

Dreamgrid

Open-Source Windows Opensimulator

Version 3.2

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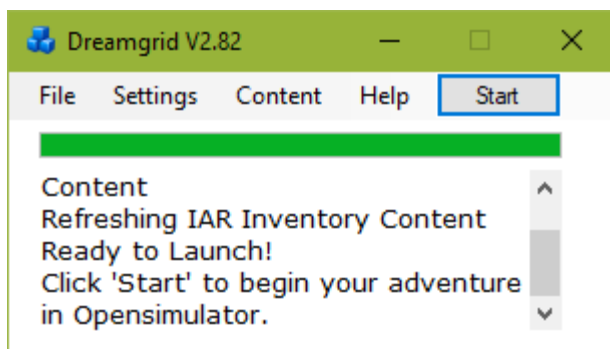
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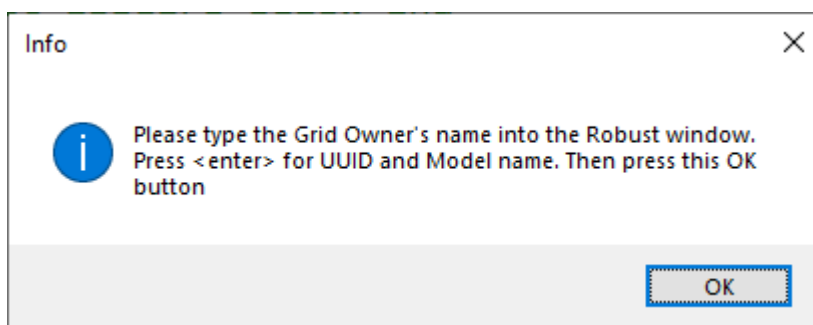
## **Startup - Starting up the System the First Time**

After you click Start.exe, you may get a popup warning. All my binary code is digitally signed and is cryptographically verified to protect you and to assure you that the code you get is what is originally authored. It is virus-free and has no ads. It should say "Verified Publisher: Outworldz, LLC".

Click [Start] in the top right of the menu:



A DOS program "Robust" should launch. This prompt will also appear:



Please leave this screen open.

**Do not click OK just yet.**

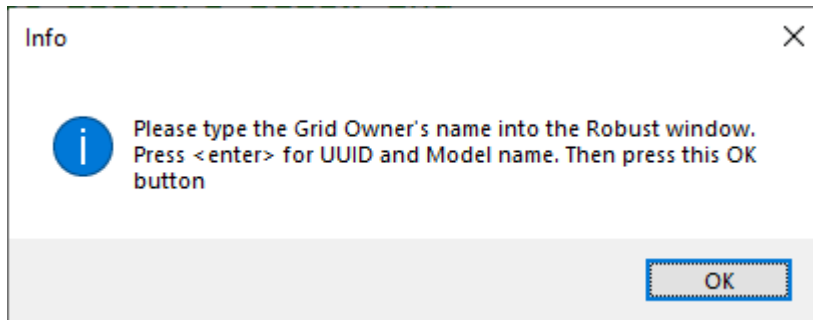
You need to create your "master user". This person will own the entire grid. Type the username you want at the Robust command prompt as shown below:

```
Robust
20:51:12 - [GRID SERVICE]: Starting...
20:51:12 - [MIGRATIONS]: AuthStore data tables already up to date at revision 4
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [GRID USER SERVICE]: Starting user grid service
20:51:12 - [MIGRATIONS]: InventoryStore data tables already up to date at revision 7
20:51:12 - [MIGRATIONS]: Avatar data tables already up to date at revision 3
20:51:12 - [AVATAR SERVICE]: Starting avatar service
20:51:12 - [MIGRATIONS]: AuthStore data tables already up to date at revision 4
20:51:12 - [MIGRATIONS]: InventoryStore data tables already up to date at revision 7
20:51:12 - [MIGRATIONS]: AssetStore data tables already up to date at revision 10
20:51:12 - [MIGRATIONS]: GridStore data tables already up to date at revision 10
20:51:12 - [MIGRATIONS]: GridStore data tables already up to date at revision 10
20:51:12 - [GRID SERVICE]: Starting...
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [GRID USER SERVICE]: Starting user grid service
20:51:12 - [MIGRATIONS]: Avatar data tables already up to date at revision 3
20:51:12 - [AVATAR SERVICE]: Starting avatar service
20:51:12 - [MIGRATIONS]: Presence data tables already up to date at revision 4
20:51:12 - [PRESENCE SERVICE]: Starting presence service
20:51:12 - [MIGRATIONS]: os_groups_Store data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [Wifi]: Administrator account Wifi Admin exists.
20:51:12 - [WifiScriptFace]: Starting...
20:51:12 - [Wifi]: Starting with extension methods type Diva.Wifi.ExtensionMethods
20:51:12 - [Wifi]: Serving local path data via resource path /bin/data
R.O.B.U.S.T.# create user Ferd Frederix
Password:
```

Enter the owner of the grid's Avatar Name and a password. Email is optional. All the other questions can be safely answered with just the ENTER key.

```
Robust
20:51:12 - [MIGRATIONS]: GridStore data tables already up to date at revision 10
20:51:12 - [MIGRATIONS]: GridStore data tables already up to date at revision 10
20:51:12 - [GRID SERVICE]: Starting...
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [GRID USER SERVICE]: Starting user grid service
20:51:12 - [MIGRATIONS]: Avatar data tables already up to date at revision 3
20:51:12 - [AVATAR SERVICE]: Starting avatar service
20:51:12 - [MIGRATIONS]: Presence data tables already up to date at revision 4
20:51:12 - [PRESENCE SERVICE]: Starting presence service
20:51:12 - [MIGRATIONS]: os_groups_Store data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [MIGRATIONS]: GridUserStore data tables already up to date at revision 2
20:51:12 - [Wifi]: Administrator account Wifi Admin exists.
20:51:12 - [WifiScriptFace]: Starting...
20:51:12 - [Wifi]: Starting with extension methods type Diva.Wifi.ExtensionMethods
20:51:12 - [Wifi]: Serving local path data via resource path /bin/data
R.O.B.U.S.T.# create user Ferd Frederix
Password:
Email []:
User ID [ca5c642a-9cc9-4a38-ba05-d86b3a22b5f3]:
Model name []:
20:53:52 - [AUTHENTICATION DB]: Set password for principalID ca5c642a-9cc9-4a38-ba05-d86b3a22b5f3
20:53:52 - [GRID SERVICE]: GetDefaultRegions returning 0 regions
20:53:52 - [USER ACCOUNT SERVICE]: Unable to set home for account Ferd Frederix.
20:53:52 - [USER ACCOUNT SERVICE]: Created user inventory for Ferd Frederix
20:53:52 - [USER ACCOUNT SERVICE]: Creating default appearance items for ca5c642a-9cc9-4a38-ba05-d86b3a22b5f3
20:53:52 - [USER ACCOUNT SERVICE]: Creating default avatar entries for ca5c642a-9cc9-4a38-ba05-d86b3a22b5f3
20:53:52 - [USER ACCOUNT SERVICE]: Account Ferd Frederix ca5c642a-9cc9-4a38-ba05-d86b3a22b5f3 created successfully
R.O.B.U.S.T.#
```

Press OK to the screen prompt.



Another DOS box will appear. This will be your first region. It will be named "Welcome". You can change this name later. The system will ask you for an estate name. You can just press enter to name it "My Estate", or type in a new name.

```

Welcome
20:56:23 - [HG INVENTORY CONNECTOR]: HG inventory broker enabled with inner connector of type OpenSim.Region.CoreModules
20:56:23 - [LAND CONNECTOR]: Remote Land connector enabled
20:56:23 - [MAP IMAGE SERVICE MODULE]: enabled with no refresh and service object OpenSim.Services.Connectors.dll:MapImageServicesConnector
20:56:23 - [NEIGHBOUR CONNECTOR]: Neighbour out connector enabled
20:56:23 - [REMOTE PRESENCE CONNECTOR]: Remote presence enabled
20:56:23 - [REMOTE SIMULATION CONNECTOR]: Remote simulation enabled.
20:56:23 - [USER CONNECTOR]: Remote users enabled
20:56:23 - [Serialiser]: Enabled, using save dir "exports"
20:56:23 - [Groups.Messaging]: GroupsMessagingModule enabled with MessageOnlineOnly = True, DebugEnabled = False
20:56:23 - [Groups]: Initializing Groups Module V2
20:56:23 - [Groups]: Initializing Groups HG Service Connector with LocalService remote
20:56:23 - [JPEGConverter]: Initialise
20:56:23 - [MI IMAGESERVICE]: Initializing...
20:56:23 - [TOS MODULE]: Using config file at .\DivaTOS.ini
20:56:23 - [TOS MODULE]: Not Enabled
20:56:23 - [NAADMIN]: Creating default avatar entries
20:56:23 - [NAADMIN]: No default avatar information available
20:56:23 - [NAADMIN]: Default avatars not loaded
20:56:23 - [LOAD REGIONS PLUGIN]: Loading region configurations from filesystem
20:56:23 - [REGION LOADER FILE SYSTEM]: Loading config files from ./Regions/Welcome/Region/
20:56:23 - [REGION LOADER FILE SYSTEM]: Loading config file ./Regions/Welcome/Region/Welcome.ini
20:56:23 - [REGION LOADER FILE SYSTEM]: Loaded config for region Welcome
20:56:23 - [LOAD REGIONS PLUGIN]: Loading specific shared modules...
20:56:23 - [LOAD REGIONS PLUGIN]: Done.
20:56:23 - [LOAD REGIONS PLUGIN]: Creating Region: Welcome (ThreadID: 1)
20:56:23 - [ESTATE]: Region Welcome is not part of an estate.
20:56:23 - [ESTATE]: No existing estates found. You must create a new one.
New estate name [My Estate]:
  
```

It will then ask you for the owner's name of this region. Use the same name that you first entered in Robust.



```

Welcome
20:57:23 - [HG ASSET CONNECTOR]: Enabled asset caching for region Welcome
20:57:23 - [HG INVENTORY CONNECTOR]: Enabled HG inventory for region Welcome
20:57:23 - [NEIGHBOUR CONNECTOR]: Enabled out neighbours for region Welcome
20:57:23 - [Groups.RemoteConnector]: Groups server at http://192.168.2.3:8003/, authentication None
20:57:23 - [JPEGConverter]: Load into region Welcome
20:57:23 - [MI IMAGESERVICE]: Set up image service
20:57:23 - [MI IMAGESERVICE]: Starting watcher for DataSnapshot
20:57:23 - [MI IMAGESERVICE]: Creating directory DataSnapshot
20:57:23 - [TEMP ATTACHS]: Registered script functions
20:57:23 - [Compiler]: Allowed languages: lsl
20:57:23 - [LLUDPSERVER]: Starting inbound packet processing for the LLUDP server
20:57:23 - [UDPBASE]: Starting inbound UDP loop
20:57:23 - [UDPBASE]: SIO_UDP_CONNRESET flag set
20:57:23 - [WATCHDOG]: Started tracking thread Incoming Packets (Welcome), ID 32
20:57:23 - [LLUDPSERVER]: Starting outbound packet processing for the LLUDP server
20:57:23 - [UDPBASE]: Starting outbound UDP loop
20:57:23 - [WATCHDOG]: Started tracking thread Outgoing Packets (Welcome), ID 33
20:57:23 - [MODULE COMMANDS]: Script engine found, module active
20:57:23 - [AuthorizationService]: Region Welcome access restrictions: None
20:57:23 - [AUTHORIZATION CONNECTOR]: Enabled local authorization for region Welcome
20:57:23 - [BULLETSIM TERRAIN MANAGER]: Terrain for Welcome/<0, 0, 0> created with Heightmap
20:57:23 - [WATCHDOG]: Started tracking thread GetMeshWorker0, ID 34
20:57:23 - [WATCHDOG]: Started tracking thread GetMeshWorker1, ID 35
20:57:23 - [WATCHDOG]: Started tracking thread GetTextureWorker0, ID 36
20:57:23 - [WATCHDOG]: Started tracking thread GetTextureWorker1, ID 37
20:57:23 - [WATCHDOG]: Started tracking thread InventoryWorkerThread0, ID 38
20:57:23 - [WATCHDOG]: Started tracking thread InventoryWorkerThread1, ID 39
20:57:23 - [SCENE]: Secure permissions loading enabled, modules loaded: DefaultPermissionsModule
Estate My Estate has no owner set.
Estate owner first name [Test]: _

```

The system will eventually tell you "INITIALIZATION COMPLETE FOR Welcome - LOGINS ENABLED"

```

Welcome
20:58:22 - [REGION DB]: Loaded inventory from 0 objects
20:58:22 - [SCENE]: Loaded 0 objects from the datastore
20:58:22 - [USER MANAGEMENT MODULE]: Caching creators' data from Welcome (0 objects)...
20:58:22 - [WORLD MAP]: Generating map image for Welcome
20:58:22 - [SHADED MAP TILE RENDERER]: Generating Maptile Step 1: Terrain
20:58:22 - [SHADED MAP TILE RENDERER]: Generating Maptile Step 1: Done in 63 ms
20:58:22 - [WORLD MAP]: Storing map image 6a2dc9ee-f121-4332-be59-5963078e472c for Welcome
20:58:22 - [WORLD MAP]: Region Welcome has no parcels for sale, not generating overlay
20:58:22 - [MAP IMAGE SERVICE MODULE]: Upload maptile for Welcome
20:58:22 - [MAP IMAGE CONNECTOR]: map tile uploaded in 15ms
20:58:22 - [GRID SERVICE]: Region Welcome (ebd52b4d-715e-430f-aa5b-ebe8e1bcb892, 256x256) registered at 1000,1000 with f
lags RegionOnline
20:58:22 - [SCENE]: Initializing script instances in Welcome
20:58:22 - [SCENE]: Initialized 0 script instances in Welcome
20:58:22 - [WATCHDOG]: Started tracking thread Heartbeat-(Welcome), ID 15
20:58:22 - [UTIL]: Loading native Windows library at lib64\sqlite3.dll
20:58:22 - [MUTE LIST]: Mute list enabled
20:58:22 - [JPEGConverter]: PostInitialise
20:58:22 - [OPENSIM]: Enabling remote managed stats fetch. URL = /ManagedStats/
Currently selected region is Welcome
Region (Welcome) #
INITIALIZATION COMPLETE FOR Welcome - LOGINS ENABLED
20:58:24 - [SCENE COMMUNICATION SERVICE]: Informing 0 neighbours that region Welcome is up
Region (Welcome) #
Region (Welcome) #
Region (Welcome) #
Region (Welcome) #
20:58:27 - [REGION DB]: Storing terrain
20:58:27 - [HEIGHTMAP TERRAIN DATA]: V2DGzip 55319 bytes
20:58:27 - [BULLETSIM TERRAIN MANAGER]: Terrain for Welcome/<0, 0, 0> created with Heightmap
Region (Welcome) #

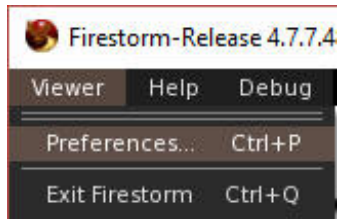
```

## **Setup Your Viewer:**

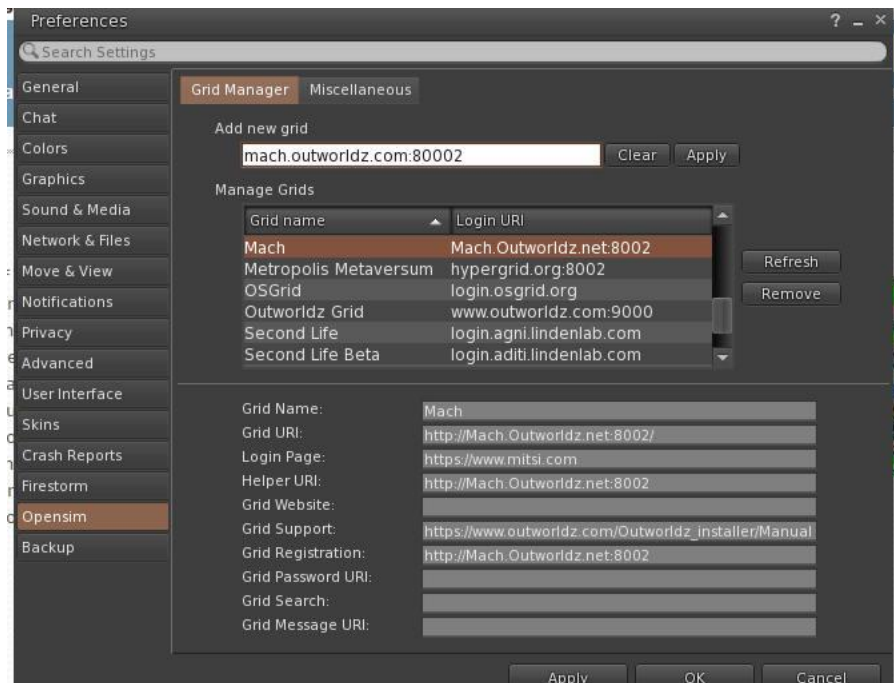
Download the Firestorm viewer for Opensim. You can get it from <https://www.firestormviewer.org/>

Launch the viewer and go to the Viewer Preferences menu (Ctrl-P).



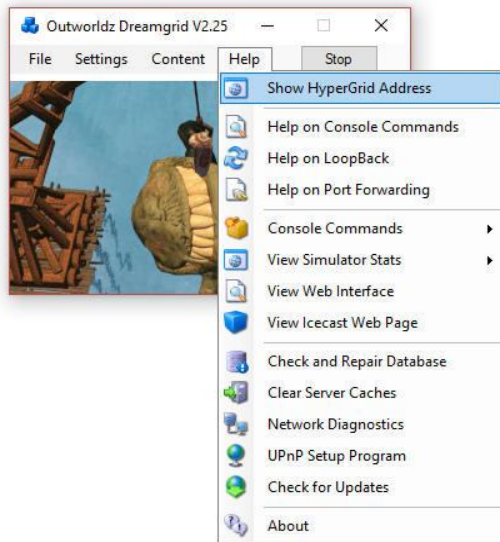


Go to the Opensim Grid manager screen:

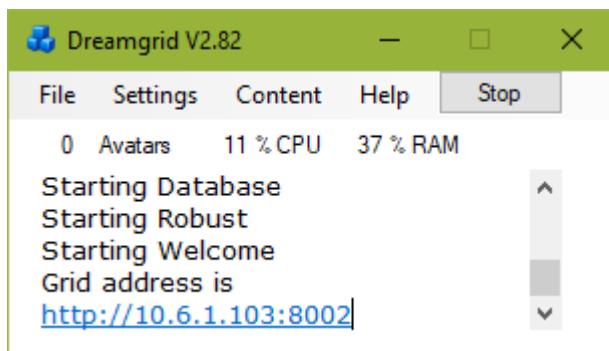


Click the first item in the Help menu - Show Hypergrid address. It may print a name, or an IP address.

If it is an IP Address, your system will only run on your local area network at this time. The Hypergrid will not be available until you set up the router. See the help section at the bottom of this article on Ports and Loopback.



The system will print the address. Mine is shown below. Yours will be a different IP, or a DNS name.



Add the new name to the Firestorm or other viewers "Add new Grid" field and click "Apply".

You should now be able to select your new DreamGrid in the pulldown login screen, and log in with the same First and Last Name and password you originally entered. You should then appear in an empty sim on a small round island.

If this does not work, please use the troubleshooting link at the bottom of this help file.

### **Running the Grid manually**

Robust: You can start Robust manually, too. The program `Outworldzfiles\RunRobust.bat` assumes MySQL is already running.

After the first run, you technically do not need DreamGrid at all. The batch file Go.bat starts a command prompt with an instance of Opensim in it (an instance is a set of sims). The batch file launches Opensim with the settings it needs for the INI files and the Log file.

This is the batch file:

```
@remarkable batch file to start DreamGrid manually.  
cd mysql\bin  
start startmanually.bat  
cd ..\..\opensim  
call runrobust.bat  
call go Welcome  
call go AnotherRegion
```

### **Links:**

Troubleshooting:

[https://www.outworldz.com/Outworldz\\_installer/Manual\\_TroubleShooting.htm](https://www.outworldz.com/Outworldz_installer/Manual_TroubleShooting.htm)

Ports:

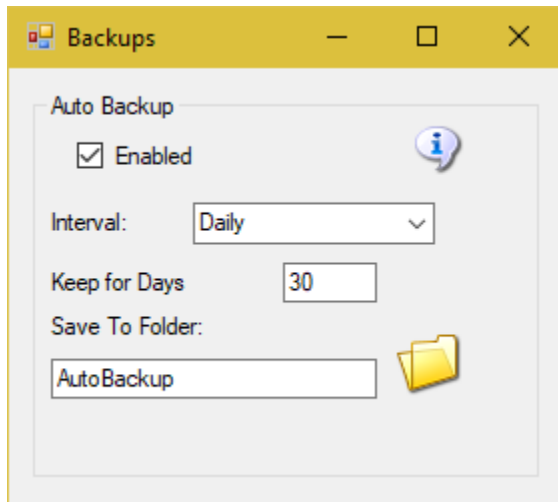
[https://www.outworldz.com/Outworldz\\_installer/PortForwarding.htm](https://www.outworldz.com/Outworldz_installer/PortForwarding.htm)

Loopback:

[https://www.outworldz.com/Outworldz\\_installer/Loopback.htm](https://www.outworldz.com/Outworldz_installer/Loopback.htm)

## **Backup - AutoBackup**

if enabled, Autobackup module periodically saves all regions as OAR files.



If this is enabled, Opensim will make an OAR backup of each region after Opensim has run for **Interval** time. The files will appear in the Outworldzfiles\Autobackup folder.

**Keep for Days** will delete any OAR older than this period of time.

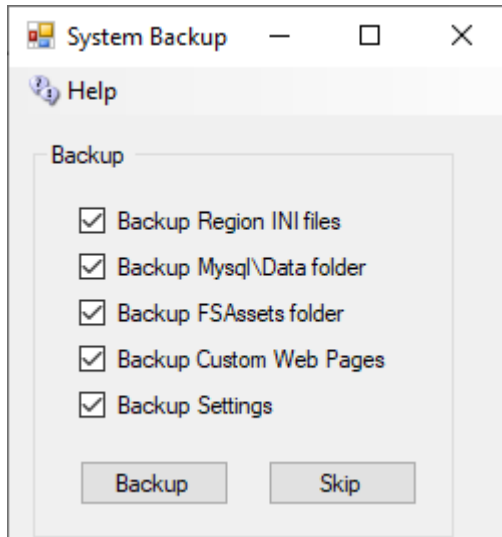
**Save To Folder:** You can click on "Autobackup" folder name, or the folder Icon, and set a different location.

Links:

[http://opensimulator.org/wiki/Load\\_Oar\\_0.9.0%2B](http://opensimulator.org/wiki/Load_Oar_0.9.0%2B)

## Backup - Manual Backups

**I strongly recommend you do a manual backup before updating.** A manual backup uses a lot of disk space, but it backs up all critical files quickly and in a usable form. It will save the selected items in the AUTOBACKUP folder.



**Region INI files** All files from Opensim\bin\Regions are copied. The useful ones are in the bin\Region\(\DosBoxName)\Region\folder

**Mysql\Data folder:** This is the database. The rest of the folders in MySQL are just code or changeable settings that come in an update.

**FSassets Folder:** If you are running the FSAssets system, this contains just the assets of the database. You still need to backup MySQL.

**Custom Web Pages:** This backs up two folders in bin\WifiPages-Custom and WifiPages-Custom in case you have made changes.

**Settings:** This copies the Settings.ini. All settings come from this file.

## **Bird Module**

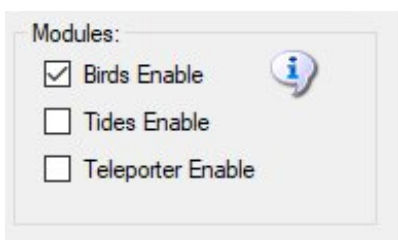
The bird module makes flocks of birds possible.

You will need a bird. There is a button at the top of the Setup Page ``ask you for your Avatar Name and password. It will load a pair of Seagulls into your inventory.

You should log in and rez "SeaGull1" on the ground in one or more of your regions.

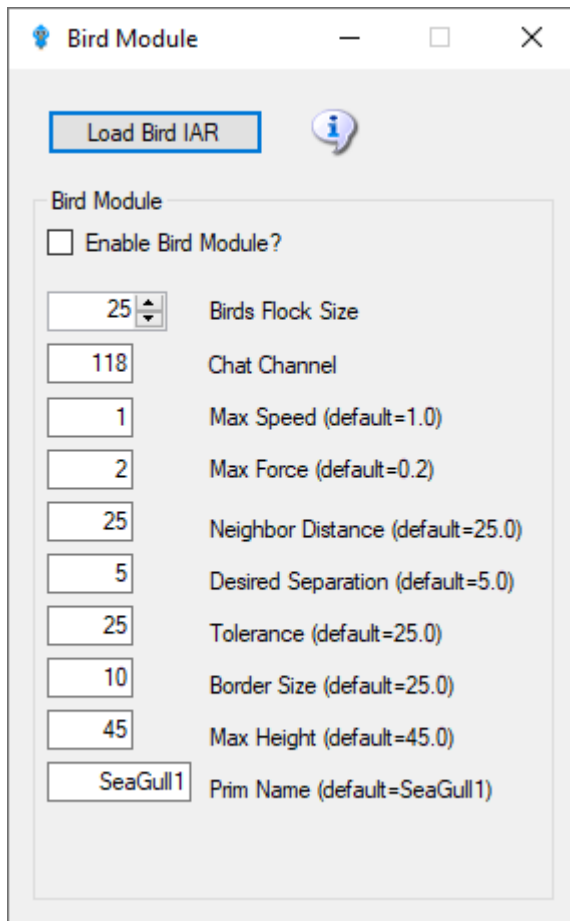


You will need to enable the bird module in each region's control panel.



There are many settings for the Bird Module. You can use the defaults. You must also click Enable and reboot the grid. Birds

must also be enabled in each Region. See each Region's edit screen for the checkbox.



- Enable Bird Module: Determines whether the module does anything.
- BirdsFlockSize = 50: The number of birds to flock
- BirdsMaxFlockSize = 100: The maximum flock size that can be created (keeps things sane)
- BirdsMaxSpeed = 3: How far each bird can travel per update. An update is 11 FPS
- BirdsMaxForce = 0.25: The maximum acceleration allowed to the current velocity of the bird
- BirdsNeighbourDistance = 25: Max distance for other birds to be considered in the same flock as others
- BirdsTolerance = 5: How close to the edges of things can we get without being worried
- BirdsBorderSize = 5: How close to the edge of a region can we get?
- BirdsMaxHeight = 25: How high are we allowed to flock



- BirdsUpdateEveryNFrames = 1: Update bird positions every N simulator frames
- BirdsPrim = SeaGull1: By default the module will create a flock of plain wooden spheres, however this can be overridden to the name of an existing prim that needs to already exist in the scene - i.e. be rezzed in the region.

The following commands can be issued on the Console or via in-world chat or scripted chat on the Chat Channel to control the birds at runtime:

- birds-stop or /118 stop  
stop all birds flocking
- birds-start or /118 start  
start all birds flocking
- birds-enable or /118 enable  
enable the flocking simulation if disabled and rez new birds
- birds-disable or /118 disable  
stop all birds and remove them from the scene
- birds-prim <name> or /118 prim <name> changes the name of the bird prim that it loads
- framerate <num>  
only update the flock positions every frames, only really useful for photography and debugging bird behavior.

These commands are great for playing with the flock dynamics in real time:

- birds-size or /118 size  
change the size of the flock
- birds-speed or /118 speed  
change the maximum velocity each bird may achieve
- birds-force or /118 force  
change the maximum force each bird may accelerate
- birds-distance or /118 distance  
change the maximum distance that other birds are to be considered in the same flock as us
- birds-separation or /118 separation  
sets how far away from other birds we would like to stay
- birds-tolerance or /118 tolerance  
sets how close to the edges of things can we get without being worried. If distance is less than separation then the birds will never flock. The other way around and they will always eventually form one or more flocks.

### Security:

By default anyone can send commands to the module from within a script or via the in-world chat on the 'BirdsChatChannel' channel. You should use a high negative value for this channel if you want to allow script access, but not in-world chat.

### Bird Prims:

Any currently rezzed in-scene-object can be used as the bird prim. However fps is very much affected by the complexity of the entity to use. It is easier to throw a single prim (or sculpty) around the scene than it is to throw the constituent parts of a 200 linked prim dragon.

Tests show that  $\leq 500$  single prims can be flocked effectively - depending on system and network. However maybe  $\leq 300$  simple linksets can perform as well.

### Network Traffic:

I tested the amount of network traffic generated by bird updates. 20 birds (each with 4 linked prims) takes up about 300kbps in network position updates. 50 of the same birds generates about 750kbps traffic. Each bird uses roughly 15kbps of network traffic. This is all measured using an update framerate of 1, i.e. birds' position is updated every simulator frame.

### Statistics:

The stats command in-world or via script returns data to BirdsChatChannel. The console command returns stats to the console. All the modules parameters are returned including a list of the active bird prims currently rezzed in the region, and the UUIDs of those prims' root prim. Also included is a list of any avatar UUIDs that may be sitting on those prims.

Here is an example output:

```
birds-started = False  
birds-enabled = True  
birds-prim = SeaGull1
```

```
birds-framerate = 1
birds-maxsize = 100
birds-size = 20
birds-speed = 1.5
birds-force = 0.2
birds-distance = 25
birds-separation = 10
birds-tolerance = 5
birds-border = 5
birds-prim0 = OpenSimBirds0 : 01abef79-7fb2-4c8d-831e-
62ce1ce878f1 :
birds-prim1 = OpenSimBirds1 : af85996d-af4d-4dda-bc89-
721c51e09d0c :
birds-prim2 = OpenSimBirds2 : ca766390-1877-4b19-a29e-
4590cf40aece :
birds-prim3 = OpenSimBirds3 : 6694bfa9-8e7f-4ac5-b336-
ad13e5cfced2 :
birds-prim4 = OpenSimBirds4 : 1c6b152d-dcca-4fef-8979-
b7ccc8139e1e :
birds-prim5 = OpenSimBirds5 : 08bba2cc-d427-4855-a7f0-
57aa55109707 :
birds-prim6 = OpenSimBirds6 : bbeb8b6d-28d8-41a9-b8ce-
dab3173bd454 :
birds-prim7 = OpenSimBirds7 : 45c73475-1f0f-487f-ac9f-
87d30d0315e8 :
birds-prim8 = OpenSimBirds8 : d5891cc8-c196-4b05-82ef-
3c7d0f703963 :
birds-prim9 = OpenSimBirds9 : 557b61e1-5fd6-4878-980e-
e93cabcc078f :
birds-prim10 = OpenSimBirds10 : 7ff2c02d-d73c-4e49-a4e9-
84b652dc70a9 :
birds-prim11 = OpenSimBirds11 : c2b0820c-ba20-4318-a0e8-
ec6ad521f524 :
birds-prim12 = OpenSimBirds12 : e8e87309-7a47-4983-89a1-
4bb11d05a40c :
birds-prim13 = OpenSimBirds13 : a351e0e3-ae99-48b8-877d-
65156f437b33 :
birds-prim14 = OpenSimBirds14 : 150f1c3b-e9d9-4cda-9e03-
69fb5286e436 :
birds-prim15 = OpenSimBirds15 : ebf63de1-d419-45d0-8eee-
3db14295e401 :
birds-prim16 = OpenSimBirds16 : faad97af-4ee6-425c-b221-
99ef53650e93 :
```

birds-prim17 = OpenSimBirds17 : d75ba544-bbc2-4f5a-9d7e-00e21ed6f191 :  
birds-prim18 = OpenSimBirds18 : b91e42cb-ae5b-4f03-bf6e-dc03d52858b7 : a351e0e3-ae99-48b8-877d-65156f437b33  
birds-prim19 = OpenSimBirds19 : 44aa3e14-56bc-43dd-afbd-7348c5dfe3a5 :

In the above example, there is one avatar sitting on bird-prim18. For more than one avatar the UUID list will be separated by spaces.

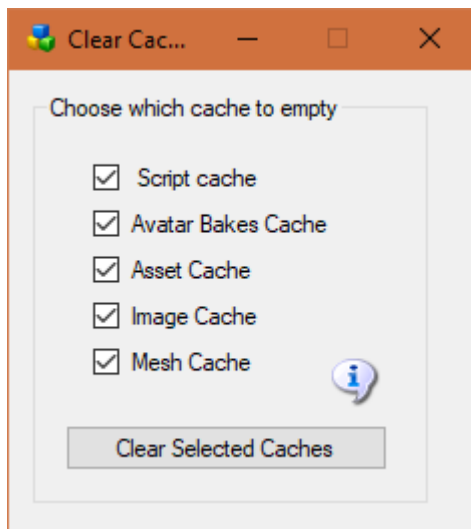
#### Links:

<https://github.com/JakDaniels/OpenSimBirds>

## Cache Deletion

Opensimulator has many caches of data to improve performance. You may optionally clear these caches. The system will refresh them on the next startup. This will slow your system down dramatically on the next boot as it must re-fetch all assets the next time it starts.

Opensim must be stopped to clear script and bake caches.



**Script cache:** Clearing the script cache is only necessary after a update to Opensim binaries. Dreamgrid will not delete the ".STATE" files so your virtual pets will not die.

**Avatars bakes cache:** this folder holds the various baked skin layers.

**Asset cache:** holds the assets (mesh, prims, textures) and is typically exceptionally large. It automatically flushes itself every 48 hours.

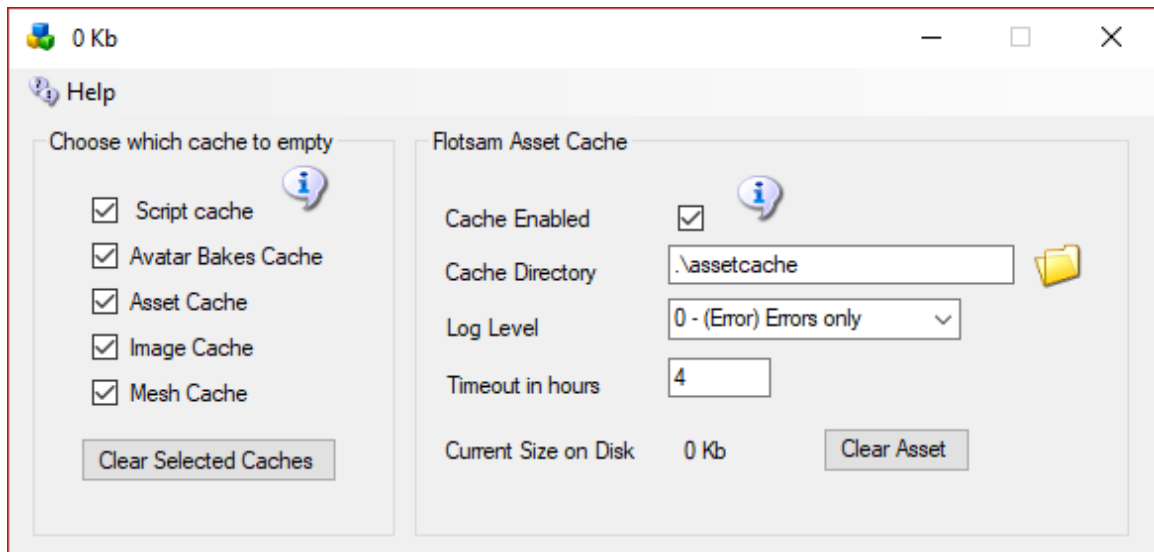
**Image cache:** holds the images and is typically exceptionally large.

**Mesh cache:** is typically not used

**Mesh cache:** is typically not used

## Flotsam Cache Settings

OpenSimulator has an asset cache that stores the assets retrieved from an asset service. This reduces the load on a possibly remote asset service and improves OpenSimulator responsiveness.



## Flotsam asset cache

Note: You do not need to run the Flotsam asset cache if you are running the FSassets file system database locally.

The Flotsam asset cache, stores assets on disk and in memory.

At the moment, the amount of memory or filesystem storage used by the cache can only be limited via manual actions (wiping all or part of cached assets from the filesystem), by console commands (e.g. "fcache clear") or by timeout settings (e.g. FileCacheTimeout = 1 to automatically remove cache files not accessed for 1 hours).

### General principles

When OpenSimulator requires an asset (e.g. in response to a viewer request for a notecard), then it first asks the cache for this data. If the data is not found in the cache, then it asks the grid asset service (or possibly a foreign asset service in the

case of Hypergrid). If the asset is found then it is both stored in the cache and returned to the user.

If an asset is uploaded to OpenSimulator (e.g. by the viewer uploading an animation), then the asset is immediately both kept in cache (if there is room and the asset is not temporary) and sent to the asset service (if the asset is not temporary).

Therefore, at any point you can wipe any temporary data stored by the asset cache (e.g. on the filesystem), since the next request for that asset will simply query the asset service as the asset will not be found in cache.



## Database Settings

Did MySQL crash? See section **Crashes**.

**Do not change any of these settings without knowing what you are doing!** Any change here must match complicated hand-made changes in MySQL! See the bottom of this help section for more details.

There are two databases in Dreamgrid: Robust is the login and inventory database. Each region also uses a separate Opensim database for storing what is in region.

Database root password is blank. This is safe as it only listens on localhost, which is your server.

### Robust Database:

- **Robust Server:** should always be 127.0.0.1. This is the Server that runs Robust (itself). It can be the IP address of a different server running MySQL.

Default: *127.0.0.1*

- **Robust name:** The name of the Robust database.

Default: *robust*

- **UserName:** The login name 'robustuser'@localhost'.

Default: *robustuser*

- **Password** : The password for Robust.

Default: *robustpassword*

- **MySQL Port:** The TCP/IP port that both databases use.

Default = 3309 to not interfere with the normal Mysql Port of 3306

### **Local Region Database:**

- **DB name:** The name of the region database.

default: *opensim*

- **UserName:** The login name 'opensimuser'@localhost'.

default: *opensimuser*

- **Password** : The password for opensim region database.

default = *opensimpassword*

- **MySQL Port:** The TCP/IP port that both databases use.

Default = 3309 to not interfere with the normal Mysql Port of 3306

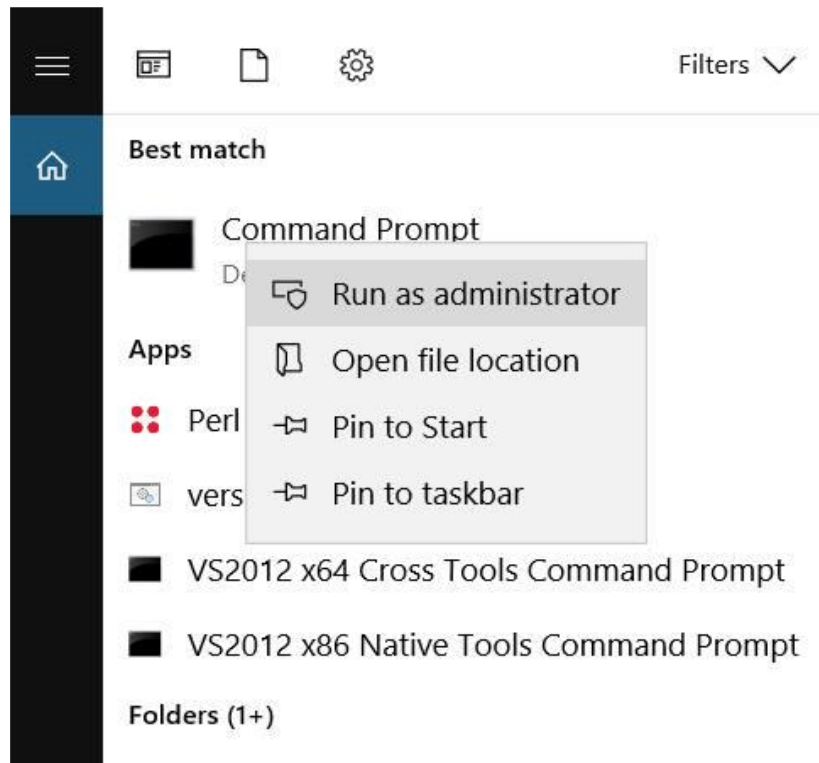
If you want to alter the username and password to either database, you must use the MySQL.exe program in a DOS box.

```
cd Outworldzfiles\mysql\bin
mysql -u root
use opensim;
create user 'anewopensimuser'@'localhost' identified by 'opensimpassword';
grant all on opensim.* to 'anewopensimuser'@'localhost';
use robust;
create user 'anewrobustuser'@'localhost' identified by 'robustpassword';
grant all on robust.* to 'anewrobustuser'@'localhost';
quit;
```

### **Running MySQL as a Service**

Dreamgrid will detect any running Mysql using the same port. You can install Mysql as a Windows service. There is a batch file \*InstallAsAService.bat\* in mysql\bin to set this up. Mysql will

then start and stop safely with Windows. This batch file must be run once, as an Administrator. You type "CMD" in the search box, and then right click the Command Prompt and select "Run as Administrator".



Use that DOS box to run **InstallAsService.bat**. Then type in 'Services.msc', and use it to start MySQL, or type in 'net start Mysql' <enter>.

You can verify MySQL is running by typing 'mysql -u root <enter>'. If you get a mysql prompt, it is running as a service. Then type quit; with the semicolon, and enter.

You should also set the service to restart so MySQL restarts on any crash. Windows knows about services and will send signals to MySQL to shut itself off gracefully. The only danger is that power fails and you corrupt the database. If you are serious about running a grid, then a UPS is necessary.

### Crashes:

Your MySQL database may be crashed. Here is a way to recover and start MYSQL manually.

Navigate to the **Outworldzfiles\mysql\bin** folder.  
Then double-click "StartManually.bat"

Any error message it prints may be helpful. If the DOS window closes, a MySQL LOG file will be saved in  
OutworldzFiles\mysql\data as a \*.err file. That may give you a clue as to what to do.

### My database still did not start!

Try running **Outworldzfiles\mysql\bin\Repair\_ISAM.bat.**

Then double-click "StartManually.bat". The DOS window that appears should 'stick' open.

Run Task manager by typing Ctrl-Shift-ESC.

Look for *mysqld.exe*. Wait for the CPU usage to go to 0 on *mysqld.exe*. This may take a long time as MySQL is rebuilding the database. It could take an hour or more, depending upon the size and your disk and CPU speed.

Double click CheckandRepair.bat to run diagnostics.

If errors appear, answer any questions with a 'Y'. This will take a long time as MySQL is repairing the database.

Once the Check and Repair is finished, type in  
'StopDatabase<enter>'

The DOS box that first appeared should now close. Your database has been recovered and it is safe to start Dreamgrid.

**If you still have issues**, delete the file Mysql\Data\ib\_logfile0 and ib\_logfile1. Do not delete ibdata1! Then repeat the above sequence.

### Starting Over with a Blank Database

You can wipe ALL data out. If you do this, you must re-enter all accounts and recreate your system from OAR and IAR files. This WILL LOSE ALL DATA.

I recommend you make a backup of the Mysql\Data folder first.

I have not yet 'lost' a database, and I have seen dozens of them crash in oddball ways. Please contact me at [fred@outworldz.com](mailto:fred@outworldz.com) if you have questions or need more help in recovering a database. The largest was 70 Gigabytes which took four days just to get a copy sent to me. It was fixed in a few hours. The problem was to a single bad character in a UUID. So please do not delete it unless you really, really want to start over!

If you MUST wipe out the database and start over, delete the folder Mysql\data. Then extract the contents of the file Blank-Mysql-Data-folder.zip to make a new Mysql\Data folder.

This will make it start over at the very beginning. The database should start up now. You must go to Robust, type create user<enter>', and re-enter your Avatar name and password. You can then re-enter your estate information in each DOS box for Each region.

You can also restore the database if you have a .SQL backup. Or use OARs and IARs.

## Server Type

### Grid Server With Robust

A grid server is modeled after the World Wide Web, with independent domains. Content is spread across small, independent and on large domains, independently, yet interlinks.

Robust is the service that lets hypergrid users enter each world. A Grid Server can also support regions locally.

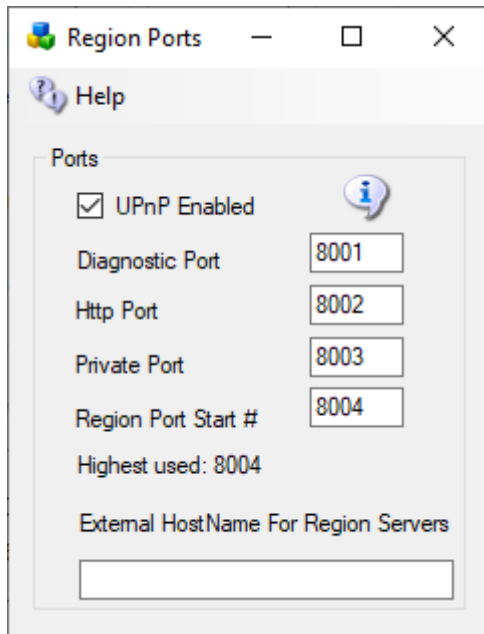
A grid server can host as many Region servers as its memory and CPU capacity allows.

### Region Server

A Region server uses a separate Dreamgrid Robust Grid Server for all assets and login services. Only regions and their content are stored locally. The grid server may be located on the same LAN, or on another WAN.

A Region Server always uses the same Domain Name and port as the Hosting server.

In cases where the Grid server is on a different WAN IP address, you must also enter the Region Servers IP address or domain name in the Region Ports setting:



### OsGrid Region Server

The **OsGrid** region server is a preconfigured region server already set up to connect to **OsGrid**.

### Hypergrid.org Region Server

The **Hypergrid.org** region server is a preconfigured region server already set up to connect to **Hypergrid.org**.

### Aviworlds Region Server

**The Aviworlds** region server is a preconfigured region server already set up to connect to **Aviworlds**.  
**Aviworlds**



## Diva 'Wifi' Management Web Page

The Management Web page can be reached at <http://127.0.0.1:8002> if the checkbox is enabled and Robust is running.

For other users, it will be <http://YourDomainName:8002>, where YourDomainName is your Public, Internet-facing IP or DNS name.

The features of Wifi are:

- Account creation, optionally controlled by the administrator
- Configurable default avatars for new accounts
- Account updates by both users and administrator
- Account deletion by administrator
- Password recovery via email
- Simple user inventory management

You can change many of the parameters of Wifi in this panel:

The screenshot shows the 'Web Server Panel' window with the following sections:

- Wifi Interface Admin:**
  - ☒ Diva Wifi Enabled
  - First Name:
  - Last Name:
  - Password:
  - Notify Email:
  - ☒ Confirmation required to Log in?
- Splash Screen:**
  - Theme: ☒ White, ☐ Black, ☐ Custom
  - This Grid's Friendly Name:
  - Viewer Splash Screen URL:
- SMTP Send Email Account:**
  - Username:
  - SMTP Password:
  - SmtP Host:
  - SmtP Port:
- Apache and PHP Web Server:**
  - ☒ Apache+PHP Enabled
  - ☐ Apache As a Service
  - Web Port:
  - ☐ Search Local Grid
  - ☒ Search All Grids

There are four sections that can be modified:

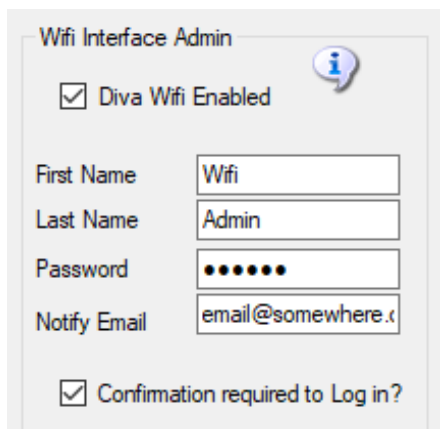
- Wifi Admin account: A super-user that administers the system
- Splash Screen: Things that affect the page that shows to new users
- Apache web server, which is needed for Viewer search.
- SMTP Email: Settings to send email for things like password changes

### Wifi Admin account

The system automatically makes several accounts the first time it is booted. One of these is "Wifi Admin". This user has special rights in the web panel. It can administer all other accounts, delete them, and approve them.

A random password is chosen at startup. You may change it. Since the Hypergrid exposes this login page to the Internet, please choose a strong password.

You must already have a user with levels set to 200 or higher in order to change the name from Wifi Admin. You can add another user and set it to that elevated level too.



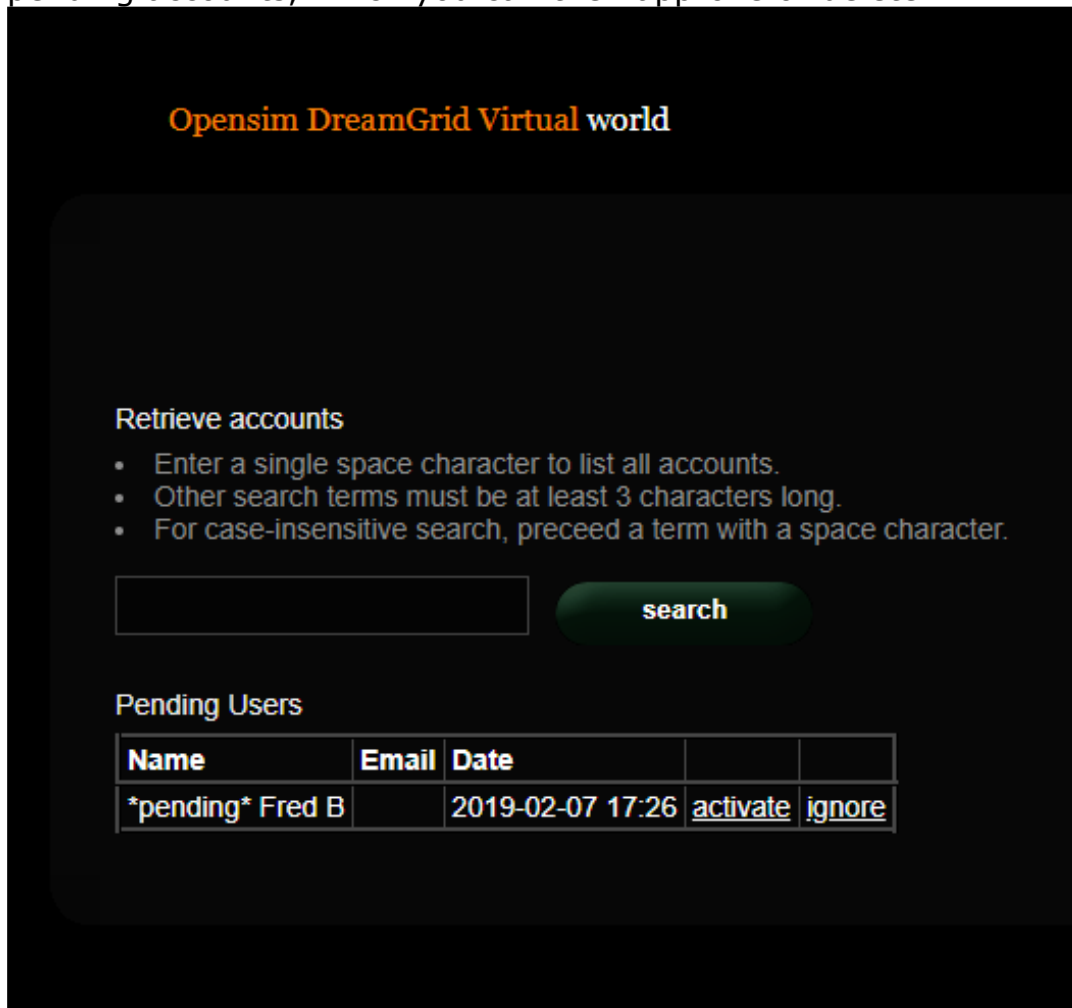
The screenshot shows a web interface titled "Wifi Interface Admin" with a blue information icon. It contains the following elements:

- A checked checkbox labeled "Diva Wifi Enabled".
- Four text input fields:
  - "First Name" with the value "Wifi".
  - "Last Name" with the value "Admin".
  - "Password" with masked characters (dots).
  - "Notify Email" with the value "email@somewhere.c".
- A checked checkbox at the bottom labeled "Confirmation required to Log in?".

### Confirmation Required to Log In:

Wifi can create new accounts in two manners: uncontrolled and controlled. If you choose to have controlled account creation, every time someone creates an account, the Wifi Admin account will receive an email notifying of such an event (make sure you have the Wifi Admin's email address properly set).

You should then login to Wifi as administrator, and choose USER MANAGEMENT. You will be presented with a list of all pending accounts, which you can then approve or delete.



If you choose to have uncontrolled account creation, then anyone can create an account in your world without going through your approval.

### Splash Screen

#### Themes:

There are three possible theme colors, Black on White, White on Black, and Custom. The default theme is Black, or the selected theme will be copied by Dreamgrid into the real WifiPages folder on startup.

### Customizing your theme

You can change the theme with this switch to one of several sets of folders:

White theme consists of two folders:

```
Outworldzfiles\Opensim\WifiPages-White  
Outworldzfiles\Opensim\bin\WifiPages-White
```

Black theme consists of two folders:

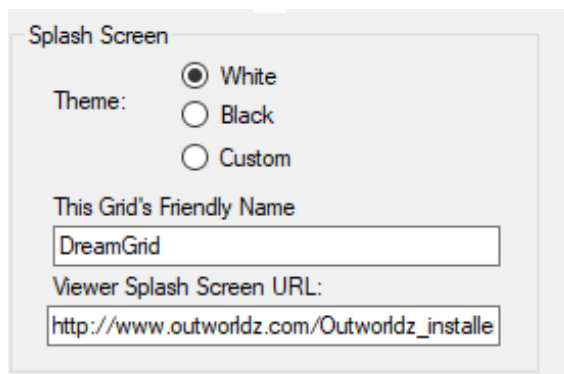
```
Outworldzfiles\Opensim\WifiPages-Black  
Outworldzfiles\Opensim\bin\WifiPages-Black
```

If you want to make modifications, please use a custom theme. Otherwise your changes to the -Black, -White or WifiPages folders will get written over in an update.

First copy both the two Black or the two White folders to the WifiPages-Custom folder next to them. Each set of files goes in these places:

- Opensim/WifiPages-Custom
- Opensim/bin/WifiPages-Custom

The updater will never overwrite these custom pages. If you make changes to the custom pages, they will be set into the Wifi page on startup.



Splash Screen

Theme: ☒ White  
☐ Black  
☐ Custom

This Grid's Friendly Name  
DreamGrid

Viewer Splash Screen URL:  
http://www.outworldz.com/Outworldz\_installe

### Changing the HTML

Diva Canto uses some advanced, Opensim-specific code in her Diva pages.

The site starts from Opensim\bin\WifiPages\index.html.

**#includes** There are several include directives that bring in the rest of the web site. Diva uses a series of `<!--#include file=header.html -->` statements to bring in files from the other folder set in Opensim\WifiPages. Includes in those files then bring in more of the web pages from Opensim\Bin\Wifipages.

**#get** There are several statements that are replaced by server data:

**Users in World:** `<!-- #get var=UsersInworld -->`

**Regions:** `<!-- #get var=RegionsTotal -->`

**Total Users:** `<!-- #get var=UsersTotal -->`

**Active Users last** `<!-- #get var=UsersActivePeriod -->` **days**

**Active Users:** `<!-- #get var=UsersActive -->`

### **Everyone wants to change the image:**

For the **BLACK** theme, do the following:

Copy the folder \OutworldzFiles\Opensim\bin\**WifiPages-Black** to \OutworldzFiles\Opensim\bin\**WifiPages-Custom**

Copy the folder \OutworldzFiles\Opensim\**WifiPages-Black** to \OutworldzFiles\Opensim\**WifiPages-Custom**

Save the image as a JPG file in

\OutworldzFiles\Opensim\bin\**WifiPages-Custom**\images\**orange-planets-background.jpg**

Go to Settings->Web Control Panel. Click the box and change it from **Black** to **Custom**. This will copy the files from **-Custom** to the working folder, bin/WifiPages.

Navigate to <http://127.0.0.1:8002>. You should see your new image.

For the **WHITE** theme, do the following:

The new image goes in \bin\**WifiPages-Custom**\images\**header.png**. You must first make the folder

Copy the folder \OutworldzFiles\Opensim\bin\**WifiPages-White** to \OutworldzFiles\Opensim\bin\**WifiPages-Custom**

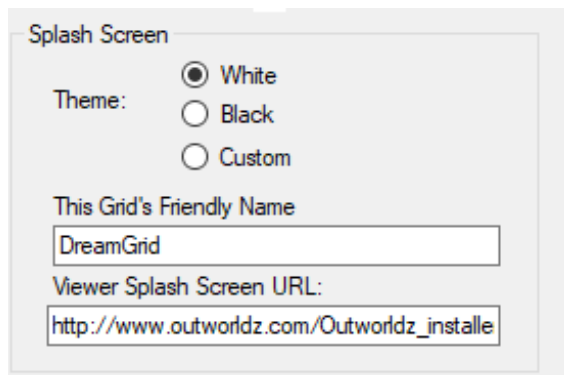
Copy the folder \OutworldzFiles\Opensim\**WifiPages-White** to \OutworldzFiles\Opensim\**WifiPages-Custom**

Then click the Theme setting for **White**. This will copy the files from custom to the WifiPages folder.

Navigate to <http://127.0.0.1:8002>. You should see your new image.

### Friendly Name

The friendly name appears on the login screen at the top. It is broadcast to viewers as the grid name in the grid Selector Pulldown. If you change this, you must delete and re-add the grid to the viewer.



Splash Screen

Theme:

- ☒ White
- ☐ Black
- ☐ Custom

This Grid's Friendly Name

DreamGrid

Viewer Splash Screen URL:

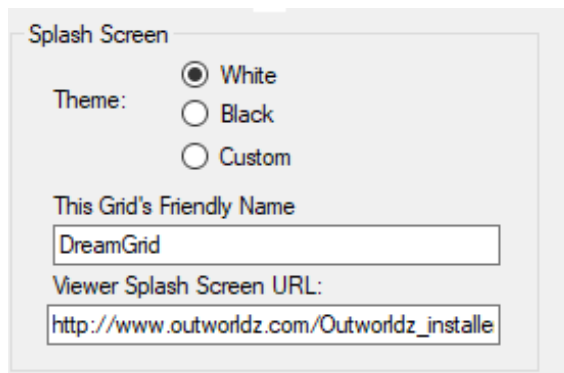
[http://www.outworldz.com/Outworldz\\_installe](http://www.outworldz.com/Outworldz_installe)

### Viewer Splash Screen URL

The Splash screen URL appears on the login screen as a web page. You can use any web page. If you change this URL, you must delete the grid setting in your viewer, and re-add it to get it updated.

If you change this, you must delete and re-add the grid to the viewer.

The Splash Screen URL is shown below.



Splash Screen

Theme:

- ☒ White
- ☐ Black
- ☐ Custom

This Grid's Friendly Name

DreamGrid

Viewer Splash Screen URL:

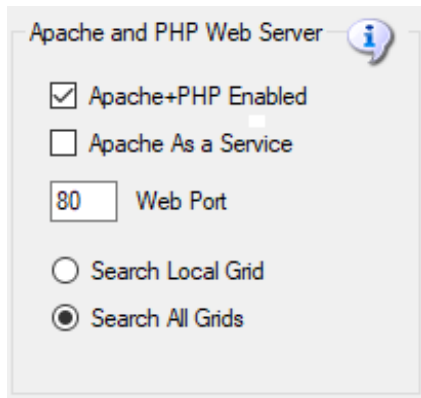
[http://www.outworldz.com/Outworldz\\_installe](http://www.outworldz.com/Outworldz_installe)

It is recommended to set this to `http://(URL of your grid):8002` so they can see the Diva Login Page.



## Apache Web server and PHP5

You may optionally set up the Apache Web server with PHP5. These are used to serve up an advanced map, web pages, and built-in viewer search.



The checkbox for Apache+PHP must be enabled for the web server and PHP to work.

### Apache As a Service Unchecked

If Unchecked and enabled, the system will run Apache as a DOS box. You will see several new DOS boxes appear. These Boxes are for the server and its log system. They will be shut down when your grid is stopped. Your grid is then completely portable.

### Apache As a Service

If checked and enabled will install "Apache HTTP Server" as a running service when you first click Start to run your grid. It will start when your PC is booted. No DOS boxes will appear. The advantage is less clutter, and 24-hour operation of the web server. But if you run from another folder, the server will still be running from the original folder. You must shut down and remove Apache with the command 'sc delete ApacheHTTPServer' before starting any copy in another folder.

**Web Port** defaults to 80. If your ISP blocks port 80, use 8000.

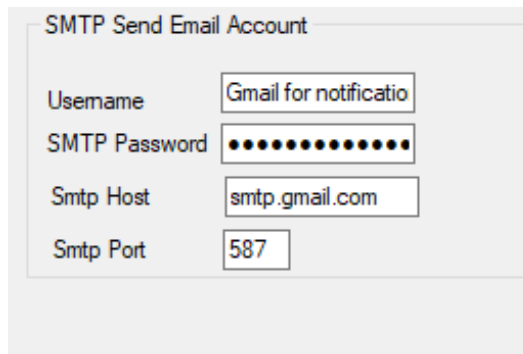
**Search Local Grid** will set search viewer Data Snapshot for primes, objects, regions for sale, and classified ads for just your grid.

Events will come from all grids, no matter what this switch is set for.

**Search All Grids** If set to Search All Grids, the data is registered to be collected and crawled by the <https://www.outworldz.com> server and is thus available for anyone to look at. They have to have the same switch set to search. To disable this, either use Search Local Grid or do not mark prims or regions for "Show in Search" in your viewer.

### SMTP Email

You may optionally set up Simple Mail Transport Protocol to send email for events such as password changes.



SMTP Send Email Account

Username	Gmail for notificatio
SMTP Password	••••••••••••
SmtP Host	smtp.gmail.com
SmtP Port	587

If you use Gmail for SMTP, you will need to enable Less-Secure mail settings at Gmail in your account.

You can find information about this at <https://support.google.com/accounts/answer/6010255>

### Default Avatars

A "Wifi.ini" file lets you select one of three default appearances for newly created avatar. But in a pristine environment you must set those avatars up first.

1. Create the avatars with names "Female Avatar", "Male Avatar", "Neutral Avatar". and authorize them via the Wifi Admin.
2. Login as each avatar in turn. They will usually appear as a cloud initially and then after a short while rez to appear as "Ruth" wearing four basic body parts, new pants, and new shirt. These parts come directly from the Opensim Library and MUST NOT be worn in your final appearance for the default avatars. You can COPY these library parts

into the avatar's inventory if you wish, or create new body parts and clothing, but before you finish you should remove any items that show as "worn" in the Opensim Library as those will not rez on avatars based on these models.

3. Create new body parts and clothing and edit them and/or add any other mesh, clothing, attachments, or HUDs you wish to appear on the avatars.
4. Note you can extend (or change the avatars names or labels) for the default appearances and/or change the preselected default by altering Wifi.ini.

```
;;Syntax: AvatarAccount_<AvatarType> = "<FirstName> <LastName>"
;;(replace spaces in <AvatarType> with underscore)
AvatarAccount_Female="Female Avatar"
AvatarAccount_Male="Male Avatar"
AvatarAccount_Neutral="Neutral Avatar"

;; Preselection for default avatar in new account registration
AvatarPreselection="Neutral"
```

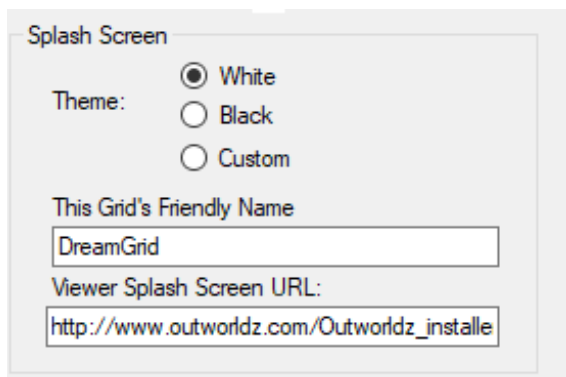
5. When you create a new avatar via the Wifi web interface based on these predefined avatars the items worn will appear in the newly create avatar's inventory under Clothes - > Default Avatar <AvatarType>.

### Viewer Splash Screen URL:

The Splash screen URL appears on the login screen as a web page. You can use any web page. If you change this URL, you must delete the grid setting in your viewer, and re-add it to get it updated.

If you change this, you must delete and re-add the grid to the viewer.

The Splash Screen URL is shown below.



Splash Screen

Theme: ☒ White  
☐ Black  
☐ Custom

This Grid's Friendly Name  
DreamGrid

Viewer Splash Screen URL:  
[http://www.outworldz.com/Outworldz\\_installe](http://www.outworldz.com/Outworldz_installe)

It is recommended to set this to `http://(URL of your grid):8002` so they can see the Diva Login Page.

## Splash Screen

### Themes:

There are three possible theme colors, Black on White, White on Black, and Custom. The default theme is Black, or the selected theme will be copied by Dreamgrid into the real WifiPages folder on startup.

### Customizing your theme

You can change the theme with this switch to one of several sets of folders:

White theme consists of two folders:

```
Outworldzfiles\Opensim\WifiPages-White  
Outworldzfiles\Opensim\bin\WifiPages-White
```

Black theme consists of two folders:

```
Outworldzfiles\Opensim\WifiPages-Black  
Outworldzfiles\Opensim\bin\WifiPages-Black
```

### Custom Theme

If you want to make modifications, please use a custom theme. Otherwise your changes to the -Black, -White or WifiPages folders will get written over in an update.

First copy both the two Black or the two White folders to the WifiPages-Custom folder next to them. Each set of files goes in these places:

- Opensim/WifiPages-Custom
- Opensim/bin/WifiPages-Custom

The updater will never overwrite these custom pages. If you make changes to the custom pages, they will be set into the Wifi page on startup.

Splash Screen

Theme: ☒ White  
☐ Black  
☐ Custom

This Grid's Friendly Name

Viewer Splash Screen URL:

### Friendly Name

The friendly name appears on the login screen at the top. It is broadcast to viewers as the grid name in the grid Selector Pulldown. If you change this, you must delete and re-add the grid to the viewer.

Splash Screen

Theme: ☒ White  
☐ Black  
☐ Custom

This Grid's Friendly Name

Viewer Splash Screen URL:

### Changing the HTML

Diva Canto uses some advanced, Opensim-specific code in her Diva pages.

The site starts from Opensim\bin\WifiPages\index.html.

**#includes** There are several include directives that bring in the rest of the web site. Diva uses a series of `<!--#include file=header.html -->` statements to bring in files from the other folder set in Opensim\WifiPages. Includes in those files then bring in more and more of the web pages from Opensim\Bin\Wifipages.

**#get** There are several statements that are replaced by server data:

**Users in World:** <!-- #get var=UsersInworld -->  
**Regions:** <!-- #get var=RegionsTotal -->  
**Total Users:** <!-- #get var=UsersTotal -->  
**Active Users last** <!-- #get var=UsersActivePeriod --> **days**  
**Active Users:** <!-- #get var=UsersActive -->

### Everyone wants to change the image:

For the **BLACK** theme, do the following:

Copy the folder \OutworldzFiles\Opensim\bin\WifiPages-Black to  
 \OutworldzFiles\Opensim\bin\WifiPages-Custom

Copy the folder \OutworldzFiles\Opensim\WifiPages-Black to  
 \OutworldzFiles\Opensim\WifiPages-Custom

Save the image as a JPG file in  
 \OutworldzFiles\Opensim\bin\WifiPages-Custom\images\orange-  
**planets-background.jpg**

Go to Settings->Web Control Panel. Click the box and change it from  
**Black** to **Custom**. This will copy the files from -Custom to  
 the working folder, bin/WifiPages.

Navigate to <http://127.0.0.1:8002>. You should see your new image.

For the **WHITE** theme, do the following:

The new image goes in \bin\WifiPages-Custom\images\header.png.  
 You must first make the folder

Copy the folder \OutworldzFiles\Opensim\bin\WifiPages-White to  
 \OutworldzFiles\Opensim\bin\WifiPages-Custom

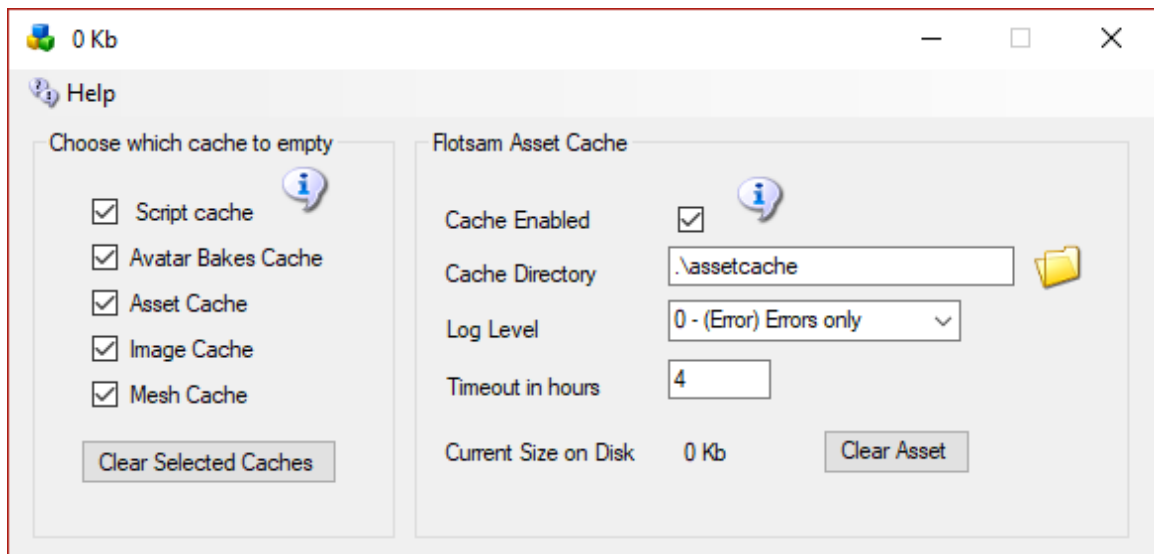
Copy the folder \OutworldzFiles\Opensim\WifiPages-White to  
 \OutworldzFiles\Opensim\WifiPages-Custom

Then click the Theme setting for **White**. This will copy the files from  
 custom to the WifiPages folder.

Navigate to <http://127.0.0.1:8002>. You should see your new image.

## Flotsam Cache Settings

OpenSimulator has an asset cache that stores the assets retrieved from an asset service. This reduces the load on a possibly remote asset service and improves OpenSimulator responsiveness.



### **Flotsam asset cache**

The Flotsam asset cache, stores assets on disk and in memory.

At the moment, the amount of memory or filesystem storage used by the cache can only be limited via manual actions (wiping all or part of cached assets from the filesystem), by console commands (e.g. "fcache clear") or by timeout settings (e.g. FileCacheTimeout = 1 to automatically remove cache files not accessed for 1 hours).

### **General principles**

When OpenSimulator requires an asset (e.g. in response to a viewer request for a notecard), then it first asks the cache for this data. If the data is not found in the cache, then it asks the grid asset service (or possibly a foreign asset service in the case of Hypergrid). If the asset is found, then it is both stored in the cache and returned to the user.



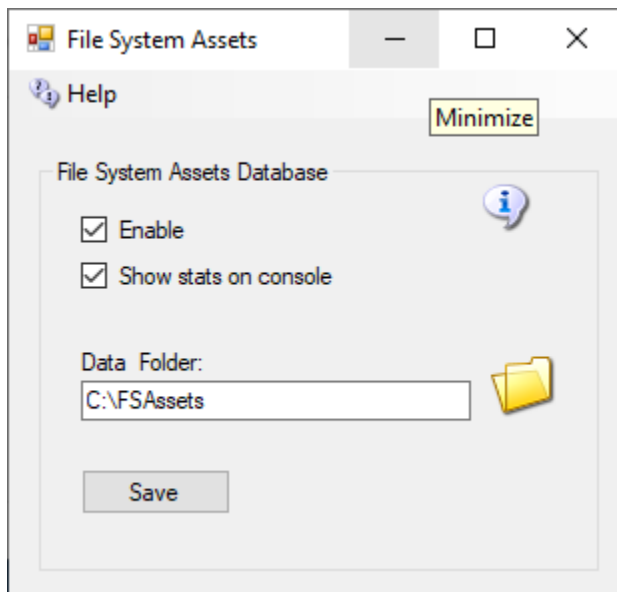
If an asset is uploaded to OpenSimulator (e.g. by the viewer uploading an animation), then the asset is immediately both kept in cache (if there is room and the asset is not temporary) and sent to the asset service (if the asset is not temporary).

Therefore, at any point you can wipe any temporary data stored by the asset cache (e.g. on the filesystem), since the next request for that asset will simply query the asset service as the asset will not be found in cache.

## FSAssets Settings

FSAssets is intended for larger grids where the size of the database is expected to exceed 50GB. This option will save the assets to the file system as opposed to the default service which stores assets as blobs in the database. This option also provides deduplication abilities. Each asset is hashed when it is received for storage. If the asset already exists, the asset service will link to the existing file rather than store two copies.

**IMPORTANT:** This is a major change in database structure. If you already have a MySQL database running with a lot of assets, this will help speed it up, but it will cost a lot of disk space. If you start out with this setting, it will use the least space. **Once you switch to FSAssets, you cannot go back to just MySQL without losing data entered since the switch.**



**Data Folder**

This is the folder in which the asset data will be saved. Default = `./fsassets/data`

**SpoolDirectory Folder**

The spool directory is a folder used for temporary storage while the asset is hashed and compressed before it gets moved to the BaseDirectory. This must be on the same file system as the base directory. Default = `./fsassets/tmp`

## Migration

FSAssets will use the MySQL database to collect the original data. This will not automatically convert all the old assets to the new service. To convert all assets from the default service there is a Robust console command provided:

```
import <conn> <table> [<start> <count>]
```

The import command expects a database connection string and the name of the legacy asset table to be passed as parameters. The following example shows how to start the import process for a MySQL database. Change the connection details to match your database schema, username, and password, or use the DreamGrid default shown here, and copy and paste this into your Robust console:

```
import "Data Source=localhost;Port=3306;Database=robust;User
ID=robustuser;Password=robustpassword;Old Guids=true;" assets
```

Depending on the size of your existing assets table, the import process will take some time to complete. The optional parameters, start and count allow you to specify the position and number of rows to convert.

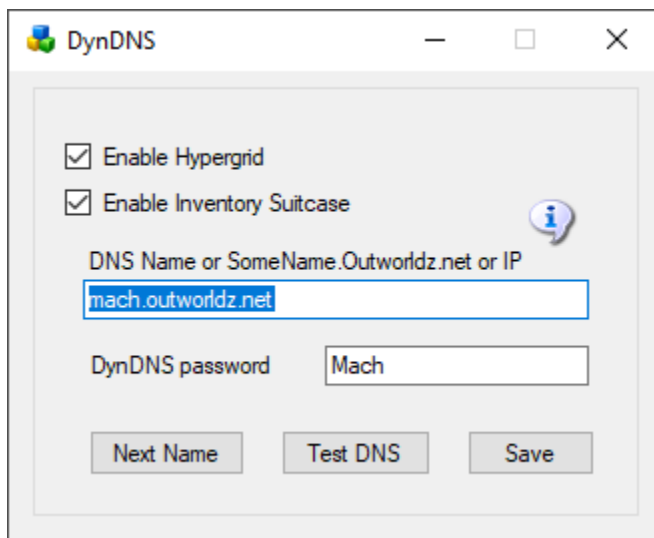
A default, blank database will look like this:

```
R.O.B.U.S.T.# import "Data
Source=localhost;Port=3306;Database=robust;User
ID=robustuser;Password=databasespassword;Old
Guids=true;" assets
Reading data
0 assets imported so far
100 assets imported so far
200 assets imported so far
Import done, 274 assets imported
```

R.O.B.U.S.T.#

## **Hypergrid and Domain Name Setup**

Hypergrid requires a DNS name or a Public IP be entered here. You can register your own domain, or use your routers public IP, or use the Outworldz system's' free Dynamic DNS system (DYN DNS).

A screenshot of a Windows-style window titled "DynDNS". The window has a standard title bar with minimize, maximize, and close buttons. Inside the window, there are two checked checkboxes: "Enable Hypergrid" and "Enable Inventory Suitcase". Below these is a text input field labeled "DNS Name or SomeName.Outworldz.net or IP" containing the text "mach.outworldz.net". To the right of this field is a small blue information icon. Below the text field is a "DynDNS password" label and a text input field containing the word "Mach". At the bottom of the window are three buttons: "Next Name", "Test DNS", and "Save".

### **DYN DNS name**

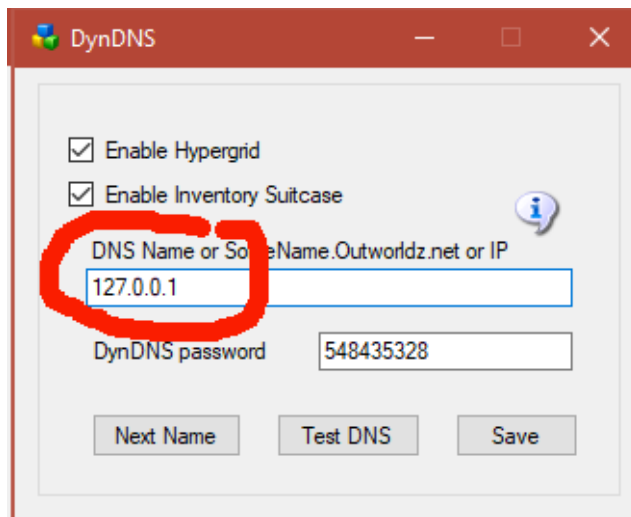
For a Free Dynamic DNS name, use "somename.outworldz.net". Choose a simple name and add ".outworldz.net". For domain names, the letters, and numbers a-z and 0-9 and a dash (-) are the only allowed characters.

Do not add anything else other than a name and '.outworldz.net'.

IP addresses may be used. If blank, the PC's LAN address will be used. Hypergrid will not be available, but other LAN PC's will be able to connect. This is ideal for schools and other types of private work grids.

### **Running on the LAN only**

When there is no network connection, such as when travelling, use localhost, or 127.0.0.1. These allow only the viewer on the server to connect.



**DynDNS Password:** This is a random number that may be used to keep your DNS Name from being used by others. It is first come, first served. Your password must be copied from one installation to another to use the same DYN DNS name. If you need help with this, or wish to delete your DNS name, please email me at [fred@outworldz.net](mailto:fred@outworldz.net).

**Enable Hypergrid:** If unchecked, the Hypergrid will not be available. The grid will be only a Private Grid, with access possible only by logging into the grid directly.

**Enable My Suitcase:** If checked, Hypergrid travel uses a viewer suitcase. The purpose of the Suitcase is to prevent a foreign "rogue" grid from stealing your inventory while you are visiting. However, any items in your suitcase are exposed to other grids. you can only rez or give items in other grids that are already in your suitcase.

The My Suitcase folder is special: it is the folder tree that receives objects you collect while you are visiting other grids. But now it is even more special: it is the **only** folder tree that is accessible to you (and therefore to the rest of the Internet) while you are traveling. Period.

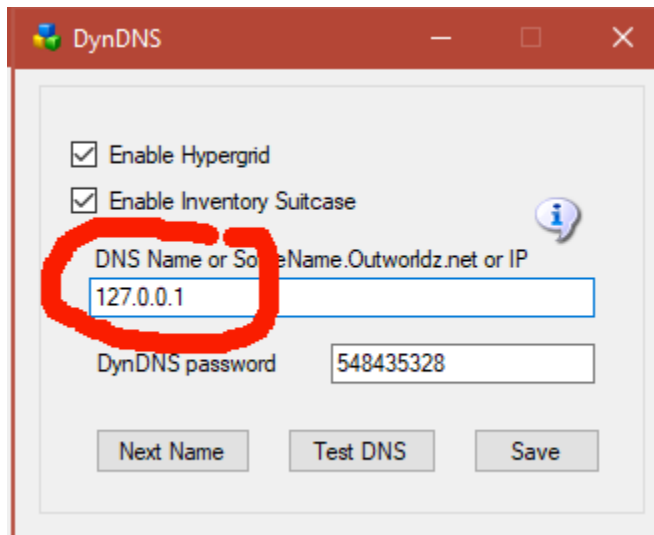
If you disable the suitcase by unchecking this box, as OsGrid does, you will be able to rez and give items while on other grids from anywhere in your inventory. Items you take or are given will still end up in your suitcase.

**Next Name:** to use the free Outworldz Dynamic DNS, click "Next Name" to get a name. The Dreamgrid Dynamic DNS system will automatically register your PC's ever-changing IP address and keep your sim running.

**Test DNS:** Will register the DNS name and check that it is resolvable. The result should be the Public IP address of your router.

### Troubleshooting Network:

1) Go back to running locally. Set the DNS name or IP to 127.0.0.1 and press Save.



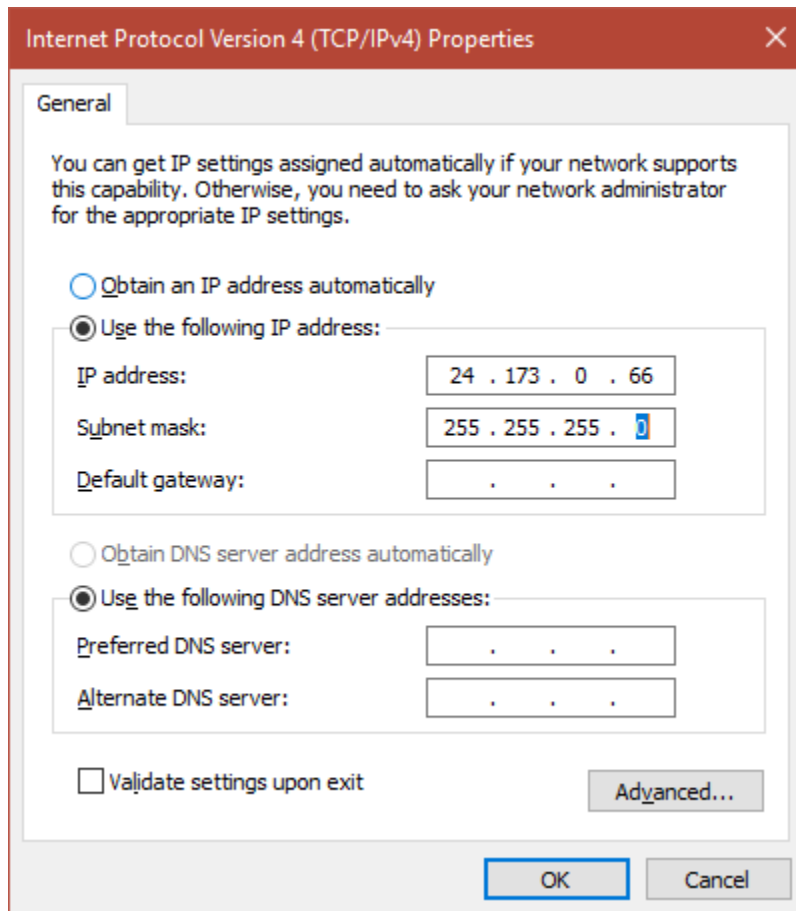
Start the grid up.

2) Now that the grid is running, use <http://www.canyouseeme.org> on port 8002 to verify your router has ports forwarded. If not, work on the router/firewalls so you can see the Opensim Robust service on 8002.

3) Try to get to that same IP address plus :8002 in a web browser from the server. My IP was 24.173.0.66, so I would try <http://24.173.0.66:8002>

If you get no web page, your router does not support loopback.

4) Add the Windows Device driver for loopback. Use the exact same IP address that <http://www.canyouseeme.org> reported. This is what mine looks like



1. Click Start, then type cmd in the search box.
2. In the command prompt, type hdwwiz.exe and press Enter.
3. Click Next.
4. Select Install the hardware that I manually select from a list (Advanced), then click Next.
5. Select Network adapters, then click Next.
6. Select Microsoft as the manufacturer, select Microsoft KM-TEST Loopback Adapter as the adapter for Windows 10, then click Next.
7. Select Next to confirm the installation.
9. Select Finish to complete the installation.

To configure the newly created adapter:

1. Click Start > Control Panel > Network Connections.
2. Select the newly created connection (named Local Area Connection #, where # is its order number).
4. Right-click on the selected connection and choose Properties from the menu.

4. Confirm that Microsoft Loopback Adapter or Microsoft Loopback Adapter # is displayed in the Connect Using: field.
5. If it is not, return to step 2 and retry properties for another adapter.
7. Select Internet Protocol IPV4 and click Properties to open Internet Protocol (TCP/IP) Properties.
8. Select Use the following IP address. Fill in the IP address and Subnet mask fields.

Example: 10.10.10.10, 255.255.255.0 <=====But use the IP address shown by <http://www.canyouseeme.org>

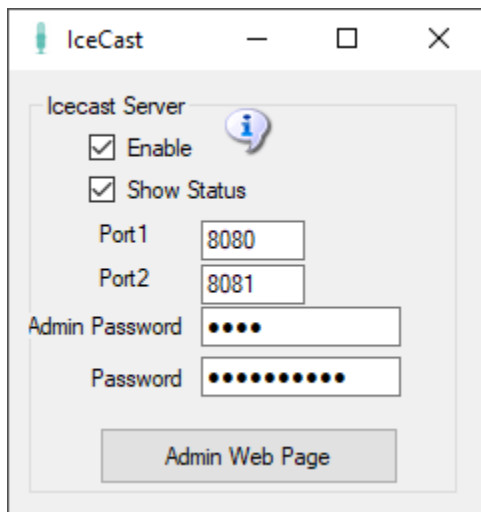
9. Click OK to close the Internet Protocol (TCP/IP) Properties.
10. Click OK to close the connection properties.
11. Right click the Microsoft Driver and rename it to just "Loopback". DreamGrid will automatically update the driver if your Public IP changes.
12. You should be able to reach your grid at the IP Address:8002 now. If so, you can now go back to the HyperGrid Setting and choose a DNS name.

links:

<http://www.canyouseeme.org>

## Outworldz Shoutcast And Icecast Server

Outworldz Dreamgrid contain a free Icecast and Shoutcast server. You can use this to broadcast voice and music to any radio, web page, Opensim, Second Life, or your own grid.



- **Enable:** Starts an Icecast Server when Start is clicked.
- **Show Status:** Displays in the window the server's status
- **Port1 & Port 2:** Default is 8080 and 8081. Both ports must be Port Forwarded in your router from the Internet so users can hear the music.
- **Admin Password:** Enter a strong password for control of your Shoutcast server. This Password protects a web page, so choose a good one.
- **Password:** This password is used to stream music to your server. You give it and the stream mount point out to applications and musicians who can stream music using your server.
- **Admin Web Page:** Click this button when Icecast is running to get to the control panel web page.

### How to Broadcast Music:

To streaming your own radio, you need a program to play music and send it to your stream.

I use Winamp. You can also use Mixxxx, or any third-party streamer. Instructions for both follow.



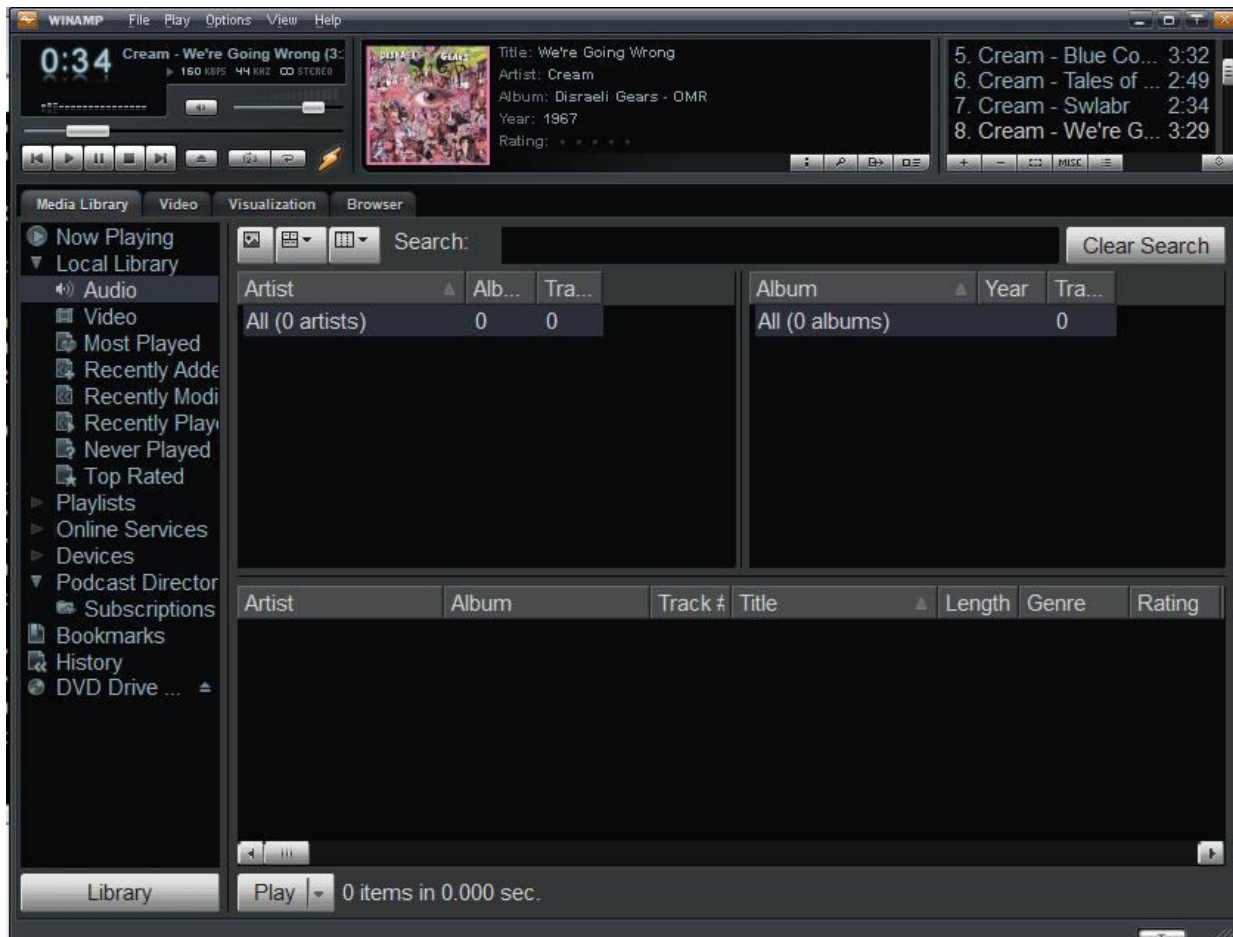
## WINAMP

You can use many different music or microphone players to stream music to your system. These instructions are for the popular Winamp player.

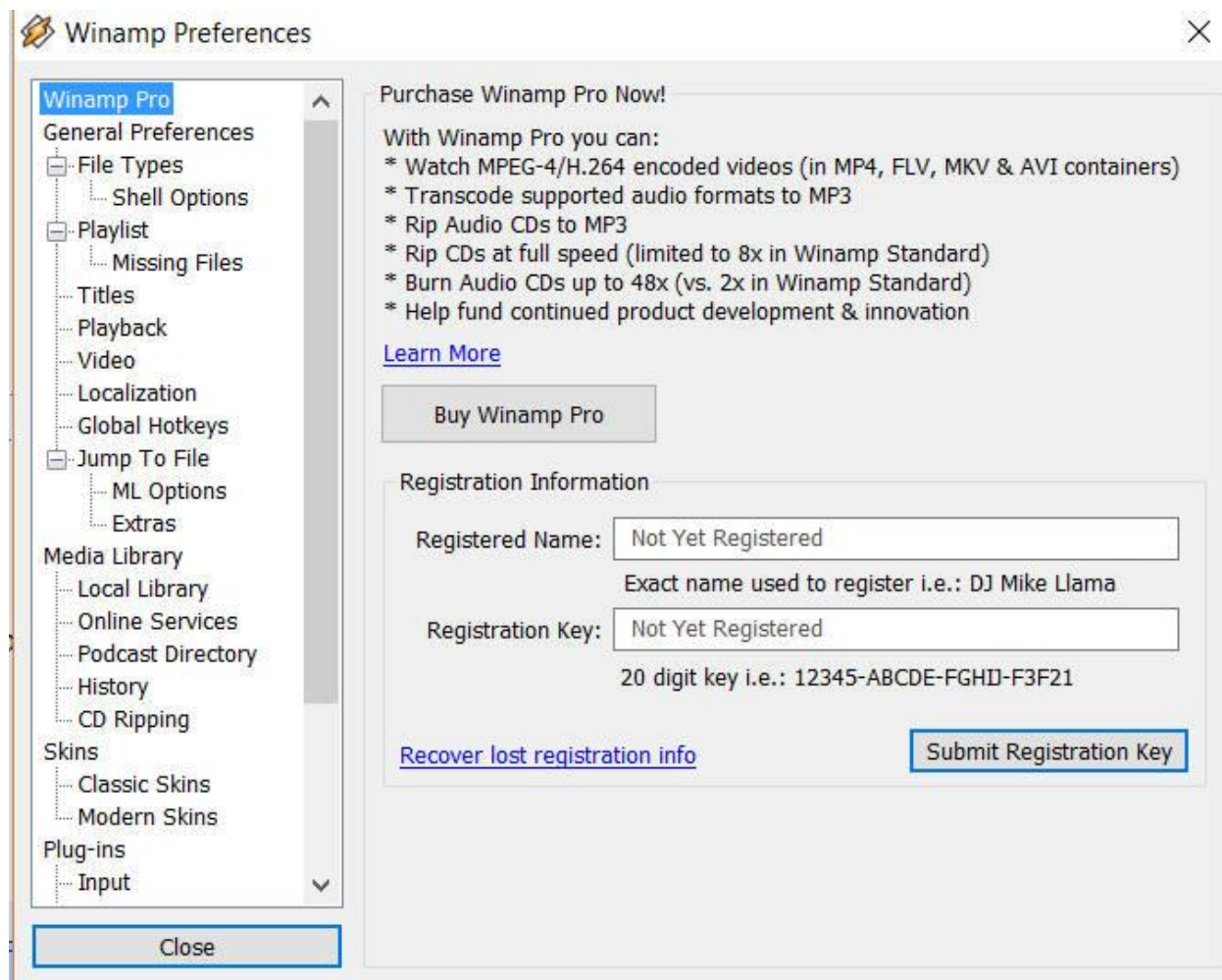
First, [download](#) and install Winamp.

Then [download](#) and install the Shoutcast DSP

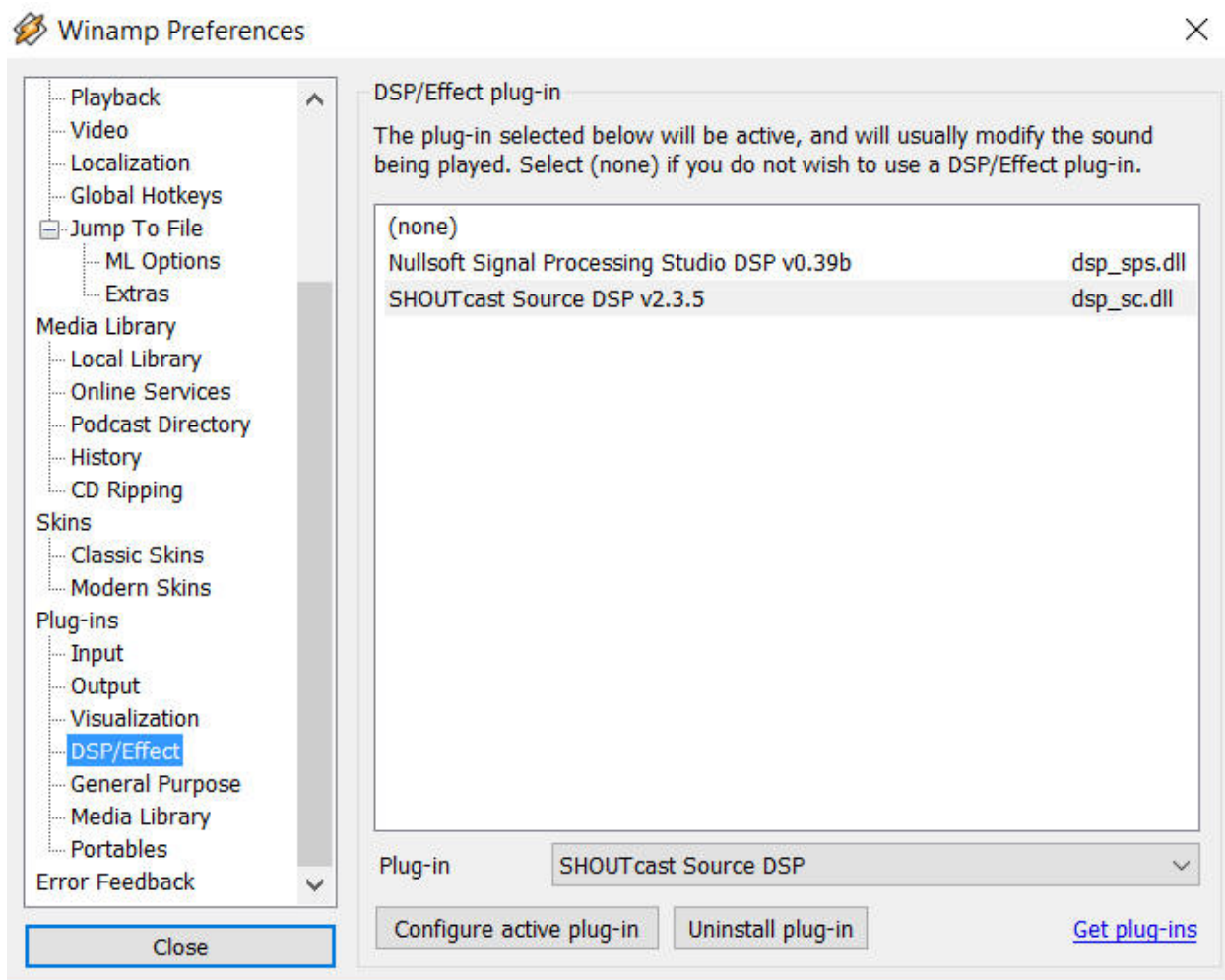
Run Winamp. You should see a screen like this:



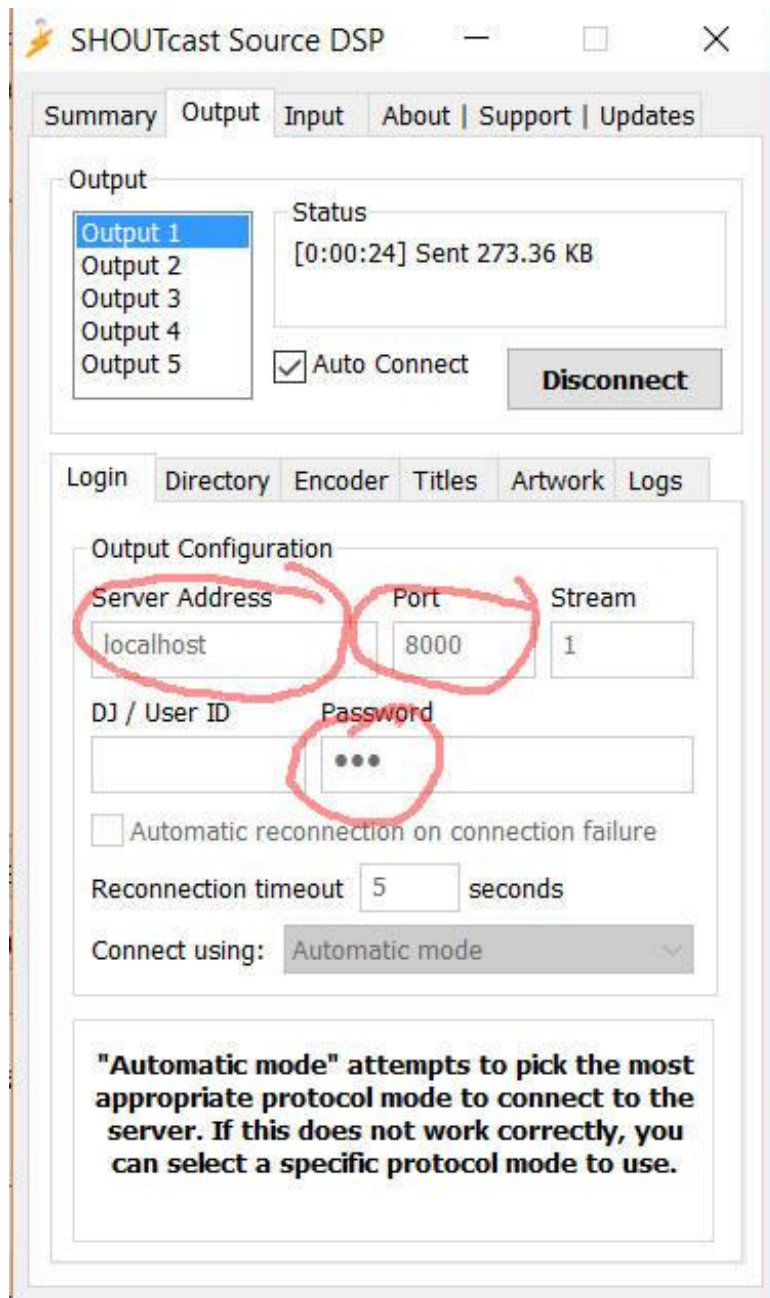
Navigate to the Options -> Preferences screen



Scroll to the DSP/Effect section on the left side:



Double click the Shoutcast DSP on the right side to get the DSP setup screen.



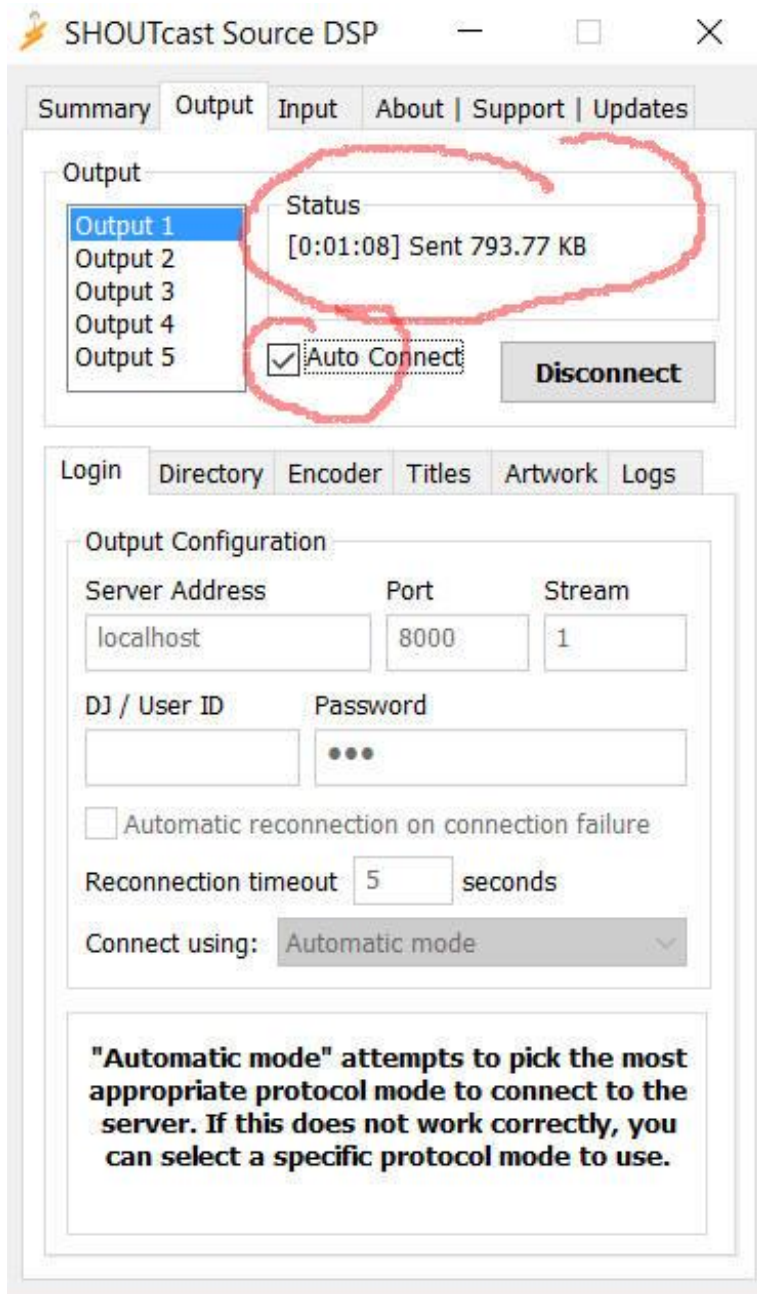
**Server Address:** Enter 'localhost' for the Server Address. If you wish to run Winamp on a different machine, use the Server LAN address.

**Password:** Choose the same password as you used in the DreamGrid's password field (not the Admin password).

**Port:** Also enter the same port you used in the Dreamgrid setup screen. The default is 8000. If you want others to hear this stream from outside your network, remember to either forward the port or enable the UPNP setting and restart your server.

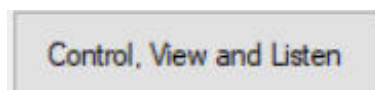
You can configure more of the screens, but they are not required.

Click **[Auto Connect]** and make certain you see it connect to your Shoutcast server.

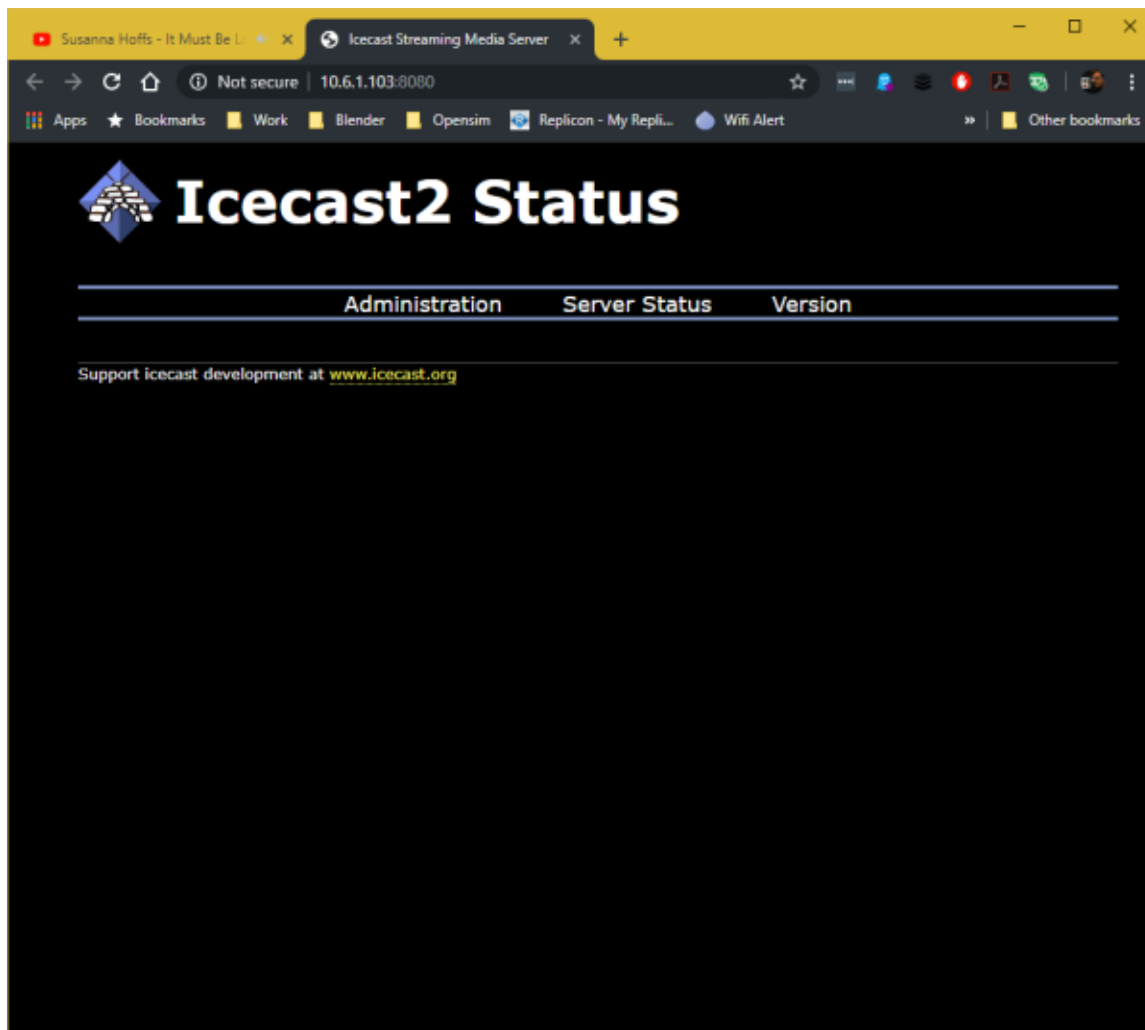


### Shoutcast Control Panel

Click the Shoutcast [Control, View and Listen] Button to view your Shoutcast web page.



It should open a web page that looks like this when there is no stream playing.

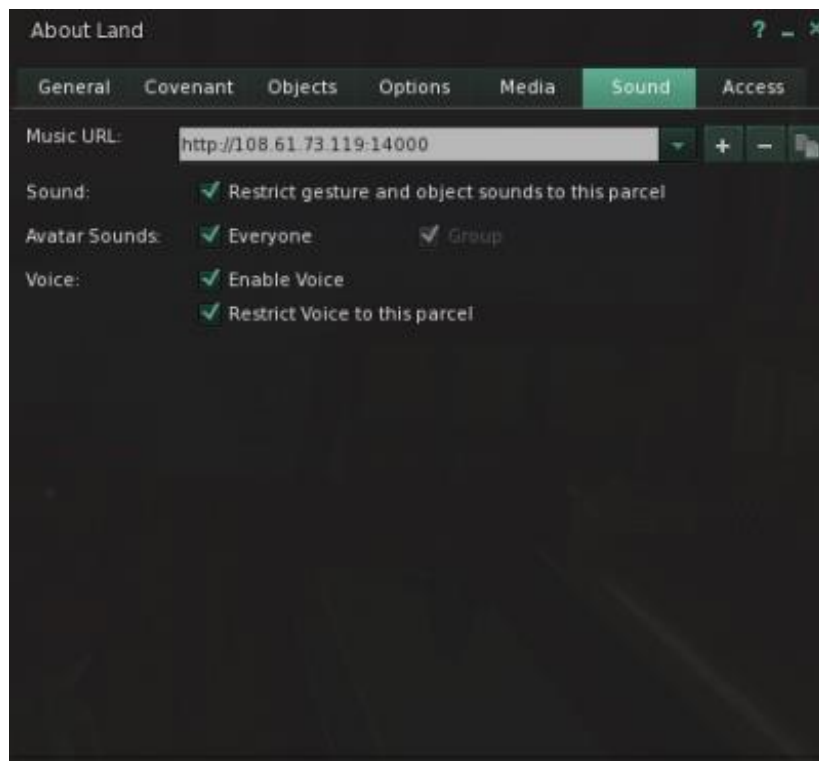


Go find some music in Winamp and press "Play".

The screen should now change to show it is up

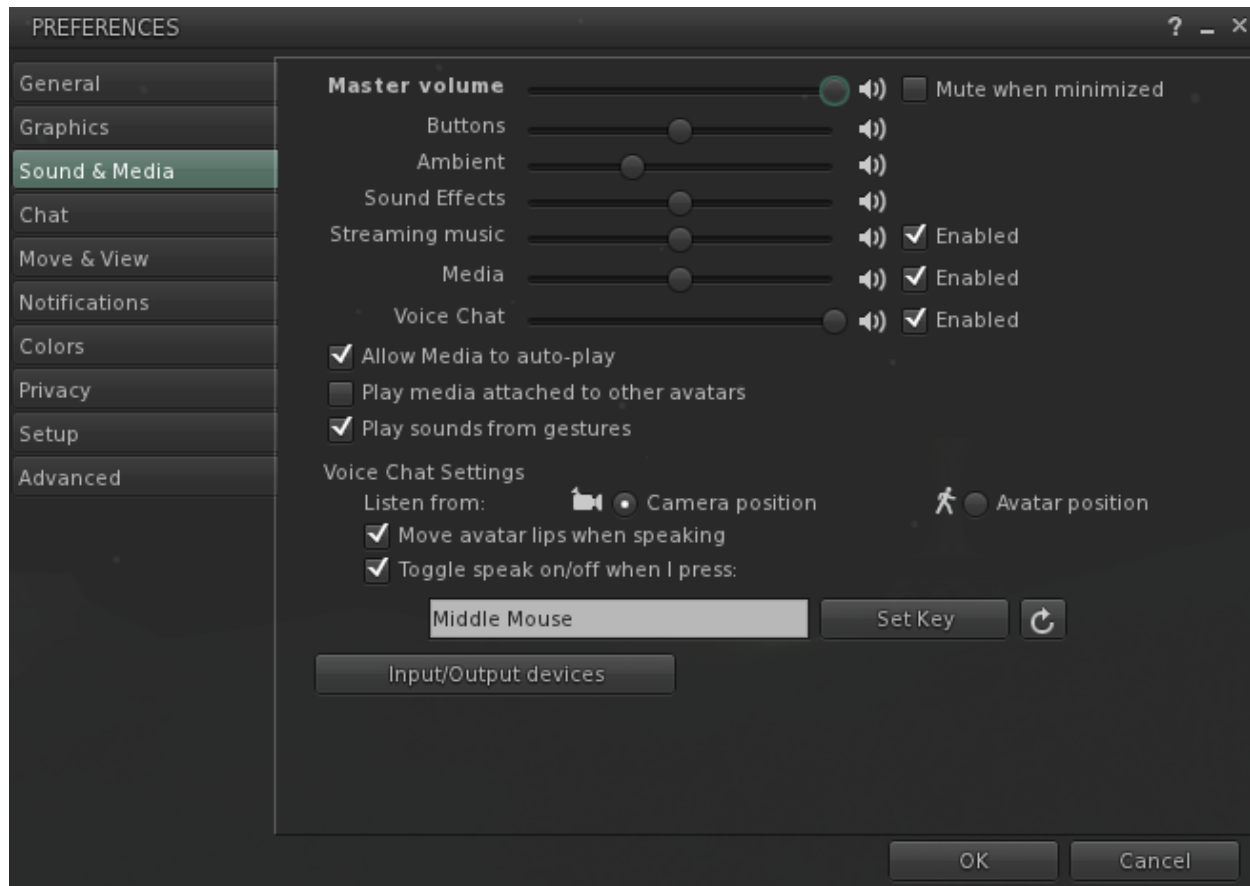
Setting up your in-world radio

You can use any radio script to set your radio onto the land. An effortless way is to navigate to the About Land tab and enter the URL into the Sound Tab. For more information see [http://wiki.phoenixviewer.com/land\\_audio\\_tab](http://wiki.phoenixviewer.com/land_audio_tab)



Now enable the media to play in your viewers Sound & Media tab.



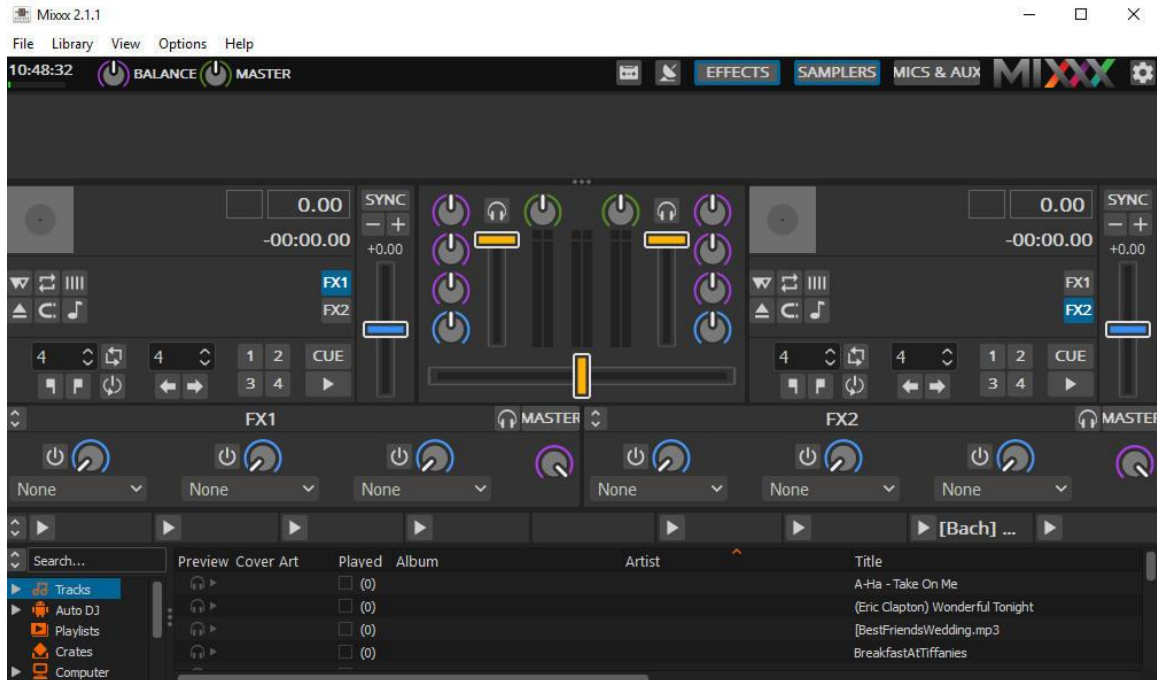


For more details, please see [http://wiki.phoenixviewer.com/land\\_audio\\_tab](http://wiki.phoenixviewer.com/land_audio_tab)

## MIXXX

Download and install Mixxx from <https://www.mixxx.org/>. This is what the screen looks like.





### **Special instructions for MP3 files:**

To enable MP3 streaming on Windows, you must follow these instructions:

First, download the lame library from <http://www.rarewares.org>. The download page includes 32-bit and 64-bit versions. Make sure the version you download matches the version of Mixxx that you use, not the version of Windows. If you are on 64-bit Windows but are using 32bit Mixxx, you need the 32bit ("x86") version of the library. Unpack the downloaded ZIP archive.

Copy libmp3lame.dll to the location you have installed Mixxx, probably C:\Program Files\Mixxx\.

### **Running Mixxx**

Go to Mixxx's Preferences Screen, then select the "Live Broadcasting" tab on the left. These are the settings I used:

Live Broadcasting source connections

Enabled	Name	Status
<input checked="" type="checkbox"/>	Connection 1	Disconnected

☐ Turn on Live Broadcasting when applying these settings

Settings for Connection 1

Select a source connection above to edit its settings here

Server connection

Type: Shoutcast 1

Mount: /stream

Host: 127.0.0.1

Port: 8080

Login:

Password: \*\*\*\*

Automatic reconnect

☒ Enable automatic reconnect

Wait until first attempt: 0.00 seconds

Reconnect period: 5.00 seconds

☒ Limit number of reconnection attempts

Maximum retries: 10

Encoding

Bitrate: 128 kbps

Format: MP3

Channels: Stereo

Stream info

☒ Public stream

Stream name: Ferd

Website: https://www.miboox.org

Description: This stream is online for testing purposes!

Genre: Live Mix

Metadata

Format: \$artist - \$title

☐ Use static artist and title.

Static artist:

Static title:

☐ Dynamically update Ogg Vorbis metadata

☐ Use UTF-8 encoding for metadata.

IceCast

Shoutcast Server

☒ Enable

☒ Show Status

Port: 8080

Port2: 8081

Admin Password: \*\*\*\*

Password: \*\*\*\*

- Check **Turn On Live Broadcasting**
- Set type to **Shoutcast1**
- The standard mount point everyone uses is **/stream**
- Host is **127.0.0.1**
- Port is **8080** from the Dreamworld setup.
- Login is **blank**
- Password is the same password from the Dreamworld setup.
- Check **Public** if you want your stream to be on the Mixxx website. Give it a name.
- Click **Okay** and the screen will gray out and should show no errors.

### Troubleshooting:

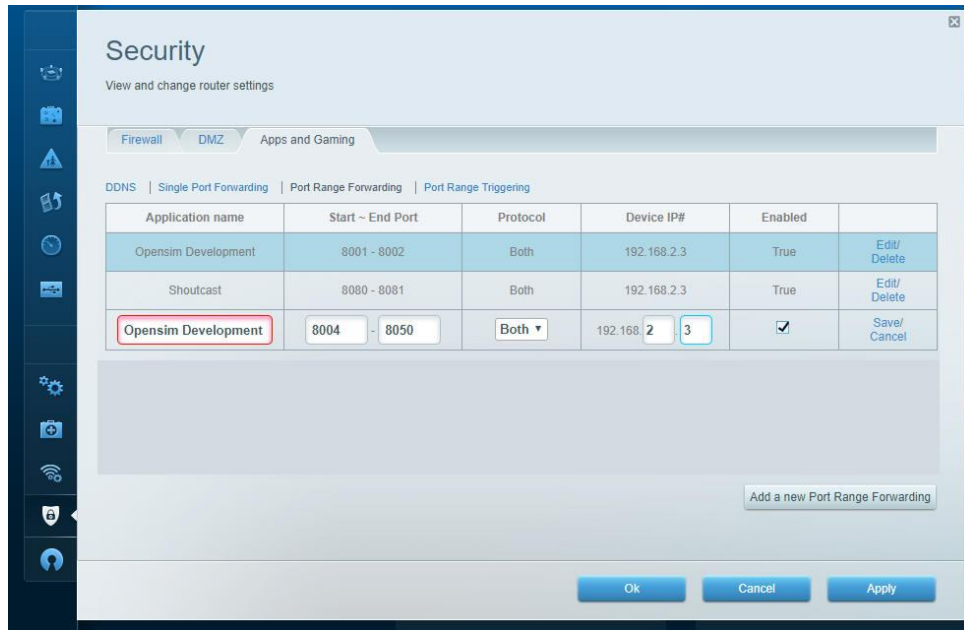
If it cannot connect, make sure Icecast is running in a separate DOS box.

You do not have to run the grid to stream music. It is only used to set up the files and start Icecast. For example, you can run a

radio station or use it for Second Life. There is a batch file in /Icecast called 'icecast.bat' that will run the server.

### **Port Forwards:**

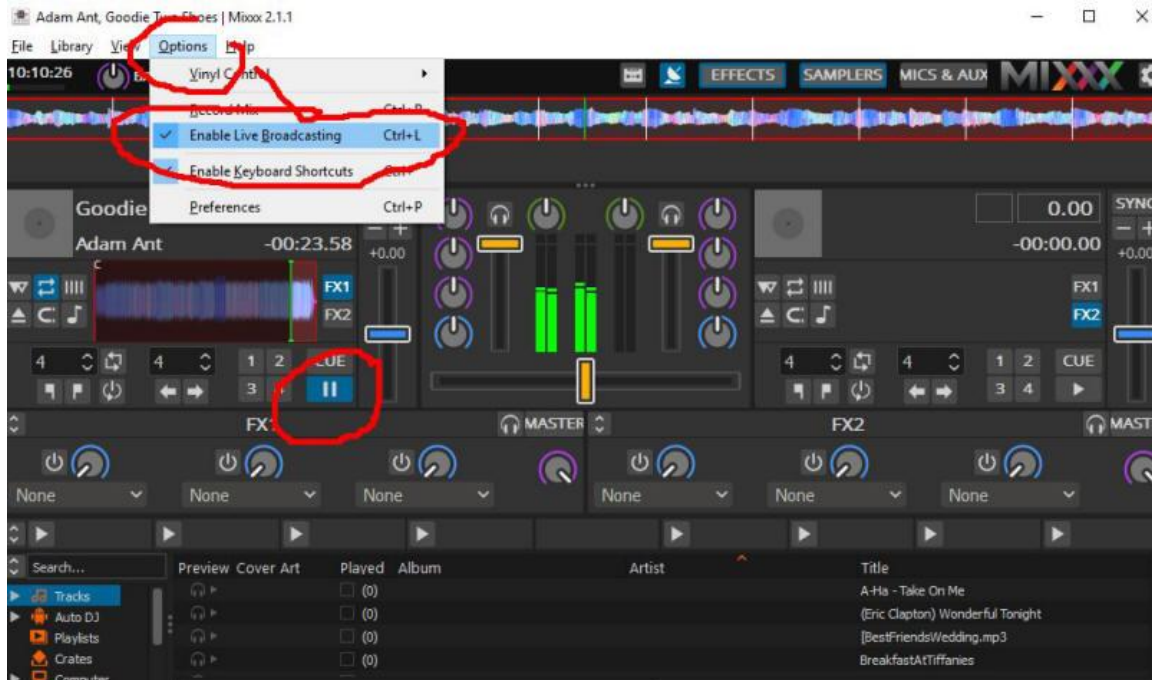
Add port 8080 and 8081 to your routers Port Forward. You should also check they are not blocked by your firewall or anti-virus. This is my setup:



The Shoutcast setting shown above is used when you are running the Icecast/Shoutcast server.

### **Mixx Setup**

On the top of the Mixxx main screen is an **Options** menu. Click **Enable Live Broadcasting**. I have it shown in the photo. Load a track and click play. For me, that was hard to find! It is circled in the picture and shows a pause button.



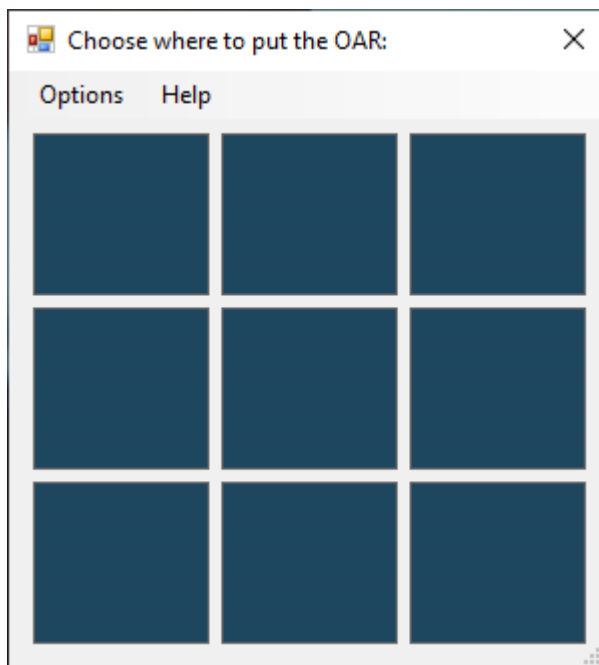
Use a web browser and navigate to <http://127.0.0.1:8080/stream> and click the play button. You can also click the **Admin Web Page** button. You should hear the music, delayed by maybe 15 seconds. This is normal buffering. Click Stop in Mixxx and the music will play for a bit longer due to the buffering.

The Public URL or Domain Name for your world is entered into your sim instead of 127.0.0.1, so for my simulator, the music URL becomes **<http://www.outworldz.com:8080/stream>**. This URL must include the 'mount point' of /stream you entered earlier.

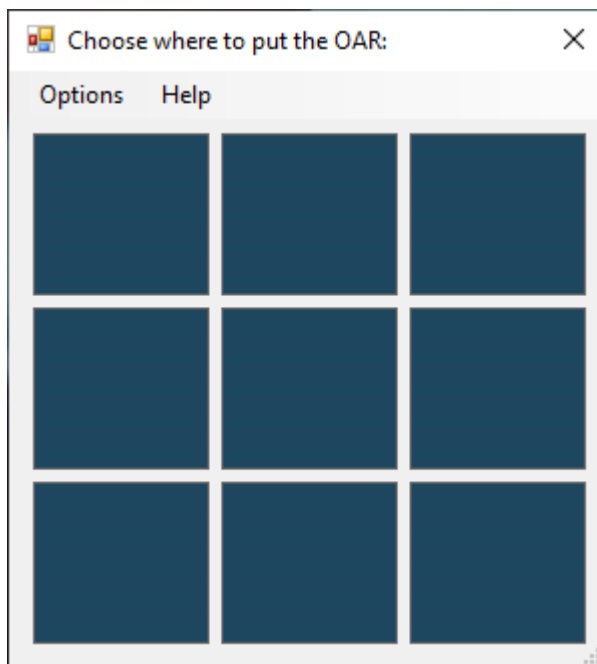
Navigate to <http://127.0.0.1:8080>. You should see the standard web page for Icecast. Yours truly, can log in using your administrator password, see the status, and see the mount point.

## Load OAR

Click a Blue section to choose which section of this Var Region to put this OAR in.



Click a Blue section to choose which section of this Var Region to put this OAR in.



### **Options:**

-merge

Specify to merge the contents of the reading OAR with the existing contents in the region.

--displacement

Specify a displacement that is added to all data as it is added to the destination region. The displacement **MUST** be specified as "<x,y,z>". So, for instance, to load an OAR from a 256x256 region into the middle of a larger 512x512 region, the parameter would be --displacement "<128,128,0>". Note that you can specify a "Z" displacement which will move the objects up or down. Thus --displacement "<0,0,1000>" will put all the OAR's objects up high for a sky box.

The displacement is also applied to the terrain if it is included. The 'z' component is added to the terrain's heights.

--force-terrain

Force terrain loading on --merge. Normally, --merge does not overwrite the existing region's terrain.

--force-parcels

Force parcel loading on --merge. Normally, --merge does not overwrite the existing region's parcel data.

--default-user "<first-name> <last-name>"

Instead of setting object ownership to the estate owner, assign it to the named user. This only applies to objects that have UUIDs that do not match any user account in the receiving grid's installation. There is currently no option that will force a change of owner for all loaded objects no matter whether they match a user in the receiving installation. One workaround to achieve this would be to save the OAR with the --publish "save oar" option to strip owner information and then reload it.

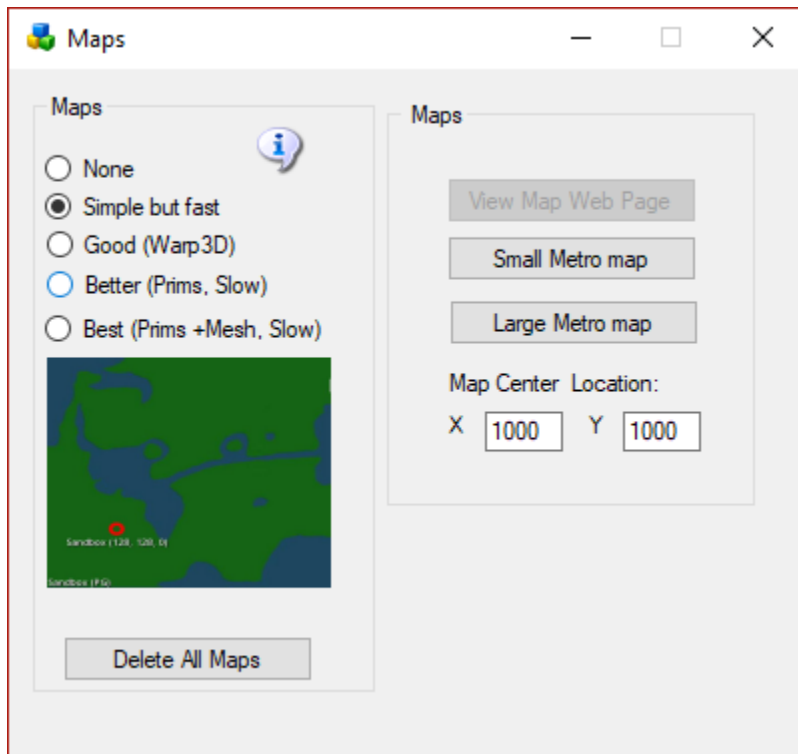
Links:

[http://opensimulator.org/wiki/Load\\_Oar\\_0.9.0%2B](http://opensimulator.org/wiki/Load_Oar_0.9.0%2B)

## Maps

Opensim has many different maps settings. Dreamgrid has multiple easy-to-use combinations. Opensimulator has several Map tile makers which vary in quality, and speed. It can take an exceedingly long time to boot when using the Better and Best maps. These maps which use the Warp3D engine must load all prims, mesh, and textures, so it takes a long time to generate new maps. Also, any bad textures may cause harmless errors from corrupted assets to appear on your console.

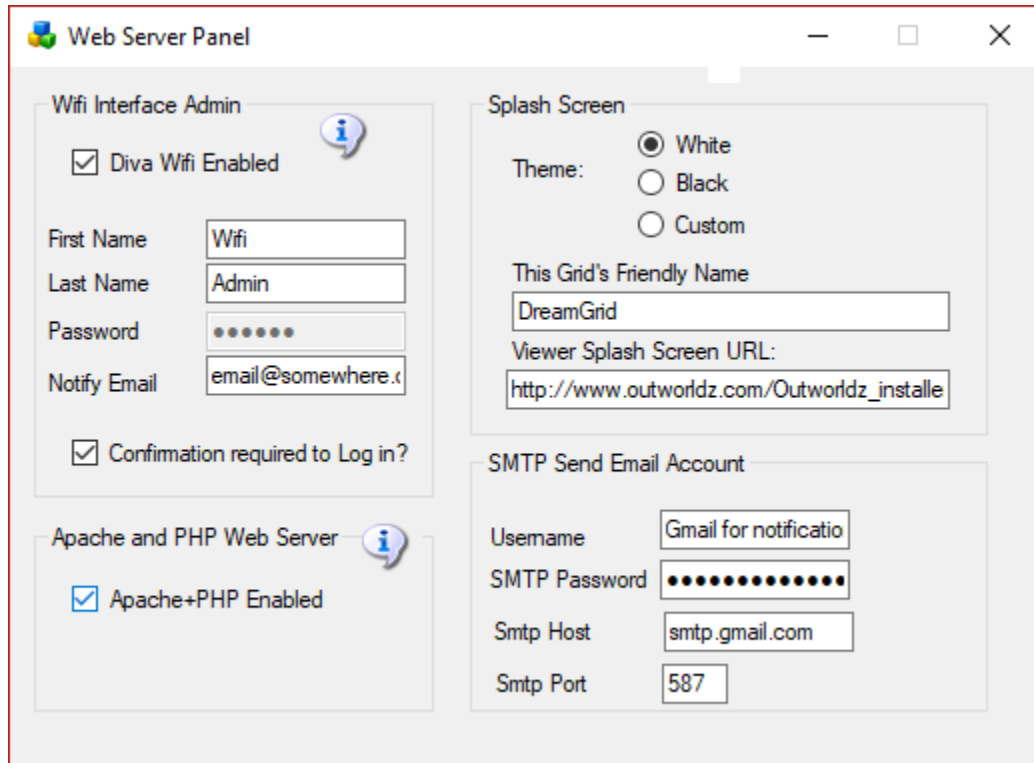
I recommend you run all maps at Best setting once, then set Maps to None. You can remake maps when enough changes have been made.



- **None:** No maps will be made. This is a good setting as the regions will boot very quickly. Any existing maps are not deleted.
- **Simple but Fast:** MapImageModule is used with just Land showing
- **Good:** Uses Warp3D module with just Land showing
- **Better:** Uses Warp3D module with Land, Prims, and land Textures showing
- **Best:** Uses Warp3D module with Land, Prims, Mesh, Sculptures, and all Textures including prims showing.



- **Delete All Maps:** If you delete a region, the map will remain. Click this to clear out all maps. You will need to regenerate all maps again by choosing a setting and restarting all regions.
- **View Map Web page:** Enabled if your system is booted. Opens a web browser to <http://localhost:8002/wifi/map.htm>.
- **Small Metro Map and Large Metro Maps** Available only if your Apache/PHP is enabled in Settings Web Pages. These maps are generated by PHP and Apache web server.



The screenshot shows a 'Web Server Panel' window with several configuration sections:

- Wifi Interface Admin:**
  - ☒ Diva Wifi Enabled
  - First Name:
  - Last Name:
  - Password:
  - Notify Email:
  - ☒ Confirmation required to Log in?
- Apache and PHP Web Server:**
  - ☒ Apache+PHP Enabled
- Splash Screen:**
  - Theme: ☒ White, ☐ Black, ☐ Custom
  - This Grid's Friendly Name:
  - Viewer Splash Screen URL:
- SMTP Send Email Account:**
  - Username:
  - SMTP Password:
  - Smtp Host:
  - Smtp Port:

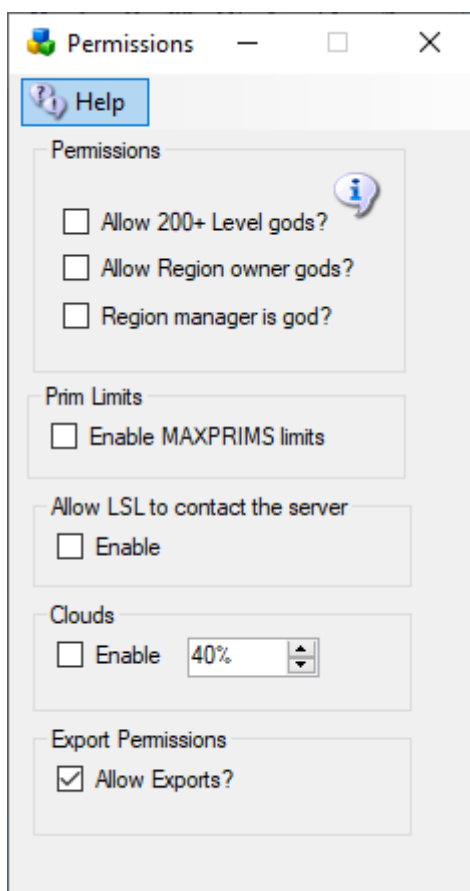
### Manual regeneration

Normally, one would generate map tiles at startup. You can also manually force map tile regeneration with the console command 'generate map<enter>'.

## Permissions

Grid god mode allows certain users to take and control permissions over objects. Setting Grid God Mode on allows you to control individual users by editing their access level in the Wifi Users Panel. Any user with a level > 100 will be a grid god. You can set any estate owner or estate manager to be a grid god, too. Users can become Gods by using the Request Admin Level button in the Advanced Viewer menu.

God mode is a useful function. However, making copies of items that are no copy or no transfer and giving them to others could be illegal. Please remember that copyright laws for your country need to be respected.



**Allow Gods:** God mode is available to selected people if enabled. These levels can be set for individual users in the Web control panel.

- Level = 0 is a normal user
- Level = 50 (or a level you set) is used to indicate a privileged user (e.g. who can set up new Hypergrid linked regions)
- Level = 100 is a Wifi admin account user
- Level >= 200 can become a God

**Region Owner is God:** If enabled, the region owner may go into God mode.

**Region Manager is God:** If enabled, any region estate manager may go into God mode.

### **Prim Limits:**

Opensimulator normally does not enforce limits on the number of prims for a region or a parcel. The viewer can show a maximum of 45,000 prims.

**Beware: If you set this checkbox on, any prims over a count of 45,000 will be returned.**

You can lower or raise any region limit in the Regions Control panel.

Default: Unchecked

### **Allow LSL to contact the server:**

By default, OpenSimulator does not allow scripts to make HTTP calls to addresses on the simulator's LAN. This stops LSL from scanning your ports inside your firewall. If you need to allow scripts to make some LAN calls, enable this checkbox. We recommend that you do not enable this unless you are very sure about what you are doing. When disabled, it will allow access to no ports on the server. You can see more in Opensim.proto - search for OutboundDisallowForUserScripts.

Default: Unchecked

**Clouds:** The original particle clouds from the early days of Second Life are still available for older viewers such as Singularity.

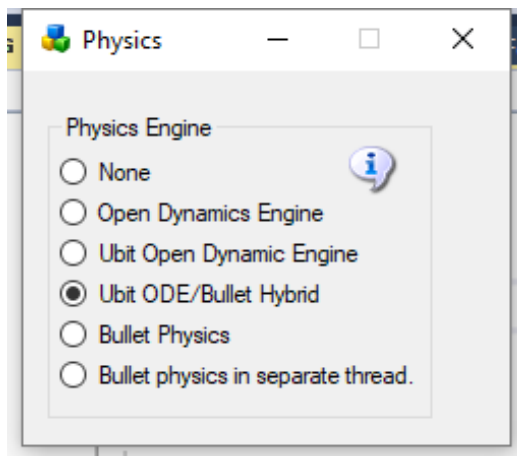
Default: Checked

**Export:** Export Checkbox can disallow export of prims by a viewer.  
Default -> Allow



## Physics Engine

The Physics selection box lets you set extremely basic physics, where the only collidable object is a box shape. It supports the original Open Dynamic Engine physics. The **ubODE** engine, by Ubit Umarov, is an advanced version of ODE that is closer to Second Life compatibility with vehicles. Bullet is an award-winning physics engine. Running Bullet in a separate thread is the default.



- None effectively does not model physics at all, making all objects phantom.
- Open Dynamics Engine was the previous default physics engine in OpenSimulator 0.7.6.1 and before. It continues to provide a workable physics implementation. It does not currently support varregions.
- UBODE is closer to Second Life in vehicle performance.
- The hybrid Ubit ODE/Bullet uses Bullet Meshmerizer with ODE runtime. Some people think this helps. Not using the proper meshmerizer will trick UBODE into using the visual part of the mesh, like bullet and old ode do, and you will get what you deserve (and not what you may think you deserve). It is better to pick anything else and upload your mesh with a proper physics for PRIM, which means to pick a physics setting and not skip that step!

- BulletSim and UBODE support varregions.
- BulletSim is the default physics engine. It provides the best performance and most functionality.
- When run in a separate thread, it cannot crash the Region if it dies.

Links:

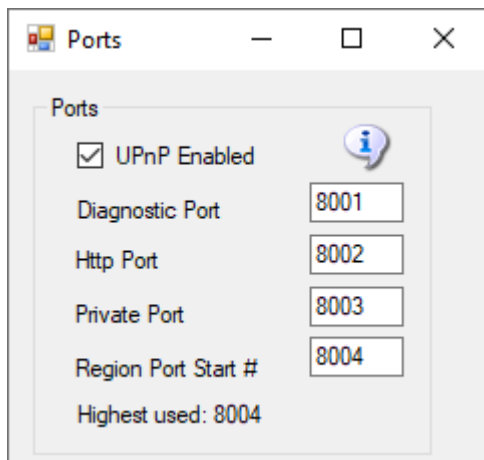
<http://www.ode.org/>

[https://en.wikipedia.org/wiki/Bullet\\_\(software\)](https://en.wikipedia.org/wiki/Bullet_(software))

## Port Settings and UPnP

## Port Settings and UPnP

Multiple TCP and UDP Ports are used in Opensim. The defaults are shown below.



The defaults are 8001 (Diagnostic), 8002 (Public), 8003 (Private) and 8004 (Starting Region). If you have manually added more regions, their region ports also need to be open. Each region that is used takes up one port. They start at 8004 and count up by one.

### **Port Forwards:**

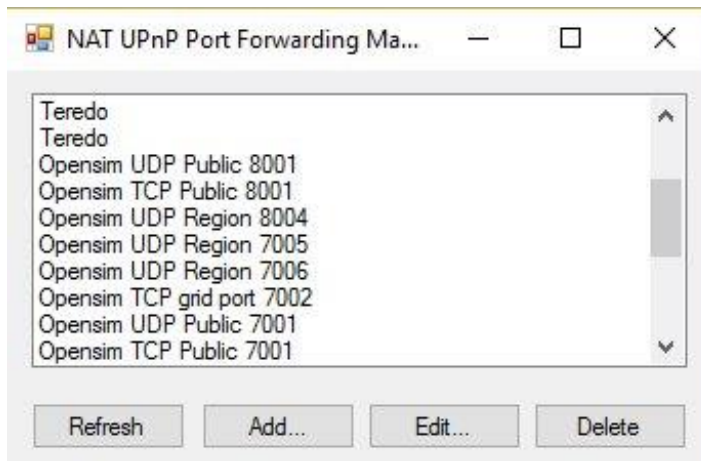
See the section on **Troubleshooting Ports** on how to manually enable the ports.

**UPnP Enabled:** The Outworldz program uses Universal Plug and Play (UPnP) to automatically allow data to come from the Internet to your computer. This is called "Port Forwarding". UPnP capability may be disabled in your router, or it may not support it.

You may need to stop the SSDP Service to prevent this service from intercepting these messages.

If UPnP is enabled and your router supports it, Dreamgrid will automatically open the correct ports. This can be slow and time-consuming, so you may prefer to disable UPnP and set your ports manually

Do you have Plug and Play (UPnP) issues? The Dreamgrid help menu has a useful tool to look at uPnP in your router:



UPnP (Universal Plug and Play) Tool for Windows

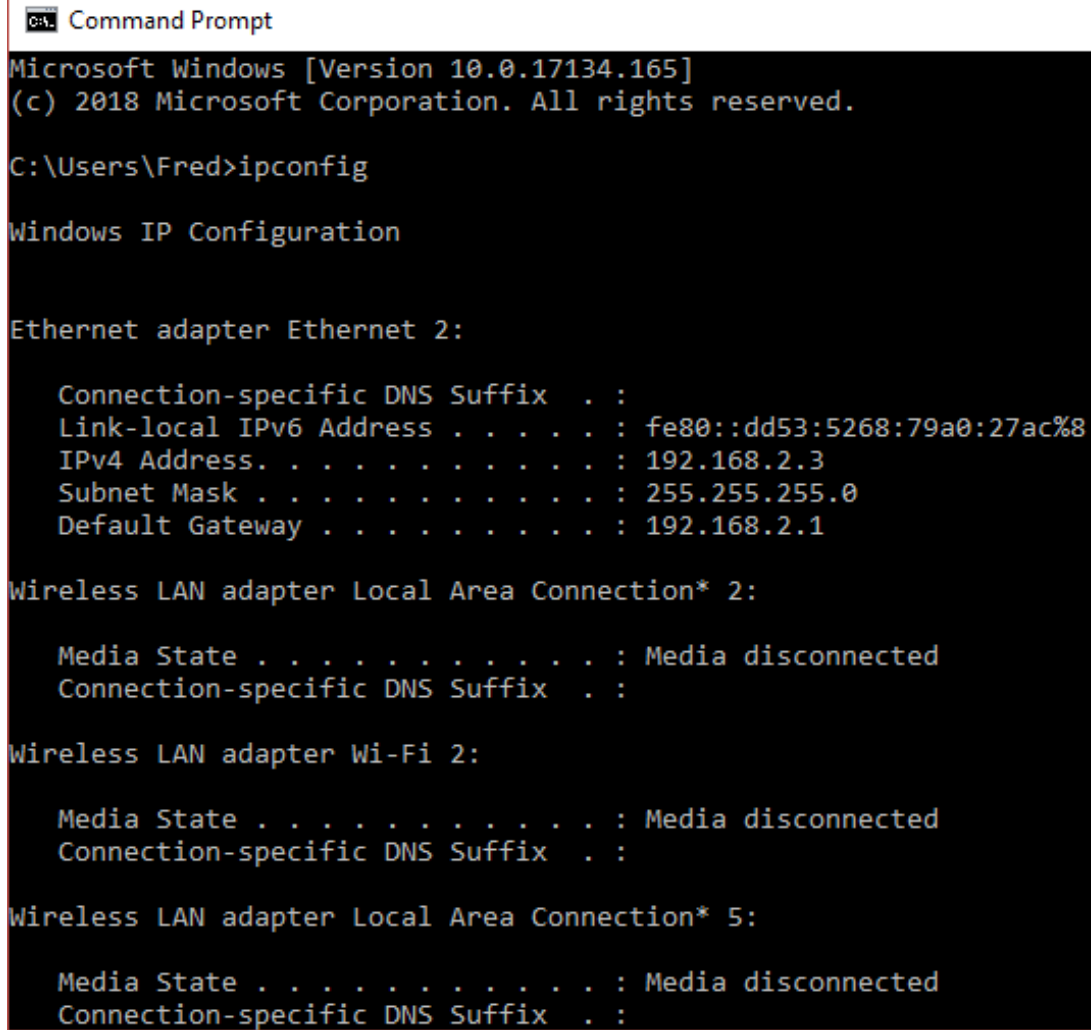
You can add, delete, and modify the settings without a password, assuming you have UPnP enabled. This tool is available in Dreamworld and Dreamgrid in the Help menu.

## Troubleshooting Ports

A list of routers and instructions [is at www.portforward.com](http://www.portforward.com) which can help once you identify your router type.

Step 1) Get your PC LAN IP address by going to a DOS prompt and typing 'ipconfig'.





```
Command Prompt
Microsoft Windows [Version 10.0.17134.165]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Fred>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::dd53:5268:79a0:27ac%8
    IPv4 Address. . . . . : 192.168.2.3
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.2.1

Wireless LAN adapter Local Area Connection* 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

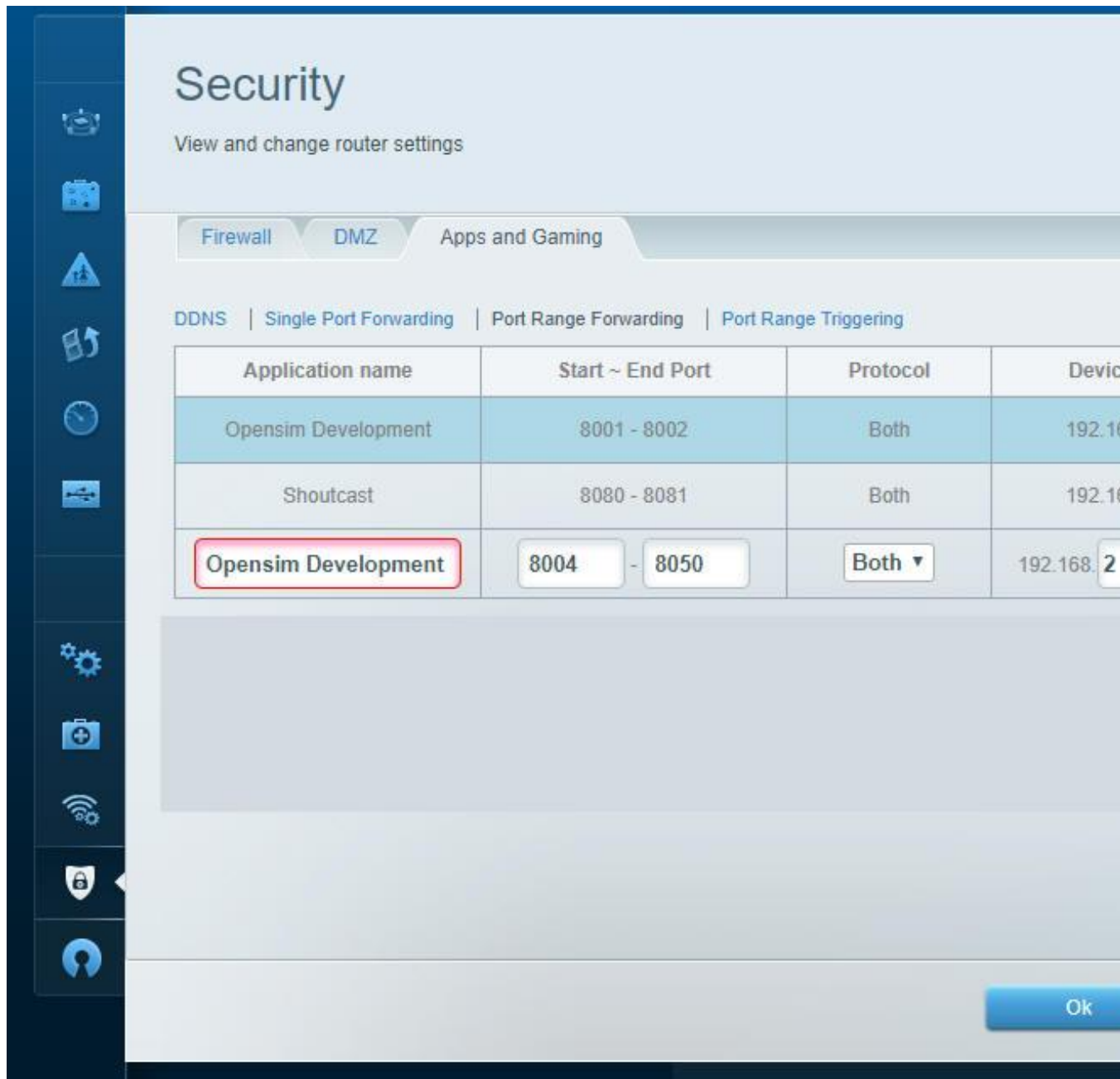
Wireless LAN adapter Wi-Fi 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

Wireless LAN adapter Local Area Connection* 5:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
```

In the above photo, my IP was 192.168.1.3. Yours is likely to be in the range 192.160.\*.\*, but it could also be a 10.0.\*.\* number. For my Linksys, it looks like this:



## IceCast/Shoutcast

Ports 8080 and 8081 must be added when you are running the Icecast/Shoutcast server.

**Which ports?** You need to Port-Forward 8001, 8002, and 8004-8010 (or higher, I usually open up to 8050) to have room for

expansion. You can also add 8080 and 8081 for Shoutcast/Icecast. Do not do 8003 for security reasons. These can usually be done in ranges, like 8001-8002 and 8004-8010. The latter ones are for regions - you need one port per region, so this would let you have 7 regions. Add more if you want - nothing wrong with opening up to 8020 or 8030 or so. In the above photo, I have opened ports 8004 through 8005.

They need to be open for both TCP and UDP. Your router will have a button or a pulldown to select UDP, TCP, or both. If you do not have a Both or All option, you have to add them twice, once for UDP and once for TCP.

**How do I know this worked?** You can tell if it worked by starting Opensimulator, and then use a web browser to go to <http://www.canyouseeme.org>, and enter 8002 while Opensimulator is running. Then click the Test Button at CanYouSeeMe. If that works, the ports are fine. If this does not work, try disabling your PC firewall. If this works, you must add exclusions to the firewall and then turn the firewall back on.

See **Firewall Issues** for help with the PC firewall.

Keep working with the router, firewall, antivirus exclusions and IP address until this test passes.

### **Loopback:**

The second part that must work is loopback - either your router supports it, or not. You can immediately tell if your loopback works after running the above CanYouSeeMe.org tests. You use your web browser to navigate to [http://\(YOUR PUBLIC IP\):8002](http://(YOUR PUBLIC IP):8002). Mine was <http://24.173.0.66:8002>. Of course, your IP address will be different than shown here, so use whatever CanYouSeeme.org shows you. If the system is working, you get a web page.

If not, you must add a loopback adapter. Go to [https://www.outworldz.com/Outworldz\\_installer/Loopback.htm](https://www.outworldz.com/Outworldz_installer/Loopback.htm) and follow the instructions.

Then go to Hypergrid/DNS Name page and enter your desired Hypergrid name

### **Firewall Issues:**

Windows will prompt you to allow Opensim to open ports when it first runs. If you say no, you will not be able to log in. I also set all the ports to be open in firewalls when you first click start.

If you are using an Anti-virus with a firewall, such as Zone Alarm, AVG Internet Suite, or anything else, running Start.exe may trigger the 3rd party firewall popup warnings. Opensim.exe needs to be allowed internet access, and Start.exe must be allowed to make changes to the firewall. If not, it will not work, and you will have to take manual action to fix it.

This code is safe and is digitally signed by me, Fred Beckhusen of Outworldz.com, and is open source and available for inspection at <https://www.github.com/Outworldz>.

You may have to manually add firewall rules to allow incoming traffic on the ports.

1. On the client operating system, go to Start>Run and type firewall.cpl. The Windows Firewall window opens.
2. Click on the "Advanced Settings" link on the left pane. The Windows Firewall with Advanced security window opens.
3. Click on the "Inbound Rules" option.
4. On the left pane, click on "New rule".
5. Under "Rule Type" select the option "Port" and click next.
6. Select "TCP" and "specific local ports" options.
7. Key in the port number, the port is 8001-8010 (or higher for more regions)
8. Click Next.
9. Select the option "Allow the connection".
10. Click Next, do not change any option here and click Next again.
11. Specify a name for this rule.
12. Click Finish.
14. Repeat the above but using UDP from step 6

### **More information about Opensim Ports**

Here is more detail about ports and the way they interact with the outside world such as [www.canyouseeme.org](http://www.canyouseeme.org) and to my diagnostics tests.

Put simply, only port 8001 and 8002 can report back to those tools as to being open and can do so only when Opensim is running.

**Port 8001:**

8001 is a TCP/HTTP port that is open for help->Network diagnostics. It is unique to Dreamworld and not to Opensim. It is used for a "port forward" test, just like Canyouseeme.org does, and for a loopback test. It collects data on sim's going up and down to change the icons and collects Partner information if two people click the partner prim.

**Port 8002:**

Opensim has a web server that web browsers understand, using the same protocol (TCP/HTTP) that tools like [www.canyouseeme.org](http://www.canyouseeme.org) support. Put simply, Opensim is the only thing that listens to port 8002 and answers to `http:// GET` and `POST` requests on 8002. Port 8002 is like port 80, the default port for web pages. You can actually set Dreamworld's 8002 port to 80, and it will still work. You can then drop the need to type `:8002` at the end of your hyperlink. <http://hg.Osgrid.org> does this. There would be no need to type the `:80`, as literally `http://` means "add a `:80` to the end of it".

8002 works with web based 'GET' probe tools. If you do switch it to 80, then you forfeit using an additional web server on your home machine as only one program can listen to a port.

If Opensim is not running and your ports are open, it is as if you tried to connect to [www.google.com](http://www.google.com)'s web server, but their web server is down. Nothing will happen, though your packets can get through the Google firewall because it is still open to traffic and is steering it to a dead server. You will get no answer. Similarly, if Opensim is not running, there is no web server to answer the request.

**Port 8003:**

This port is used by Opensim to listen to region traffic. Regions chat to the server database for login, presence, and other services use it to talk to the region so people can teleport from one region to another. In Dream World, regions must be on the same machine. In DreamGrid, just like OsGrid or any other remotely attachable grid, the regions can run on any machine anywhere in the world.

If you opened port 8003 to anyone on the web, you expose the internal database protocol to the web. Anyone with the right knowledge could attach a region to your sim. If you run a DreamGrid and host regions outside your LAN, it is recommended you use firewall rules to only allow access from known IP addresses running approved regions.

### **Port 8004 and upwards:**

The region ports (8004-upward) run both TCP and UDP. UDP is used for the viewer. UDP cuts the load on the server dramatically as there is no need to automatically always ACK every packet. As one example, no one cares if an audio stream gets briefly interrupted as you cannot hear it anyway, and it is too late to use it if it comes later in a retry. It just gets discarded.

For multiple regions in a single DOS box, all regions listen for TCP traffic on the last port used in that DOS box. As one example, if one region is in a DOS box by itself, and it is the first region, then it listens on both TCP and UDP on 8004.

If you had two regions in one DOS box, and they start at 8004, then the regions listen to UDP on 8004 and 8005, and both regions listen to 8005 for TCP traffic. You can check that the region is reachable on the Hypergrid only by using port 8005. 8004 will not respond, as it only listens to 8004 on UDP.

As a result, you can test regions with tools like Canyouseeme.org or a web browser

Links:

Port Testing: <http://www.canyouseeme.org>

Loopback:

[https://www.outworldz.com/Outworldz\\_installer/Loopback.htm](https://www.outworldz.com/Outworldz_installer/Loopback.htm)

Manual Trouble shooting:







[https://www.outworldz.com/Outworldz\\_installer/Manual\\_Trouble Shooting.htm](https://www.outworldz.com/Outworldz_installer/Manual_TroubleShooting.htm)



## **Publicity**

Publish Grid sends shows your grid in the list at [Hyperica.com](http://Hyperica.com).

Click to Teleport. Click header to sort. Search button is at the bottom left.

Hop	WWW	Name	Image	URL
		2BS.Outworldz.net		2BS.Outworldz.net:8002
		2Open		2open2.tk:8002
		3DLES EDUgrid		edugrid.3dles.com:8002

### **Photos:**

Click the Green box to load PNG image and it will appear in your listing.

### **Publish Items Marked for Search:**

Setting this switch will store any prims or regions you set for "Show In Search" into a database at Outworldz that shows the data in any Outworldz grid in your viewer in Search.



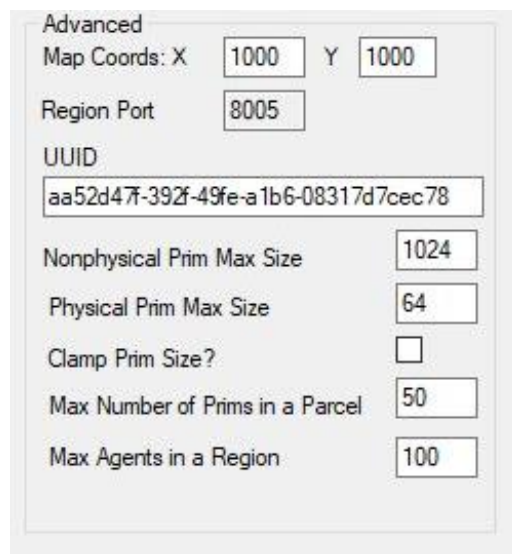


region. It will grow North and East and will be 4 times larger, overall. You will also need to move it in X and/or Y or delete the other regions as regions cannot overlap. You can shrink them, too, but objects that fall off the right and top edge will be lost.

- You can only set regions of the same size next to each other.

## **Options**

The next section contains optional items you may choose to change.



The screenshot shows a configuration window titled "Advanced" with the following fields and values:

Map Coords: X	1000	Y	1000
Region Port	8005		
UUID	aa52d47f-392f-49fe-a1b6-08317d7cec78		
Nonphysical Prim Max Size	1024		
Physical Prim Max Size	64		
Clamp Prim Size?	<input type="checkbox"/>		
Max Number of Prims in a Parcel	50		
Max Agents in a Region	100		

**Map Coords:** The (x, y) location of the region on the grid. You can set regions next to each other by changing the X and Y coordinates and restarting the region. The X and Y is the lower left point on the global map.

If you get messages saying that regions overlap, change the coordinates, and retry the region boot. If your region still will not start due to it overlapping, type this into the Robust console:

deregister region id <UUID Goes Here>

Copy and paste the region UUID where it says <UUID Goes Here>. This can be done on Windows with Ctrl-V, or by right clicking the Robust title bar and selecting Edit->Paste.

**UUID:** Never change the UUID unless you want to start with a blank region again. Altering the UUID will force the system to

create a new, blank region the next time it is started, and you will be forced to move your region to another spot.

**MaxAgents:** The maximum number of agents that can be in the in the region at any given time. The default is 100.

**MaxPrims:** The maximum number of prims that the region will be listed as supporting. However, this limit is not currently enforced by OpenSimulator. Due to LL protocol constraints, the maximum limit that can be shown is 45000.

**PhysicalPrimMax:** The maximum dimensions of a physical prim. This is a single number which applies to X, Y and Z co-ordinates. This will affect resizing of existing prims. Default is 10.

**NonphysicalPrimMax:** The maximum dimensions for a non-physical prim. This is a single number which applies to X, Y and Z co-ordinates. This will affect resizing of existing prims. Default is 256.



**ClampPrimSize:** If true then if a viewer attempts to create a prim which has any dimension larger than the NonphysicalPrimMax, then that dimension is reduced to NonphysicalPrimMax. Default is false;

**MaptileStaticUUID:** UUID of texture to use as a map tile for this region. Only set if you have disabled dynamic generation of the map tile from the region contents.

## **Overrides**

The next section are overrides for global settings made elsewhere.

Region specific settings override default settings

<p><b>Search</b></p> <p><input type="radio"/> Use Default</p> <p><input checked="" type="radio"/> Do not publish this region</p> <p><input type="radio"/> Publish Items marked for search</p>	<p><b>Maps</b></p> <p><input checked="" type="radio"/> Use Default</p> <p><input type="radio"/> None</p> <p><input type="radio"/> Simple but fast</p> <p><input type="radio"/> Good (Warp3D)</p> <p><input type="radio"/> Better (Prims, Slow)</p> <p><input type="radio"/> Best (Prims +Mesh, Slow)</p> 
<p><b>Permissions</b></p> <p><input checked="" type="checkbox"/> Use Default </p> <p><input type="checkbox"/> Allow Gods in this region</p> <p><input type="checkbox"/> Region owner is god?</p> <p><input type="checkbox"/> Estate Manager is god?</p>	<p><b>Modules:</b></p> <p><input type="checkbox"/> Birds Enable</p> <p><input type="checkbox"/> Tides Enable</p> <p><input type="checkbox"/> Teleporter Enable</p> <p><input type="checkbox"/> Disable Gloebits</p> <p><input type="checkbox"/> Disable Foreign Visitors</p> <p><input type="checkbox"/> Disable Residents</p> <p><input type="checkbox"/> Smart Start</p>
<p><b>Physics Engine</b></p> <p><input type="radio"/> Use Default</p> <p><input type="radio"/> None</p> <p><input type="radio"/> Open Dynamics Engine</p> <p><input type="radio"/> Ubit Open Dynamic Engine</p> <p><input type="radio"/> Ubit ODE/Bullet Hybrid</p> <p><input checked="" type="radio"/> Bullet Physics</p> <p><input type="radio"/> Bullet physics in separate thread.</p>	

Each of these settings is specific to this ONE region. As an example, if you want maps to made Best quality for just one region, you can set it here. It will override the global maps setting for this region.

At lower right are settings for Modules. These settings extend the Global settings to enable these modules on a per-region basis.

## **Rules for INI files**

Dreamgrid has several simple rules for \*.INI files that differ slightly from stock Opensim.

Example of how regions are organized is found in the file system:

Opensim\bin\Regions\SOME DOS BOX NAME\Region\Fred.ini

Opensim\bin\Regions\SOME DOS BOX NAME\Region\Rak.ini

These two regions **Fred** and **Rak** will be in a single Dos box named "**SOME DOS BOX NAME**".

If you rename the folder "**SOME DOS BOX NAME**" to "**Internet**", they will be in a DOS box named "**Internet**". If you create a new folder named "**HEY**", like this:

Opensim\bin\Regions\HEY\

And then MOVE Region\Rak.ini into it:

Opensim\bin\Regions\HEY\Region\Rak.ini

You will end up with a DOS box named "**Hey**" with the Region named "**Rak**" in it. The other Dos box will have just Fred in it:

Opensimulator\bin\Regions\SOME DOS BOX NAME\Region\Fred.ini

### **Rules:**

- No Duplicates: Do not leave a Region.ini in one folder and the same Region.ini in another. All files such as Region.bak are ignored.
- The only thing you need to put in the **SOME DOS BOX NAME\Region\** is one or more Region.INI files.

- All other files, such as Opensim.ini are automatically re-created when you start the region.
- The INI file name must match the [Region Name] inside it. This example region [Welcome] must be saved as "Welcome.ini".
- Only one [Region Name] is allowed in an INI file.

•

## Region Edit Panel

This panel lets you edit or add new regions.

There are four sections: Region Name, Advanced, and Region

HomeLand Region

Help

Region Name:  
HomeLand

☐ Enabled

Sim Size  
☒ 1 X 1      Or:    X 256  
☐ 2 X 2                      Y 256  
☐ 3 X 3  
☐ 4 X 4

Save    Deregister    Delete

Advanced  
Map Coords: X 2335    Y 1448

UUID  
66bc3d61-05c5-47cc-a7dd-3f36c9568047

Nonphysical Prim Max Size 1024  
Physical Prim Max Size 64  
Clamp Prim Size? ☐  
Max Number of Prims in a Parcel 45000  
Max Agents in a Region 100  
Script Timer Minimum 0.2

Region specific settings override default settings

Search  
☐ Use Default  
☒ Do not publish this region  
☐ Publish Items marked for search

Permissions  
☒ Use Default  
☐ Allow Gods in this region  
☐ Region owner is god?  
☐ Estate Manager is god?

Physics Engine  
☐ Use Default  
☐ None  
☐ Open Dynamics Engine  
☐ Ubit Open Dynamic Engine  
☐ Ubit ODE/Bullet Hybrid  
☒ Bullet Physics  
☐ Bullet physics in separate thread.

Maps  
☒ Use Default  
☐ None  
☐ Simple but fast  
☐ Good (Warp3D)  
☐ Better (Prims, Slow)  
☐ Best (Prims +Mesh, Slow)

Modules:  
☐ Birds Enable  
☐ Tides Enable  
☐ Teleporter Enable  
☐ Disable Gloebits  
☐ Disable Foreign Visitors  
☐ Disable Residents  
☐ Smart Start

Specific. Each section is covered below

## Region Name Section


Give your region a name:



Choose a sim size. Each section is 256 X 256 meters in size.

- $1 \times 2 = 256 \times 256$  (Second life type)
- $2 \times 2 = 512 \times 512$
- $3 \times 3 = 768 \times 768$
- $4 \times 4 = 1024 \times 1024$

You can type in a larger size, such as 2048 X 2048 (8X8). Please be aware that exceptionally large sims can lead to mediocre performance, extensive RAM use, viewer crashes and inability to edit the land.

Click  when done. You can immediately start the new region by clicking the name in the Region (Ctrl-R) panel.

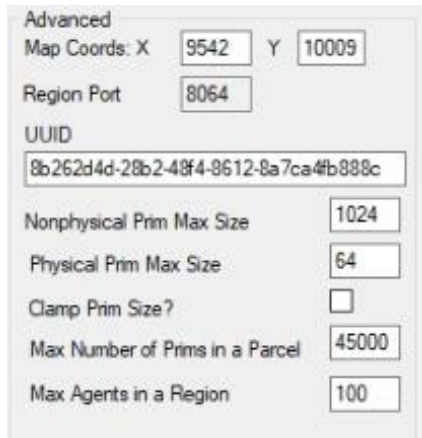
Delete: Clicking Delete will remove the region. The region INI file will still be there, but the file be renamed to .bak and will not show again. If you want to rename the file back to INI, it will be recoverable. The file is in this folder:

Outworldzfiles\Opensim\bin\Regions\ (DOS BOX NAME)\Region

## Advanced Section

This section at lower left has optional settings for each region.





Advanced

Map Coords: X  Y

Region Port

UUID

Nonphysical Prim Max Size

Physical Prim Max Size

Clamp Prim Size? ☐

Max Number of Prims in a Parcel

Max Agents in a Region

**Map Coords:** The (x, y) location of the region on the grid. Range is from 0,0 to 65536,65536

**Region Port:** Read-only. This is displayed for information purposes only. All region ports start at the setting found in Settings->Network Ports in the box "Region Port Start #" and automatically count up by one.

**UUID:** The unique ID of the region. UUID's are randomly assigned at the very first region startup. To wipe out a region, change a few digits and restart. It will be blank. Change the numbers back and it will re-appear.

**Nonphysical Prim Max Size:** The maximum dimensions for a non-physical prim. This is a single number which applies to X, Y and Z co-ordinates. This will affect resizing of existing prims. Default is 256.

**Physical Prim Max Size:** The maximum dimensions of a physical prim. This is a single number which applies to X, Y and Z co-ordinates. This will affect resizing of existing prims. Default is 25.

**Clamp Prim Size:** If true then if a viewer attempts to create a prim which has any dimension larger than the Nonphysical Prim Max, then that dimension is reduced to Nonphysical Prim Max. Default is false

**Max Number of Prims in a Parcel:** Sets how many prims can be in a parcel (not a region, in later versions of Opensim, this will change to be regions). The maximum that can be shown in a viewer is 45,000. This limit is not enforced by Opensim unless

you also check the Prim Limits checkbox in Settings->Permissions.

***Caution: Checking this box and rebooting may return prims!***

### Max Agents in a Region:

The maximum number an estate manager can set for how many people and NPCs can be in a region. Must be set in the viewer to be enforced.

### Region Specific Section


This section overrides defaults set elsewhere.

Region specific settings override default settings

**Search**

- ☒ Use Default
- ☐ Do not publish this region
- ☐ Publish Items marked for search

**Permissions**


- ☒ Use Default 
- ☐ Allow Gods in this region
- ☐ Region owner is god?
- ☐ Region manager is god?

**Physics Engine**

- ☒ Use Default
- ☐ None
- ☐ Open Dynamics Engine
- ☐ Ubit Open Dynamic Engine
- ☐ Bullet Physics
- ☐ Bullet physics in separate thread.

**Maps**

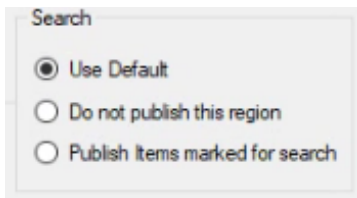
- ☒ Use Default
- ☐ None
- ☐ Simple but fast
- ☐ Good (Warp3D)
- ☐ Better (Prims, Slow)
- ☐ Best (Prims +Mesh, Slow)



**Modules:**

- ☐ Birds Enable
- ☐ Tides Enable
- ☐ Teleporter Enable

### Publish Items Marked for Search:



The default is set in Settings->Publicity. This setting overrides that setting for one region.

Setting this switch will Send data about any prims or regions you set for "Show In Search" into a database at Outworldz that shows the data in your viewer in Search. If you disable this, prims marked for Search and the regions marked for Show in Search will not be shown.

### Permissions:

The default is set in Settings->Permissions. This setting overrides that setting for one region.

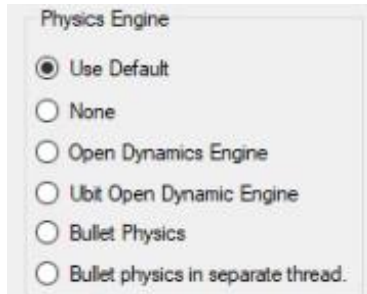


**Allow Gods:** God mode is available to selected people if enabled. These levels can be set for individual users in the Web control panel.

- Level = 0 is a normal user
- Level = 50 (or a level you set) is used to indicate a privileged user (e.g. who can set up new Hypergrid linked regions)
- Level = 100 is a Wifi admin account user

### Physics Engine:

The default is set in Settings->Permissions. This setting overrides that setting for one region.

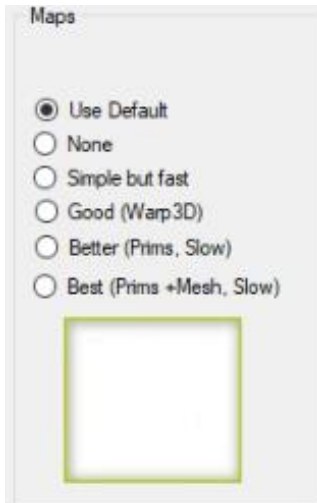


None effectively does not model physics at all, making all objects phantom.

- OpenDynamicsEngine was the previous default physics engine in OpenSimulator 0.7.6.1 and before. It continues to provide a workable physics implementation. It does not currently support varregions.
- UBODE is closer to Second Life in vehicle performance.
- BulletSim and UBODE support varregions.
- BulletSim is the default physics engine. It provides the best performance and most functionality.
- When run in a separate thread, it cannot crash the Region if it dies.

### **Maps:**

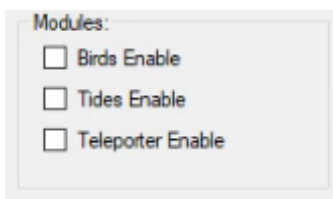
The default is set in Settings->Maps. This setting overrides that setting for one region.



- **None:** No maps will be made. This is a good setting as the regions will boot very quickly. Any existing maps are not deleted.
- **Simple but Fast:** MapImageModule is used with just Land showing
- **Good:** Uses Warp3D module with just Land showing
- **Better:** Uses Warp3D module with Land, Prims, and land Textures showing
- **Best:** Uses Warp3D module with Land, Prims, Mesh, Sculpt, and all Textures including prims showing.

### Modules:

These settings enable features for this region and also require the feature be set in the Settings Panel. Unlike the other settings here, these must also be set here to enable them.



**Bird Module:** The bird module makes flocks of birds possible.

You must also enable the Bird Module in Settings->Birds.

There are many settings for the Bird Module. You can use the defaults. You must also click Enable on each region and reboot the grid. If this is checked the birds will automatically fly. If unchecked they will be available but must be started manually.

See Settings->Birds for more information.

### **Tides Enable:**

The tide module makes water go up and down. It has a buoy with a script to make boats and objects float with the changing water level

Individual region Tide setting must be enabled to make the water go up and down in each region.

See Settings->Tides for more information.

### **Teleporter Enable**

If the Teleporter Enable checkbox is set, the system will add the region to the build-in Teleporter and teleporter HUD. You can load these into your inventory with the Load Local OAR option.

### **Disable Gloebits**

You can disable Gloebits for each region, independently of the overall Gloebits setting.

### **Disable Foreign Visitors**

This switch prevents Hypergrid visitors from entering this region.

### **Disable Residents**

This switch sets it so only Region Owners and Estate Managers may enter this region.

### **Smart Start**

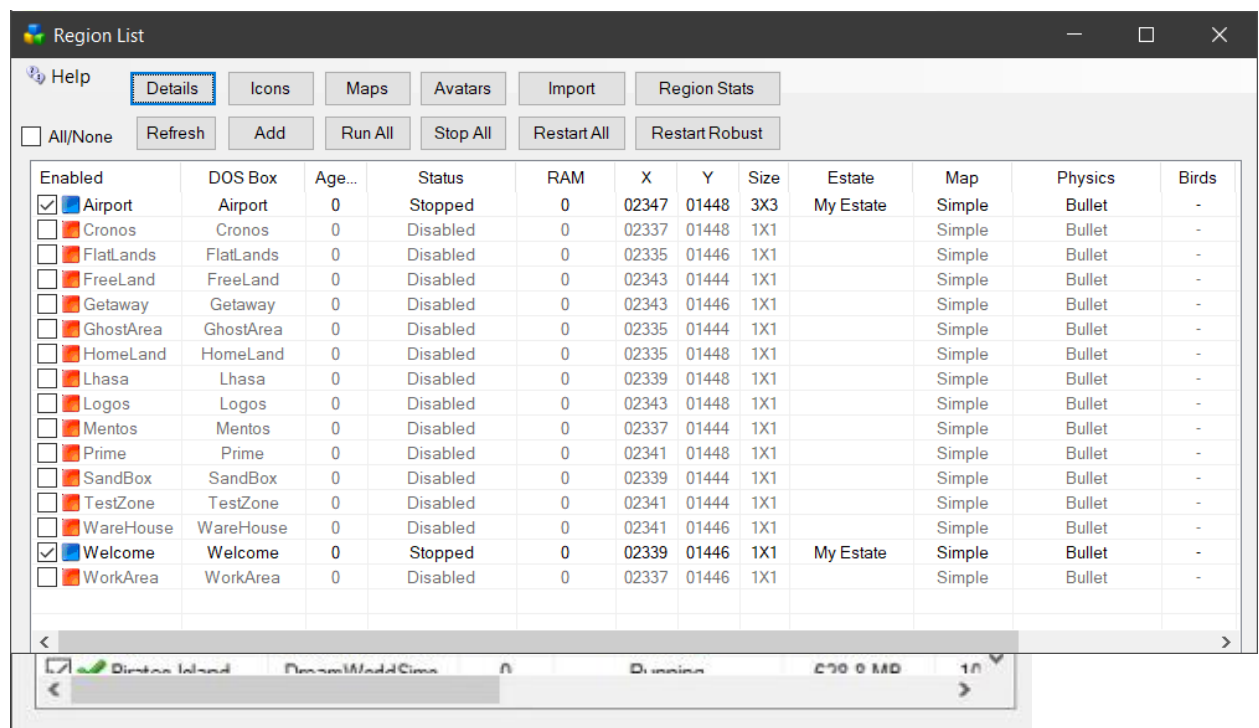
SS is a future Extension of Dreamgrid that is in development.

## Region List

Open the Region Panel with Ctrl-R, or go to Setting-Region.

There will be anywhere from one to many Region.INI files in your system. These show up in this panel. The default is an island called "Welcome".

**Sorting:** Click any column to sort. The default sort is by DOS Box.



## Refresh button

Click Refresh to rescan the system status and update this panel.

## Add Regions

Click the Add button to make a new region. You only need to give it a name and save it.

## Run All Button

Runs all Checked regions

## Stop All Button

Stops all Checked Regions

## Restart Button

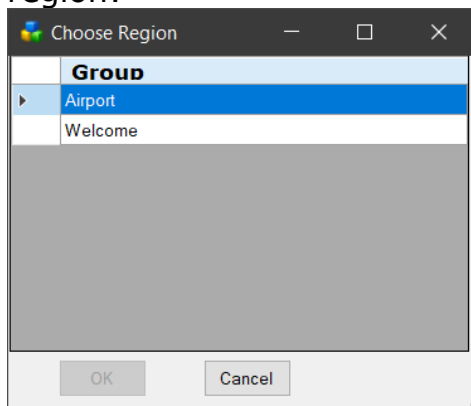
Restarts all checked regions.

## Import Button

This button lets you find region.ini files from other system, such as the standalone DreamWorld or backups, and import the file into Dreamgrid in a new or existing DOS box.

## Region Stats

The region stats are a web-based data collector. Frst, choose a region:



The first screen shows general statistics:



The screenshot shows a web browser window with the address bar displaying '10.6.1.14:8018/SSStats/'. The page content includes a navigation bar with links for Home, Client, and Sessions. Below this is a summary table of statistics:

# Users Total	# Sessions Total	Avg Client FPS	Avg Client Mem Use	Avg Sim FPS	Avg Ping	KB Out Total	KB In Total
4	20	143.1638	377206.2	62.49995	59.18057	22825.65	55361.76

Below the summary table, there is a '1. Welcome' section with a 'Welcome' heading. This is followed by two tables of performance metrics:

Dilatn	SimFPS	PhysFPS	AgntUp	RootAg	ChldAg	Prims	ATvPrm	AtvScr	ScrLPS
0	0	0	0	0	0	0	0	0	0

FrmMS	AgtMS	PhysMS	OthrMS	OutPPS	InPPS	NoAckKB	PndDWN	PndUP
0	0	0	0	0	0	0	0	0

Below these tables is an 'ActiveLog' section containing a list of log entries with timestamps and descriptions of events, such as loading objects, initializing scripts, and enabling remote managed stats.

The client screen shows the types of viewers that have visited

The screenshot shows a web browser window with the address bar displaying '10.6.1.14:8018/SSStats/clients.report'. The page content includes a navigation bar with links for Home, Client, and Sessions. Below this is a table showing client version statistics:

ClientVersion	Count/%	SimFPS
<a href="#">Firestorm-Release64 5.0.11.53634</a>	15/75%	56.38665
<a href="#">Firestorm-Release64 6.0.2.56680</a>	5/25%	80.83985

Below this table is another table showing region statistics:

Region	ClientVersion	Count/%	SimFPS
9e235325-235c-481a-8798-3b5256637732	Firestorm-Release64 5.0.11.53634	2/100%	81.25302
a1fe4303-93f9-4edd-a581-ea639d568d61	Firestorm-Release64 5.0.11.53634	1/100%	104.8917
ab8d7880-278e-22e4-8c33-0803210c9b44	Firestorm-Release64 5.0.11.53634	1/100%	73.53123
ae823f8a-edcc-4351-b797-0e1072b35555	Firestorm-Release64 5.0.11.53634	4/100%	62.15864
Welcome	Firestorm-Release64 5.0.11.53634	6/54.54546%	34.21323
Welcome	Firestorm-Release64 6.0.2.56680	5/45.45455%	80.83985
caec64ef-4cac-44a2-9987-2cc7db7857d8	Firestorm-Release64 5.0.11.53634	1/100%	50.95684

The Sessions screen shows the visitor list

FirstName	LastName	SessionEnd	SessionLength	Client
Ferd	Frederix	9/23/2019 - 4:04 PM	2 Minutes	Firestorm-Releasex64 6.0.2.56680
Test	User	7/2/2019 - 4:25 PM	2 Minutes	Firestorm-Releasex64 5.0.11.53634
		7/2/2019 - 5:27 PM		Firestorm-Releasex64 5.0.11.53634
		7/2/2019 - 9:09 PM	2 Minutes	Firestorm-Releasex64 5.0.11.53634
Test	User	7/16/2019 - 3:02 PM	14 Minutes	Firestorm-Releasex64 5.0.11.53634
		7/16/2019 - 3:08 PM		Firestorm-Releasex64 5.0.11.53634
		7/16/2019 - 3:21 PM	10 Minutes	Firestorm-Releasex64 5.0.11.53634
		7/25/2019 - 7:16 PM	2 Minutes	Firestorm-Releasex64 5.0.11.53634
		7/25/2019 - 10:13 PM	23 Minutes	Firestorm-Releasex64 5.0.11.53634
		8/20/2019 - 4:17 PM	2 Minutes	Firestorm-Releasex64 5.0.11.53634
		8/20/2019 - 6:50 PM		Firestorm-Releasex64 5.0.11.53634
		8/20/2019 - 7:18 PM	2 Minutes	Firestorm-Releasex64 5.0.11.53634
		8/20/2019 - 7:48 PM		Firestorm-Releasex64 5.0.11.53634
		8/20/2019 - 8:37 PM		Firestorm-Releasex64 5.0.11.53634
Test	User	8/27/2019 - 4:42 PM	4 Minutes	Firestorm-Releasex64 5.0.11.53634
		9/16/2019 - 2:47 PM	14 Minutes	Firestorm-Releasex64 5.0.11.53634
		9/16/2019 - 4:21 PM	2 Minutes	Firestorm-Releasex64 6.0.2.56680
		9/16/2019 - 5:40 PM		Firestorm-Releasex64 6.0.2.56680
		9/23/2019 - 4:00 PM		Firestorm-Releasex64 6.0.2.56680
		9/23/2019 - 4:06 PM		Firestorm-Releasex64 6.0.2.56680

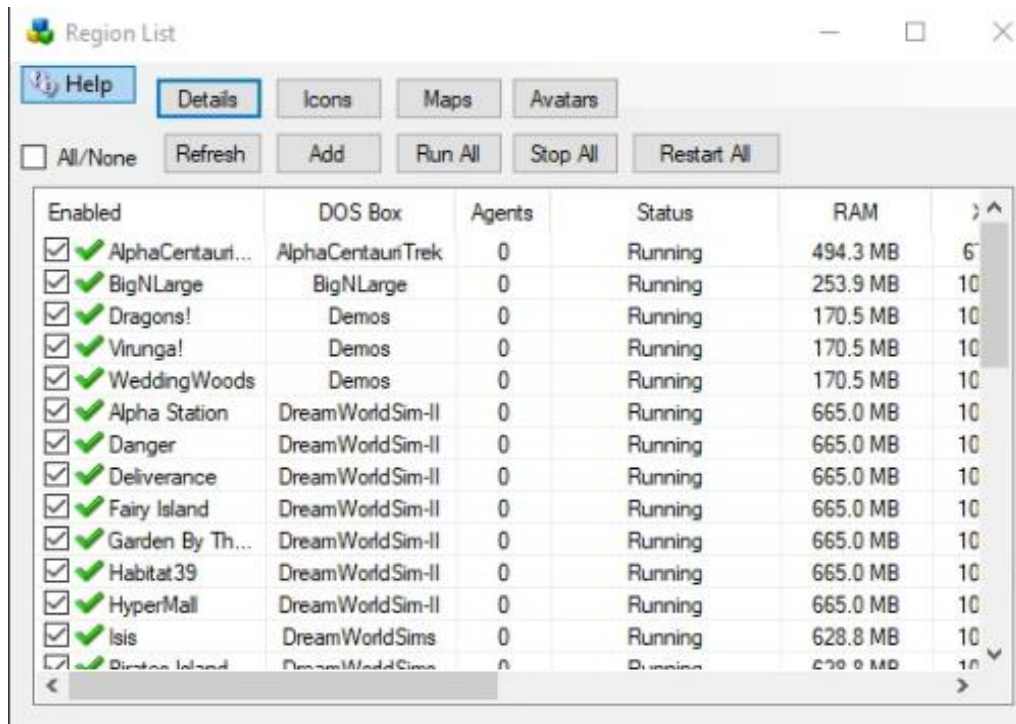
## Restart Robust

This button safely stops and restarts Robust.

## View button

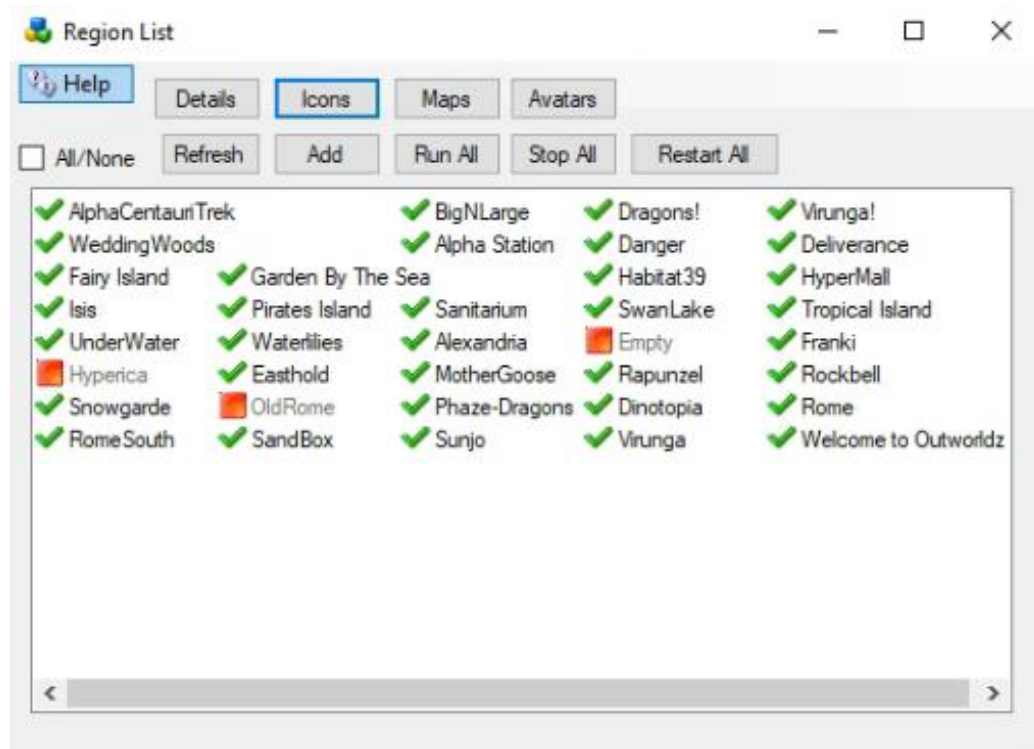
There are four views.

**Detail View:** The Detail view can be sorted by Name, Group, Agents or Status by clicking the column name.



**Icon View:** The second view is a small icon-only view for larger grids

251658240

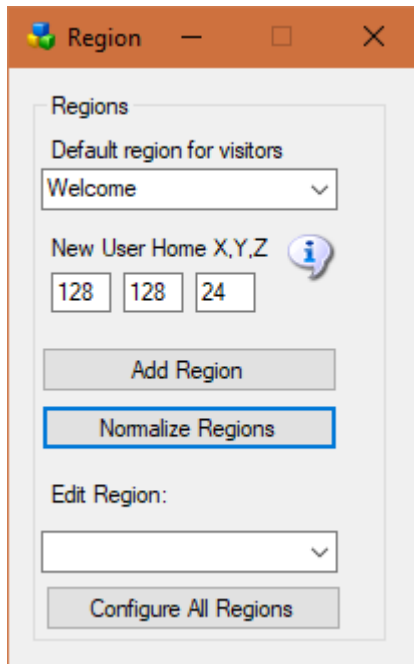


**Map view:** The third view only appears if Maps are enabled before the stem boots. It has zoomable map images by the scroll wheel.



- The INI file name must match the [Region Name] inside it. This example region [Region Name] must be saved as “Region Name.ini”.
- Only one [Region Name] is allowed in an INI file.
- All contents of a Region file are made by Dreamgrid and will be overwritten. See the Region Control Panel to change the settings.

## Regions



**Default region for visitors:** This is your “Welcome” region. Hypergrid visitors and people who log in for the first time get sent to this region. The region must be online.

**New User Home X,Y,Z:** Users that create accounts on the web page will land at this spot on your Welcome region. Their home is set here.

Default: 128,128,24

**Add a Region:** will bring up a dialog form for adding a new region.

**Normalize Regions:** The web maps require that the lower left corner be started at 1000,1000. This will move all regions so that the chosen region is at 1000,1000. All regions maintain their relative positions.

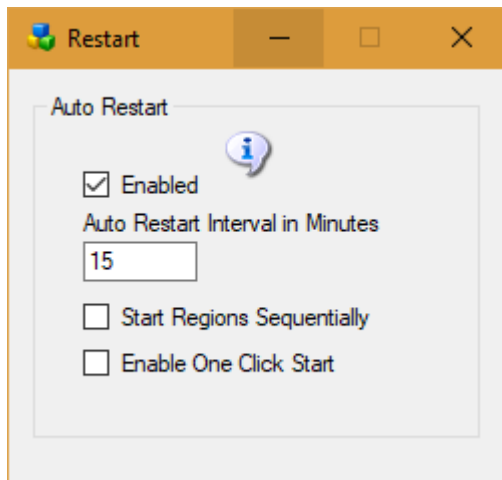
**Edit Region:** will bring up a dialog form to edit the selected region.

**Configure All Regions:** will open all regions for editing.

## **Auto Restart and Startup Settings**

Opensim uses up more RAM as people arrive and leave. Periodic restarting of regions is necessary to clear memory. You can set up a restart timer here.

Dreamgrid will not restart a region if avatars are present. It will restart the region only after all avatars leave.



**Enable:** If enabled, the auto restart interval will be set to 1440 minutes, which is one day. If disabled, the regions will try to run forever.

**Auto restart Interval:** The number of minutes a region runs before it restarts.

- 0 = Off
- 720 is 1/2 day. 1440 is one day. 2880 is 2 days.
- If Autobackup is enabled, this interval will be extended beyond the Autobackup Interval by 30 minutes to allow Autobackup to complete.

**Start Regions Sequentially:** Unchecked= start a new region every few seconds. This can overwhelm the database, memory and/or CPU on some systems. Checking this box will start each regions sequentially it will wait for it to boot completely before



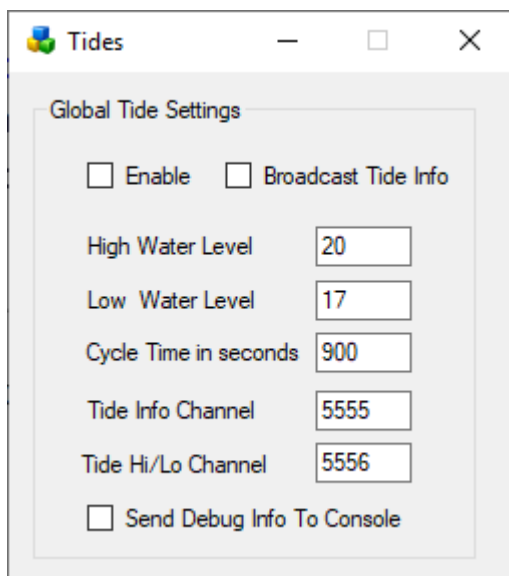
starting the next. It will extend the waiting period up to 3 minutes. per region.

**Enable One Click Start:** If set, running Start.exe will automatically start Opensim without needing to click the second [Start] button.

## Tides Module

The tide module makes water go up and down. It has a buoy with a script to make boats and objects float with the changing water level. It must be used on a single sim surrounded by water.

Tides is by Jak Daniels from  
<https://github.com/JakDaniels/OpenSimTide>



**Enable:** If set, Tides are enabled globally. Individual region Tide setting must be enabled to make the water go up and down in each region.

**Broadcast Tide Info:** This must be checked to send tide level info to the provided buoy. It uses channel 5555.

**High Water Level:** default 20 meters

**Low Water Level:** default 17 meters

**Cycle time in seconds.** default 900 seconds = 15 minutes

**Tide Info Channel:** As the tides rise and fall, a tide level command is broadcast on this channel. This must be set to 5555 for the provided script to work.

**Tide High Low Channel:** An announcement will be made on this channel when the tide is at a high or low level.

**Send Debug Info to console:** will send chat to the regions console for debugging.

Buoy:

A floating buoy is provided in the Load Local IAR menu.



### Tide script:

To make items float on water just place this script into their root prim.

```
integer listen_handle;
vector myPos;
float tideLevel = 20.0;

default {
    on_rez(integer start_param)
    {
        llResetScript();
    }

    state_entry()
    {
        listen_handle = llListen(5556, "TIDE", NULL_KEY, "");
    }

    listen( integer channel, string name, key id, string message )
    {
        tideLevel=(float)message;
        myPos = llGetPos();
        llSetPos(<myPos.x, myPos.y, tideLevel + 0.05>);
    }
}
```

To make items float on water just place this script into their root prim.

More complex stuff can be done using the full info channel, which has data about where in the tide cycle we are. Rez a cube prim and place

this script inside:

```
integer listen_handle;
default
{
    state_entry()
    {
        listen_handle = llListen(5555, "TIDE", NULL_KEY, "");
    }

    listen( integer channel, string name, key id, string message )
    {
        llWhisper(0, channel + " " + name + " " + id + "\n" + message);
    }
}
```

The cube will whisper info about the current tide position every time the tide is updated.

Links:

<https://github.com/JakDaniels/OpenSimTide>

## **Vivox Voice Settings**

Vivox powers voice for millions of players in many of the world's best games.

You must first ask for a free Opensim Vivox account by clicking the link. These accounts are free for non-commercial use. It can take a week to get a response, so please be patient and polite.

When you get the email, add your User ID and Password to this form and enable it. Restart the system and voice should work.

Links:

<https://support.vivox>

<http://www.hypergridbusiness.com/2011/12/free-vivox-for-all>

**License Agreement:**

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Source code: <https://github.com/Outworldz/DreamWorld>

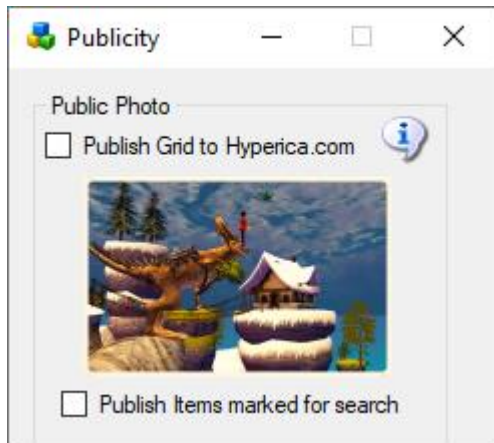
Other open source licenses apply to Opensimulator and the libraries and other functions included herein. A list is provided in several folders:

- \Licenses\_to\_Content
- \Opensim\ThirdPartyLicenses
- \Opensim\NOTES

**Data Collection Policy**

Outworldz, LLC does not collect personally identifiable information. No personal details of your site, such as passwords or user names or other details are sent to Outworldz.

## Publicity:



If you check the **Publish Grid** button, the system will send public information about your grid, such as the web address, to Outworldz, LLC for use in the Hyperica.com directory. This information is removed automatically if you turn your grid off or uncheck the box.

## DNS

The DYN DNS system stores public IP addresses and your domain name as is necessary to run the DNS system.

## Anonymous data

The unique random identifier of your machine is stored at Outworldz along with a small amount of anonymous data. This includes whether your software passes diagnostics, the revision level, and whether it is on the Hypergrid. This is used for quality control purposes.

The Outworldz web server may also automatically collect and store routine information in server logs. This may include details of how you used our service, such as your search queries or Internet protocol address, browser type, browser language, the date and time of your request and referral URL.