JAZZERAINIOUS

Like No Place On The Planet Operation Manual

Table of Contents

TABL	E OF CONTENTS	2
1. JA	AZZERAINIOUS SYSTEM DEFINED	3
1.1. 1.2. 1.3. 1.4. 1.5. 1.6. 1.7. 1.2. 1.3. 1.4. 1.5.	INTRODUCTION OR OVERVIEW (WHAT IS JAZZERAINIOUS?)	
1.6. 1.7.		
3. J	AZZERAINIOUS WEBSITE	
3.2. 3.3. 3.4. 3.5. 3.6. 3.7. 3.8. 3.9. 3.10 3.11 3.12 3.13 3.14	ENTER JAZZERAINIOUS: WHAT'S PLAYING NOW: SUPPORTING ORAGNIZATIONS: GET YOUR JAZZERAINIOUS T-SHIRT: WANNA BE ON JAZZERAINIOUS? ARTIST LISTING: WORTH MENTIONING: JAZZ FESTIVALS/CONCERTS: IN MEMORY OF: O.THANKS: I.REVIEWS: 2.HOW JAZZERAINIOUS CAME TO BE: 3.COMMENTS TO JAZZERAINIOUS: 4.COMMENTS ON JAZZERAINIOUS.COM:	$\begin{array}{c} 18\\ 18\\ 18\\ 18\\ 19\\ 19\\ 19\\ 19\\ 19\\ 19\\ 19\\ 19\\ 19\\ 19$
	AZZERAINIOUS BACKGROUND SCRIPTING	
4.2.	FILEMANGE.PL SCRIPT JAZZPLAYLIST.PL SCRIPT	
	FAILOVER AND RECOVERY FROM PRIMARY TO SECONDARY	
5.2.	PREPARATIONS: Failover Process: Recovery	23
6. F	FINAL COMMENTS AND SUMMARY	25

1. JAZZERAINIOUS SYSTEM DEFINED

1.1. Introduction or Overview (What is Jazzerainious?)

Jazzerainious is simply an Internet Jazz radio station that streams out Jazz music on a 24x7 timeframe. It streams out many different flavors of jazz along with Jazz specials of certain artists who have made a major impact on jazz and its history. The radio station consists of the following elements of support;

- iMac desktop computer with a minimum of four GB of memory and 500GB hard drive
- Its own dedicated class A ip-address
- Itunes with a minimum of 5000 pieces of music in a playlist
- Nicecast broadcaster
- A website
- Separate (computer or internet radio) to act as a monitor with a separate class A IP-address
- A remote IMac (Dev) to act as a remote computer performing updates and modifications as required
- Some background scripting requirements to handle reporting, log information and communication between Jazzerainious's main operations and the website

1.2. How Does Jazzerainious Operates?

Jazzerainious works by broadcasting a developed Itunes playlist over the broadcaster in a stream over the Internet. The broadcaster has its own server where information that it picks up from the playlist is streamed out as well. The website (<u>www.jazzerainious.com</u>) provides access to the station along with information of who is playing, historical information and contact data. Please note the diagram below;

Jazzerainious operates by running the playlist from iTunes on either Jazzerainious or Jazzerainious II. The broadcaster (Nicecast) sends it out (using 96.92.63.241 only) through the switch, router, and firewall onto the Internet, where listeners can hear it. Mandela is the only system that can remotely operate, configure, and update Jazzerainious and Jazzerainious II. The Web server provides information and a direct link to Jazzerainious depending on which server (Jazzerainious or Jazzerainious II) is running at the time. The jazzerainious servers provide a backup to each other in case one goes down.

1.3. How was Jazzerainious Developed?

Jazzerainious is the brainchild of Bill Sommerville. Jazzerainious went into production status on 24 October 2013 and has been online since then. More information on its operations can be found at the website at <u>www.jazzerainious.com</u>



1.4. The Heart of Jazzerainious

Jazzerainious would not exist without the vast amount of jazz music that has been collected throughout the years. With the advent of MP3 and other protocols, applications like iTunes could collect these musical files and organize them into a database or spreadsheet where further ideas and artistry could be expanded into what is now known as Jazzerainious.

1.5. Development of Jazzerainious

All development is done using Mandela. Development is performed for the following actions;

• Adding new music to the Prejazzerainious and Jazzerainious playlists

- Recording of music and sounds
- Rearranging music in the playlist
- Updating the Transferbin folder playlist for transferring to the production servers
- Remote updating into Jazzerainious (Production)
- Remote updating into JazzerainiousII (Production)
- Updating background scripts (Production)
- Updating of the Jazzerainious website (Jazzerainious.com)

1.6. Certain assumptions

It is assumed that anyone who reads this and is considering their own radio station using Itunes understands the operations of Itunes (adding to the library, creating, deleting, importing, and exporting playlists), ChronoSync, and Nicecast information. Support for Chronosync is available at <u>https://www.econtechnologies.com</u>. Instructions for iTunes are available at the help portion of iTunes or at the Apple support website. Instructions for Nicecast are available at <u>https://www.rogueamoeba.com/nicecast</u>. Chronosync and Nicecast cost between \$50-\$60 bucks each, and the license can cover more than one server.

1.7. Update news

Unfortunately, Nicecast support is no longer available. This is what you see when you go to Google and type in Nicecast.

Nicecast has been retired; Migrate to Audio Hijack



Rogue Amoeba https://www.rogueamoeba.com > nicecast

Back in 2018, *Nicecast* was retired from development and removed from sale. We now recommend Audio Hijack for broadcasting from your Mac. Audio Hijack includes ...

More results from rogueamoeba.com »

Nicecast No More? 5 Mac Alternatives



Aug 4, 2024 — *Nicecast was a widely used Mac radio broadcasting software* with a really easy-to-use interface. Unfortunately, it has now been discontinued.

The End of the Nicecast Era

Summary. Today, our internet radio tool Nicecast is being ...

Broadcasting From the Mac ...

We encourage you to read this blog post for details

More results from rogueamoeba.com »

Now, the alternative that has been recommended may or may not cost you in broadcasting and support. I was able to avoid all of this by keeping one of my Mac OS at the following level



Enel, no updates.

This version let Nicecast start-up and has been running ever since. Remember, you need to stop the system from doing automatic updates if you go this route. This system will need to stay at this OS level with no updates. I understand there may be a security issue here. If your system is isolated to where there are no more connections (than the Internet itself), Mine has been running since 2013 with no

security issues. This will let Nicecast keep running, and you will not have to pay for any broadcast/support fees.

JAZZERAINIOUS MAIN OPERATIONS

1.7. Adding Music to Jazzerainious

New music is acquired in different ways; resources consist of the following;

- Internet purchase
- Itunes purchase
- CD downloads
- LP downloads
- Self-developing/recording

Once the music has been selected and downloaded, it should to be added to Itunes in playlists. There are two playlists they must be added to as follows;

- Prejazzerainious
- Jazzerainious

Prejazzerainious is the list where the initial adding and the modification of the list are made. Once satisfied with the results, the changes are copied to the Jazzerainious playlist and another playlist called Transferbin (just the updated information). The Transferrin playlist is used to update the production Jazzerainious and the JazzerainiousII production servers. The Prejazzerainious and the Jazzerainious playlists on Mandela

5,456 items, 15.7 days, 38.18 GB

are called the **Master Playlists.** All other playlists on the production servers (Jazzerainious and JazzerainiousII) are compared and matched to the **Master Playlists**. Matching the production playlists

to the Master Playlists ensures that the number of items, days, and GB size (located at the bottom) matches. No broadcasting is performed until the playlists on the production servers (Jazzerainious & JazzerainiousII) match the Master Playlists on Mandela.

The functions of the playlists are as follows;

Servers	Playlists	Function	Remarks	Function
Mandela	Prejazzerainious	Master Playlist	Initial Work is performed	Master Playlist
Mandela	Jazzerainious	Master Playlist	After Prejazzerainious is done, received just the updated music added to it	Backup to Master Playlist
Mandela	Transferbin	Updated Playlist	Receives just the updated music	Transfer list to the Prod servers
Jazzerainious	Prejazzerainious	Updated Playlist	After Transferbin is im- ported, received just the updated music added to it	Backup to Production
Jazzerainious	Jazzerainious	Updated Playlist	After Transferbin is im- ported, received just the updated music added to it	Production
Jazzerainious	Transferbin	Updated Playlist	Has the updated music from the Master Playlist	Transfer list to the Prod servers
JazzerainiousII	Prejazzerainious	Updated Playlist	After Transferbin is im- ported, received just the updated music added to it	Backup to Production
JazzerainiousII	Jazzerainious	Updated Playlist	After Transferbin is im- ported, received just the updated music added to it	Production
JazzerainiousII	Transferbin	Updated Playlist	Has the updated music from the Master Playlist	Transfer list to the Prod servers

Once the playlists on Mandela (Prejazzerainious, Jazzerainious, and Trandferbin (containing just the updated information) have been exported (saved), you will need to sync the new music that is on Mandela to Jazzerainious and JazzerainiousII. There are various ways to accomplish this. Currently in use is Chrono-Sync. It has the ability to sync the files you wish to sync (music/music) and not the other stuff (movies, TV shows, audio-

Tunes	File	Edit	Song	View	С	ontrols	Account	Window	
		w t Playli se Win		æ	w		••• ••• •••		
<	Add to Library Burn Playlist to Disc Library			sc			A Home Layou		
Favorit		rary vices					ate Genius Off Genius		
		me Sha	aring				anize Library	·	
0	Op	en Stre	am	æ	U		solidate File		
0	Sub	oscribe	to Pode	cast		Expo	ort Library		

books, etc.).



When the sync process is complete, you will need to go into Itunes on the productions servers (Jazzerainious and JazzerainiousII) and select Add to Library. Select the path where the new

music is located (in

most cases, selecting the music folders will work). This will put the new music you sync from Mandela into the iTunes music list. Next copy the Transferbin playlist file (Mostly in the playlist folder on Mandela) to the Jazzerainious and JazzerainiousII server in the same folder location.







The Transferbin playlist is great for updating the shortlists (100 or less) to add to the Prejazzerainious and Jazzerainious playlists on the production servers. Once you have saved the files, go into Itunes and select File >>>>Library>>>Import Playlist

Locate and select the Transferbin file. If there are no errors, it will bring in the new selections of music you plan



to add to Prejazzerainious and Jazzerainious playlists on the production servers. Then, it is just a matter of using iTunes to copy the music from the Transferbin playlist to the Prejazzerainious and Jazzerainious playlists. Where you put the music in the playlist is the owner's choice.

1.2. Warning on exporting and importing the Prejazzerainious playlist

The Prejazzerainious and Jazzerainious playlists are huge. (Over 5000 pieces of material). Trying to copy the whole playlist will invite a host of errors of missing pieces of music. If you are working with a reimage or new servers, you should copy your music to the new servers, perform your discovery (of adding music to the library in Itunes), perform your importing of the Prejazzerainious playlist, then perform your adding or corrections if you receive any missing errors. After all your music has been discovered for the first time in iTunes in the Prejazzerainious playlist on the new server, any additions to the playlist should be made by using the Transferbin playlist in smaller increments (100 pieces of music or less). To update the Jazzerainious playlist from the Prejazzerainious playlist, first make sure the Jazzerainious playlist is empty, and then copy all of the pieces from the Prejazzerainious playlist to the Jazzerainious playlist. After the Prejazzerainious and Jazzerainious playlists are the way you want them, be sure to export the playlist to a playlist folder. This will be a safeguard in case of any damaged music or missing files. When the server is in a production state (playing music live over the Internet), always use the Jazzerainious playlist.

1.3. Setting up Jazzerainious for Production Operations

Once the playlist matches the master playlist on Mandela (See Sec 1.5 Adding Music to Jazzerainious), it is ready to go into production operations (Broadcast music over the Internet). Only the production server can be in a production state at any one time. Whichever server you choose to start production operations (Jazzerainious or Jazzerainious II), it will be the primary, and the other will be the backup and act as the secondary in case of any issues that occur on the primary that may cause it to go down during production operations.

The following applications must be on the production servers for proper broadcasting production operations.

- Itunes (with the Prejazzerainious and Jazzerainious [matching the Prejazzerainious] playlists
- Nicecast (with broadcast server)
- Murus Security Firewall Application

NICECAST

Nicecast handles the broadcasting over the Internet. It is easy to use and does not require any additional tools. You have the ability to be on or off the air with a simple click of the mouse.

	Nicecast Broadcast
Broadcast	Nicecast 🔗
Start Broadcast	State: Standby Level: Standby Source: Difference
Source	D Titles Quality Share Effects

There are setups to do for ip address configurations and music informational monitoring. Instructions are provided that give the user many choices to choose from. It is recommended that the configurations be used for Jazzerainious;

Source:

Source	Nicecast will broadcast audio from the item selected below.
Application	•
Ø iTunes	
	Advanced Select 🗸

Info:

Information	This info will be sent out to listeners with your stream.
Name:	Jazzerainious
URL	www.jazzerainious.com
Genre:	Jazz AIM:
Description:	Jazz Like No Place On The Planet

Titles:

- Track Tit	es	Track Ti	tles that are displayed in the listener's player
Show:	🗹 Artist	Album	🗹 Title
Source:	N/A		?
Currently:	N/A		~

Quality:

Quality	Determine	s your stream's quality	and CPU usage.
Preset:	Custom		•
	Bitrate:	320 Kbps	٥
	Sample Rate:	44.100 Khz	٢
	Channels:	Stereo	٢
	CPU Usage/Quality:		
	_	Leas	Most

Share:

Note: Ip-address can be what you have available. Port can be the same as what is seen here or what the user feels is more appropriate.



			licecast 🖗
Built-In Server	Listeners	Console	۵
			Stop
			8006
Password : joe	Maxi	imum Listen	ers: 80
	96 utomatic 96.92. Password	96.92.63.24 Itomatic 96.92.63.241 Password Maxi	Built-In Server Listeners Console 96.92.63.241 96.92.63.241 P Itomatic 96.92.63.241 P Password Maximum Listen : joe

Effects: No Effects are required.

MURUS

Murus is a security firewall that protects the Jazzerainious production servers from hackers since the Jazzerainious production servers use a class A IP address for the Internet, as seen above in the Share section. The following is the recommended configurations for the Murus Firewall for inbound network connections;



Once the Murus Firewall is configured, you will need to test it using the application itself (upper left-hand corner) and actually with Jazzerainious running and using the monitor to ensure the sound is getting out on the Internet. Tweaking of the services may be required. Instructions come with the Murus Firewall.

1.4. Establishing and Configuring the Radio Monitor

The radio monitor can be either an Internet radio or a computer that is linked to the Jazzerainious radio station using the URL noted in section 1.7 in the Share section figure. If using a computer, there are several ways to connect to the Jazzerainious radio station as follows;

- Going to the Jazzerainious website and clicking on the Enter Jazzerainious link
- Starting up Itunes, select View, then Media Kind, then and Internet Radio. Select Jazz, then scroll down the Jazz listing until you come along to Jazzerainious.

iTunes	File	Edit	Song	View	Controls	Account	Window	Help	
			1	Med	ia Kind	▶ ►	✓ Music		₩1
•••	•		••	View Sort Shov		► Dns ૠJ	Movies TV Sho Podcas iTunes	ws	第2 第3 第4 第5
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Ar Ar	tists oums				o Playback alizer		Interne 1et So 0 seconds		#9
∫ So	ngs			Ente	r Full Screer	ካ ^ജF	Jacconda	Luit Play	131
(<->) JA)	ZZER/		US		JAZZ LIK	E NO PLA	ACE ON T	HE PLA	NET,

- Use Tune-in and using the search engine to find Jazzerainious
- Use Listen-Radio-Net and using the search engine to find Jazzerainious

1.5. Starting Jazzerainious for Product Operations (Broadcasting)

Once the configuration/testing is complete and the production server is selected, do the following:

- 1. Ensure the Murus firewall is enabled
- 2. Use Itunes, slide the volume bar all the way to the right, and start the Jazzerainious playlist
- 3. Start up Nicecast, slide the volume all the way to the right, and click on the start broadcast button
- 4. Check the radio monitor (Internet Radio or a computer linked to Jazzerainious) to see that you can hear the music.
- 5. If you can hear Jazzerainious, you are in production operations and are virtually broadcasting Jazzerainious over the Internet globally.

1.6. Monitoring Jazzerainious with Nicecast

Nicecast not only provides the broadcast ability of Jazzerainious over the Internet but also provides a wealth of information as it broadcasts as follows;

- What systems connect to Jazzerainious by ip-address
- The total number of connections
- Average listing times
- Average GB being sent out for listening

NSF NSF NSF NSF	es/12.1.2 (Macintosh; OS X 10.10.3) AppleW Player/12.00.7601.18741 WMFSDK/12.00.76 Player/12.00.7601.18741 WMFSDK/12.00.76 Player/9.0.0.4509 WMFSDK/9.0 Player/9.0.0.4509 WMFSDK/9.0 IeCoreMedia/1.0.0.12F69 (Apple TV; U; CPU	01.18 64.45.197.2	235:31:11 88:45:28 65:19:13 57:37:14
NSF NSF NSF	Player/12.00.7601.18741 WMFSDK/12.00.76 Player/9.0.0.4509 WMFSDK/9.0 Player/9.0.0.4509 WMFSDK/9.0	01.18 198.234.129.210 170.173.16.10	65:19:13 57:37:14
A NSF A NSF A App	Player/9.0.0.4509 WMFSDK/9.0 Player/9.0.0.4509 WMFSDK/9.0	170.173.16.10	57:37:14
A NSF	Player/9.0.0.4509 WMFSDK/9.0		
App		202.70.228.27	
	leCoreMedia/1.0.0.12F69 (Apple TV; U; CPU		28:06:36
🖬 iTun		OS 1 125.30.10.166	26:33:06
	es/10.6.3 (Macintosh; Intel Mac OS X 10.5.8) Apr 74.15.54.89	19:48:02
NSF	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 174.21.207.168	6:30:34
A NSF	Player/11.0.5721.5275 WMFSDK/11.0	58.189.193.117	6:12:59
App	leCoreMedia/1.0.0.11D258 (Apple TV; U; CP	U OS 45.49.236.77	5:01:30
A NSP	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 210.171.248.200	4:29:59
NSP	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 133.218.12.65	4:26:36
NSF	Player/11.0.5721.5275 WMFSDK/11.0	180.57.62.243	4:06:08
NSF	Player/9.0.0.4509 WMFSDK/9.0	153.203.187.102	3:48:25
A NSF	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 124.100.122.127	1:40:51
NSP	Player/11.0.5721.5275 WMFSDK/11.0	126.8.197.52	1:13:24
App	leCoreMedia/1.0.0.11D258 (Apple TV; U; CP	U OS 86.174.78.92	1:08:43
NSF	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 114.187.67.81	1:04:03
A NSP	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 219.164.50.151	37:08
A NSP	Player/12.00.7601.18741 WMFSDK/12.00.76	01.18 121.113.68.71	21:05
steners	: 5872, Average Listening Time: 40:24		Kick
			T G G F G F
	NSF App NSF NSF NSF NSF NSF NSF NSF	NSPlayer/11.0.5721.5275 WMFSDK/11.0 AppleCoreMedia/1.0.0.11D258 (Apple TV; U; CF NSPlayer/12.00.7601.18741 WMFSDK/12.00.76 NSPlayer/12.00.7601.18741 WMFSDK/12.00.76 NSPlayer/11.0.5721.5275 WMFSDK/11.0 NSPlayer/9.0.0.4509 WMFSDK/9.0 NSPlayer/12.00.7601.18741 WMFSDK/12.00.76 NSPlayer/11.0.5721.5275 WMFSDK/11.0 AppleCoreMedia/1.0.0.11D258 (Apple TV; U; CF NSPlayer/12.00.7601.18741 WMFSDK/12.00.76 NSPlayer/12.00.7601.18741 WMFSDK/12.00.76	AppleCoreMedia/1.0.0.11D258 (Apple TV; U; CPU OS 45.49.236.77 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 210.171.248.200 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 133.218.12.65 NSPlayer/11.0.5721.5275 WMFSDK/11.0 180.57.62.243 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 124.100.122.127 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 124.100.122.127 NSPlayer/11.0.5721.5275 WMFSDK/11.0 126.8.197.52 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 114.187.67.81 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 114.187.67.81 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 121.113.68.71 NSPlayer/12.00.7601.18741 WMFSDK/12.00.7601.18 121.113.68.71 teners: 5872, Average Listening Time: 40:24 102.24

By displaying the IP address of what systems are listening, you have the ability to know what media application they are using to connect to Jazzerainious. Using <u>http://www.ipfingerprints.com/</u>, you have ability to get a fair idea of where the listener (at least country & city) is located. This can provide an enormous amount of information on the following;

- Where most of your listeners are (country/city)
- By IP address, your most frequent listeners
- How long they listen tells the popularity of Jazzerainious (playlist organization)
- The timing of when the Jazzerainious listeners connect and listen

This information, in time, will provide insight into the operations of Jazzerainious interactions with the listeners, thus providing adjustment opportunities in collaboration of the comments email link on Jazzerainious.com if required.

1.7. Updating the production server playlists during broadcasting

This can be done and provides the listener with an interruption of service during the process. However extreme caution should be observed while in this updating phase during broadcasting. Clicks required to update production server playlists according to the instructions (sec 2.1) must be performed slower (especially remotely). Any sudden moves or clicks in the wrong area can affect the music being played if not bring down Jazzerainious altogether.

3. JAZZERAINIOUS WEBSITE



The Jazzerainious website consists of much of the information as a white paper style about Jazzerainious. Jazzerainious.com consists of several links that cover the following information;

3.1. ENTER JAZZERAINIOUS:

This provides immediate access to the Jazzerainious radio station.

3.2. WHAT'S PLAYING NOW:

Provides information of what is currently playing on Jazzerainious for the users listening pleasure.

3.3. SUPPORTING ORAGNIZATIONS:

Consist of organizations that list Jazzerainious within their systems for public listening support. These organizations provide additional access support to Jazzerainious for listeners using an iPad, iPod, other computers, Internet radios and cell phone devices.

3.4. <u>GET YOUR JAZZERAINIOUS T-SHIRT</u>:

This link provides viewing and ordering of the Jazzerainious T-shirts.

3.5. WANNA BE ON JAZZERAINIOUS?

Provides information to listeners on how to submit their voices as DJ's on Jazzerainious.

3.6. ARTIST LISTING:

Displays a listing of most of the artists that are on Jazzerainious.

3.7. WORTH MENTIONING:

Provides information on certain artist whom wishes for Jazzerainious to display information about them.

3.8. JAZZ FESTIVALS/CONCERTS:

Provides link listing to other sites on Jazz festivals and concerts covering the mid-west and eastern US and parts of Canada and Europe.

3.9. IN MEMORY OF:

Displays a listing of some of the past greats in Jazz. Papers on each one provide a historical and personal accounting of their artistry.

3.10.<u>THANKS</u>:

A personal thanks to listeners of certain cities throughout the world for listening to Jazzerainious.

3.11.<u>REVIEWS</u>:

Displays comments from those who have listened to Jazzerainious.

3.12.<u>HOW JAZZERAINIOUS CAME TO BE</u>:

A Historical paper on the thoughts and ideas that lead to the creation of Jazzerainious. (This document is included)

3.13.<u>COMMENTS TO JAZZERAINIOUS</u>:

Opens an email to send to <u>comments@jazzerainious.com</u> reference the operations of the Jazzerainious radio station.

3.14.Comments on Jazzerainious.com:

Jazzerainious.com consists of many areas tapping Jazz. It also receives information from Jazzerainious itself, informing anyone who clicks the WHAT'S ON JAZZERAINIOUS (Sec: 3.2) link. There are scripts that run in the background, providing this information for the website. The next section will provide more information on this and other background scripts.

4. JAZZERAINIOUS BACKGROUND SCRIPTING

Several background scripts provide additional information of Jazzerainious. This information is provided mostly from the NIcecast broadcast application logs. These logs cover key areas during operations. They are as follows;

- Music has played
- Number of IP address that have connected to Jazzerainious
 - Length of connected
 - Number of connections during a certain time
 - Average times the total number of listeners were connected
- Length of time of broadcasting

These and other items of information are collected by the background scripts and processed into readable files, and stored for reference. This process consists of the following;

4.1. Filemange.pl script

This Perl script is the heart of the background work for Jazzerainious. It gathers the log information from Nicecast and processes it into understandable text, then sends it to the mail server to be sent and analyzed when required. This information is important as it provides the traffic load information of listeners where adjustments can be made on the bandwidth for Jazzerainious if required.

4.2. Jazzplaylist.pl script

These Perl scripts take the log file that Nicecast has on the music that has played, process it, and send the current music playing to the web server. There, Jazzerainious.com displays the current music playing on Jazzerainious by clicking on the WHAT'S PLAYING NOW link on the main web page.

5. FAILOVER AND RECOVERY FROM PRIMARY TO SECONDARY

5.1. Preparations:

5.1.1. Before attempting any failover, you will need to acquire configuration information. In order to keep your listeners tuned in your station, you need to keep your configuration information (address, quality, share, path, titles, playlist, and customer-supported information to match or be as close as possible.

Diagram:



Only one system can broadcast, so it is important that the network information (IP address, subnet mask, and DNS) on the primary be moved to the secondary and the primary be given another set of network information.

5.2. Failover Process:



- 5.3. Note: The above figures (Failover & Recovery) Jazzerainious (Primary) is on two different networks (192.168.0.0 & 173.168.0.0). Since 192.168.0.0 is the main network for the class A network (IP:96.92.63.245/for work), it broadcast on the 173.168.0.0 network under the class A IP:96.92.63.241. This network has a router and the network change will consist of modifying the network configurations within that router.
- 5.4. Step1- Manually insert the same network information that is in the Jazzerainious primary at the

network router in the JazzerainiousII secondary network configuration window. Even though the apply button will light up as enabled, (DO NOT CLICK ON THE APPLY BUTTON)

5.5. Step 2- In Jazzerainious primary place another network configuration information as noted below;

IPv4:	Manually
IP Address96:	. 96.92.63.247
Subnet Mask:	255.255.255.240
Router:	96.92.63.254
DNS:	75.75.75.75, 75.75.76.76

Step 3- Once the network information has been entered, Click the apply button on Jazzerainious primary server only. Once Jazzerainious Primary has accepted the new IP address and network configuration, click on the apply button of JazzerainiousII secondary network configuration button.

Note: Jazzerainious (primary) is attached to a router; therefore, the network must be changed within the router and not the server itself.

At this stage, failover is complete and the secondary server should be able to broadcast.

5.6. Recovery

- 5.7. Recovery is performing the opposite of failover. The difference in this case is applying the network change on primary last, whereas in failover, it was last.
- 5.7.1.Remember: The only network address that can be used for broadcasting is the following;

5.7.2.——	
5.7.3.IPAddress:	96.92.63.241
5.7.4.Subnet Mask:	255.255.255.240
5.7.5.DNS:	75.75.75.75
5.7.6.DNS2	75.75.76.76

6. FINAL COMMENTS AND SUMMARY

If you are interested in starting your own radio station, these sets of instructions will definitely get you on your way. As the owner, you control how it will be (commercials, no commercials, in-between, type of music, and playlist length). With this in mind, be prepared to adjust as you see fit. I am not trying to corner any market on anything. That is why these instructions are on-line to share with all. As with many of you, as I became older after having fun in life, I began to have legacy thoughts. Jazzerainious is mine, and no matter if you use these instructions to create your own system or come up with something entirely new, I only ask that you recognize your source and pass it on.

Thank You Bill Sommerville