if you desire.