

# **Iridium Direct Internet**

**Powered by Riverbed<sup>®</sup> SteelHead<sup>™</sup> Mobile**

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## **User Manual for Mac OS X<sup>®</sup> Operating Systems**

## Notice

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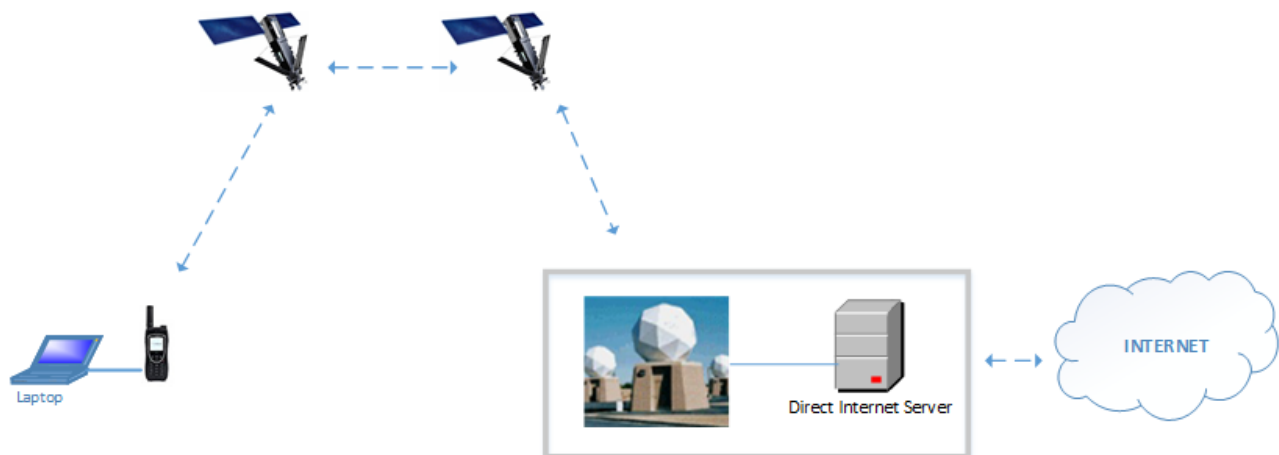
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## 1. Overview

Iridium's Direct Internet Service allows customers to connect directly to the Internet via the Iridium gateway. While users are not required to load any special software onto their computer to connect, they will find additional compression and speed benefits from installing the Riverbed SteelHead Mobile ("Riverbed"). However, the service utilizes standard dial-up networking and has been shown to work with a variety of operating systems. This documentation provides complete instructions on use.

The Iridium Direct Internet service is provided by the Riverbed software application and runs through a Riverbed® Controller at the Iridium gateway. The application provides data reduction/acceleration for faster browsing using your Iridium phone as an Internet modem.

## 2. How It Works



By initiating a connection through the pre-configured dial-up connection, your Iridium phone will dial and initiate a connection with the Iridium gateway through the Iridium satellite constellation. The Iridium gateway switch will then route the call to the Riverbed server. Once connected to the Riverbed server and a session has been established, the Riverbed accelerator (if installed on your computer) will automatically detect the connection and enhance your Internet connectivity experience. NOTE: The Riverbed application may take up to 30 seconds to establish its connection with the server.

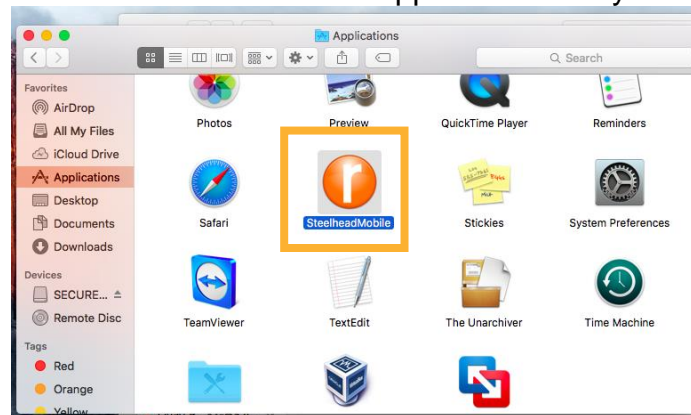


## 3. The Dial-Up Connection

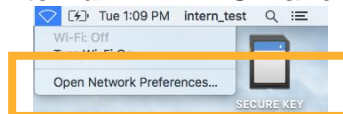
### 3.1. Connect

This process will allow you to connect to the Internet via a data call from your Iridium phone.

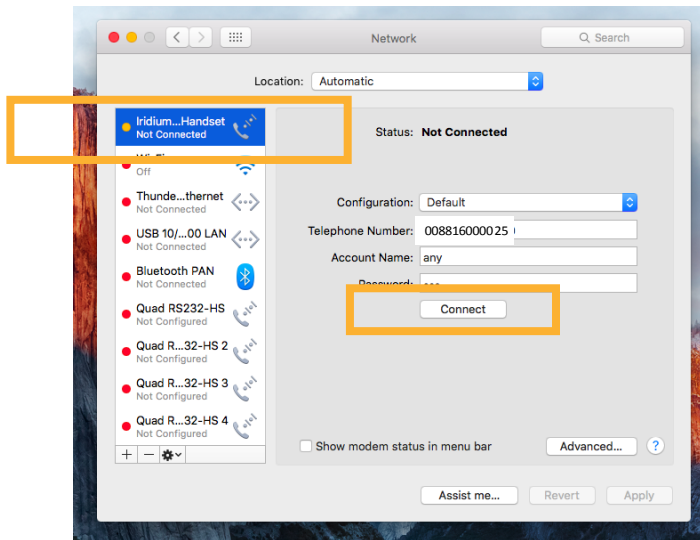
1. Connect the computer and Iridium satellite phone or transceiver. The Iridium Extreme®, Extreme® PTT, and 9555 satellite phones require a USB to mini USB cable (Iridium Part Number: USBC0801). The Iridium 9505A satellite phone requires a standard RS-232 cable and RS-232 Data Adapter (Iridium Part Number: RDA0401). The Iridium 9522B satellite transceiver requires the 26-pin IDC connector.
2. Position the Iridium phone or transceiver antenna with a clear view of the sky.
3. Make sure the computer is powered and completely booted up.
4. Turn on the Iridium phone or transceiver and wait for it to register with the satellite network.
5. Launch the Riverbed SteelHead Mobile application from your **Applications** folder.



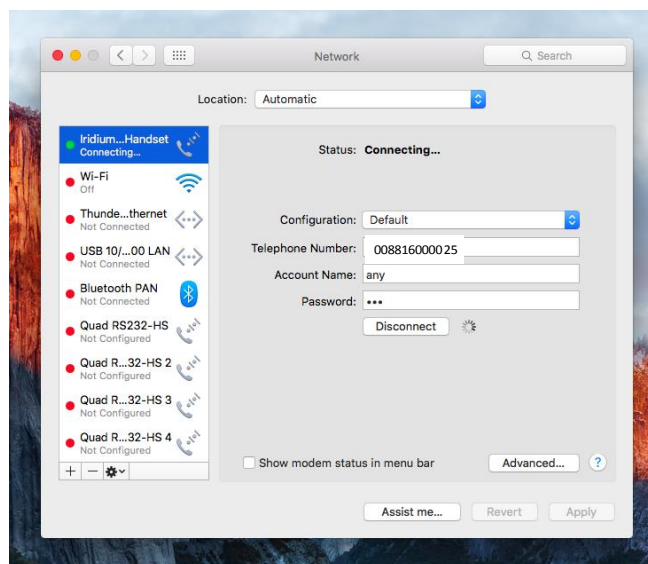
6. Click the Wi-Fi AirPort icon to **Turn Wi-Fi Off** and click **Open Network Preferences**



7. Click **iridium\_handset**, then, click **Connect**. *Note: your Iridium phone may register as a different name, such as Iridium 9575, Iridium 9555, or other names of the modem you use.*

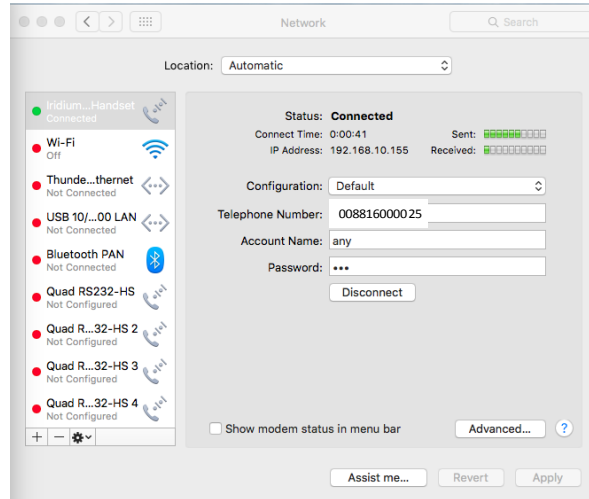


8. As the Iridium phone is dialing...
- The *phone* will display **USB Data Call in Progress** or **Data Call in Progress**.
  - The *computer* will show the **Status as Connecting...**





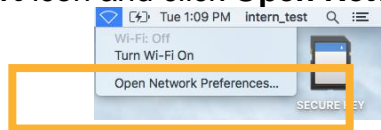
9. Once connected, the **Status** will read **Connected** and you can now launch you Internet connection.



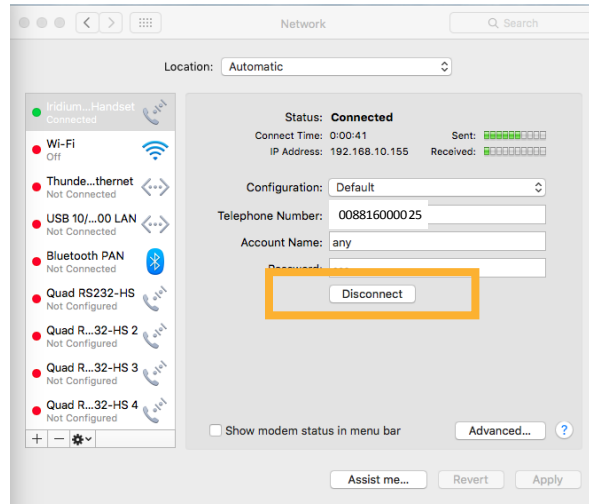
### 3.2. Disconnect

This process will disconnect your Iridium phone's data call and end your Internet access.

1. Click the **Wi-Fi AirPort** icon and click **Open Network Preferences**



- Click **Disconnect**.



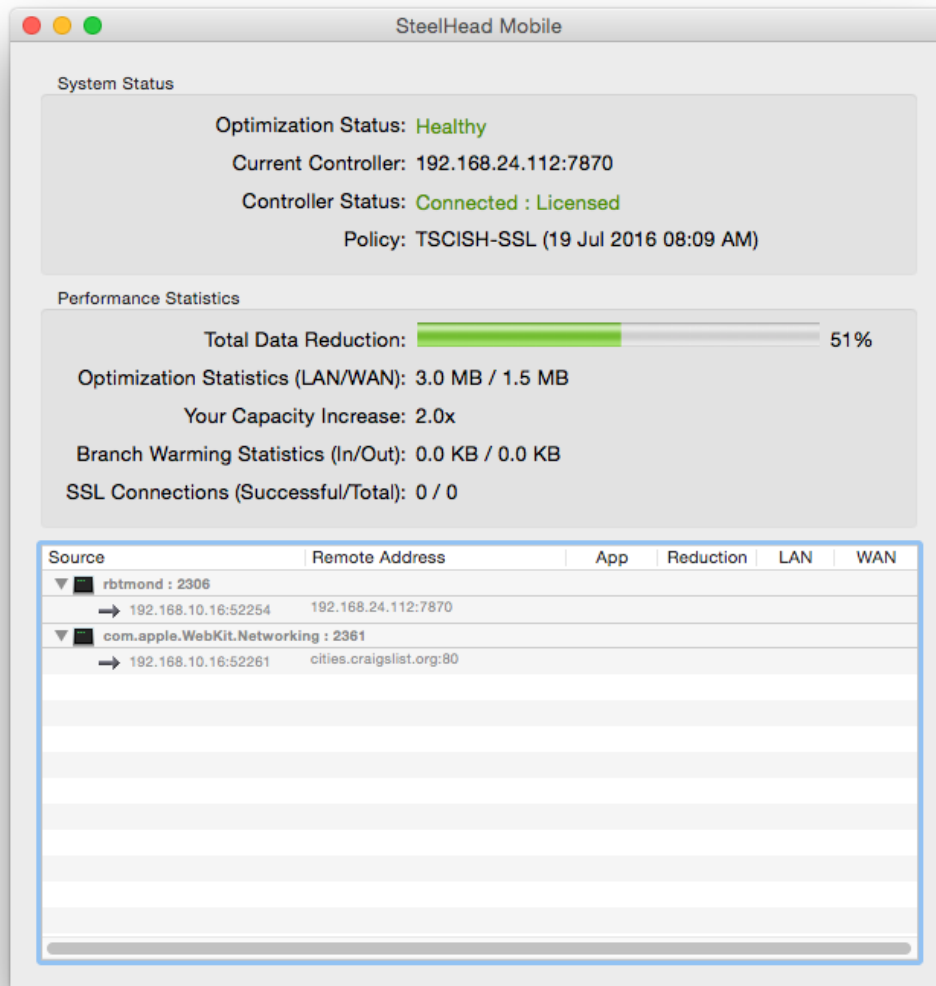
## 4. SteelHead Mobile Client

Source: Riverbed. "Mac SteelHead Mobile Client Properties." *SteelCentral™ Controller for SteelHead™ Mobile User's Guide*. Version 4.8.

**Note:** Any changes to the default settings on the Riverbed SteelHead Mobile client is not necessary and is discouraged as it may impact the client working properly.

### 4.1. Status Tab

The Status tab displays the SteelHead Mobile system status, performance statistics, and connection list.



The following table describes the controls under the Status tab of the Windows® SteelHead Mobile.

Function	Control	Description
<b>System Status</b>	Optimization Status	Displays the current state of the SteelHead Mobile. The SteelHead Mobile can be in one of the following states:  <b>Initializing</b> - Indicates that the optimization service is starting. <b>Healthy</b> - Indicates that all systems are functioning properly. <b>Critical</b> - Indicates that the optimization service is not running. Contact your system administrator. <b>Disabled</b> - Indicates that the optimization service is turned off.
	Current Controller	Displays the Mobile Controller hostname or IP address and the port to which the client

connects.

**Warning** - Indicates that the optimization status is running, but there are some issues. Contact your system administrator.

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Controller Connection Status	Displays the Mobile Controller's connection status. Possible values are <b>Connected, Licensed, Not Licensed, or Not Connected</b> .
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Policy	Displays the policy currently running on the client.
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**Performance Statistics**

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Total Data Reduction	Displays the percent data reduction on the SteelHead Mobile since the optimization service has been running.
Optimization Statistics (LAN/WAN)	Displays the total amount of optimized data exchanged with peer SteelHead (for LAN/WAN).
Your Capacity Increase	Specifies the performance improvement as a result of data optimization
Branch Warming Statistics (In/Out)	Displays the branch warming statistics. This is a feature that is not utilized with the solution Iridium is providing.
SSL Connections (Successful/Total)	Displays the number of successful SSL connections.

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**Connection List**

Displays the different connections. Right-click a connection and select **Detect SteelHeads** to find and display SteelHeads along the network path to a specified destination server.

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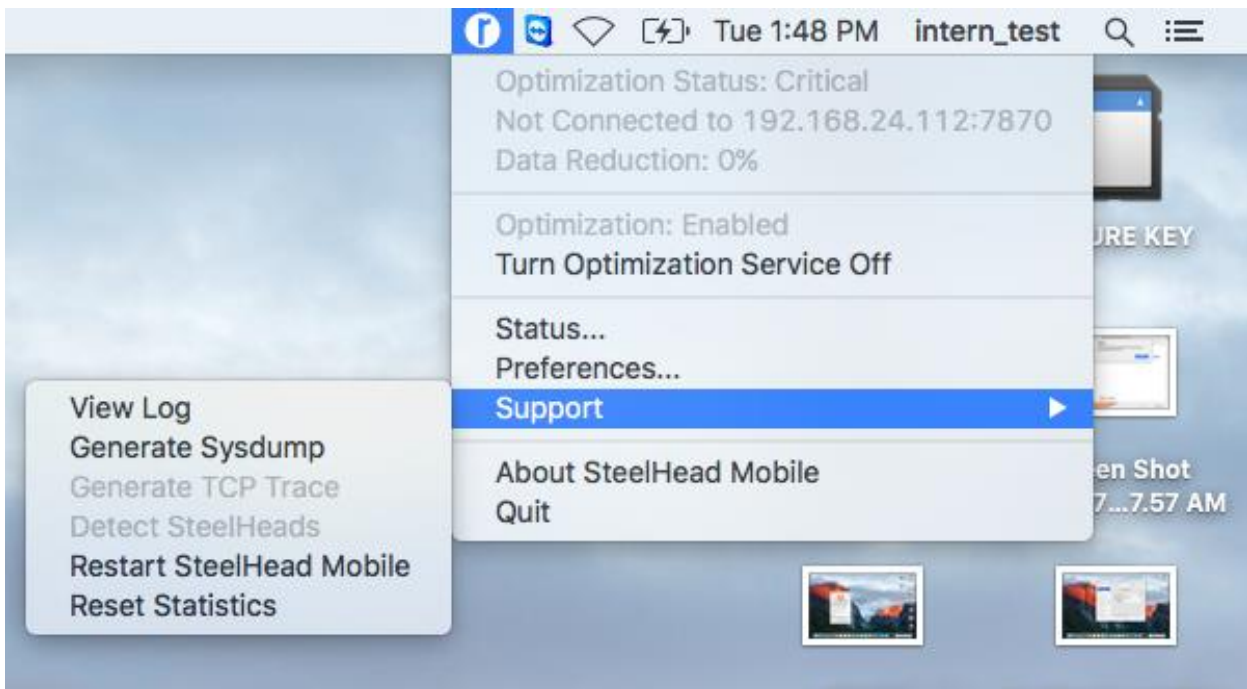
**Connection Icons**

The following icons are displayed in the Connection List of the Status tab to indicate the state of the connection:

- Yellow arrows  Displays Established (Optimized) connection.
- Green arrow  Displays Established (Branch Mode) connection.
- Blue arrow  Displays Established (Branch Warming) connection.
- Gray arrow  Displays Established (Pass-through) connection.
- Red arrow  Displays Established (Optimized) connection with optimization error.
- Lock icon  Indicates secure inner channel connection

## 4.2. Support Tab

The Support tab displays tools for assisting you in diagnosing problems with your system. Listed below are the controls for the user to be used during troubleshooting with a system administrator or Riverbed support staff.

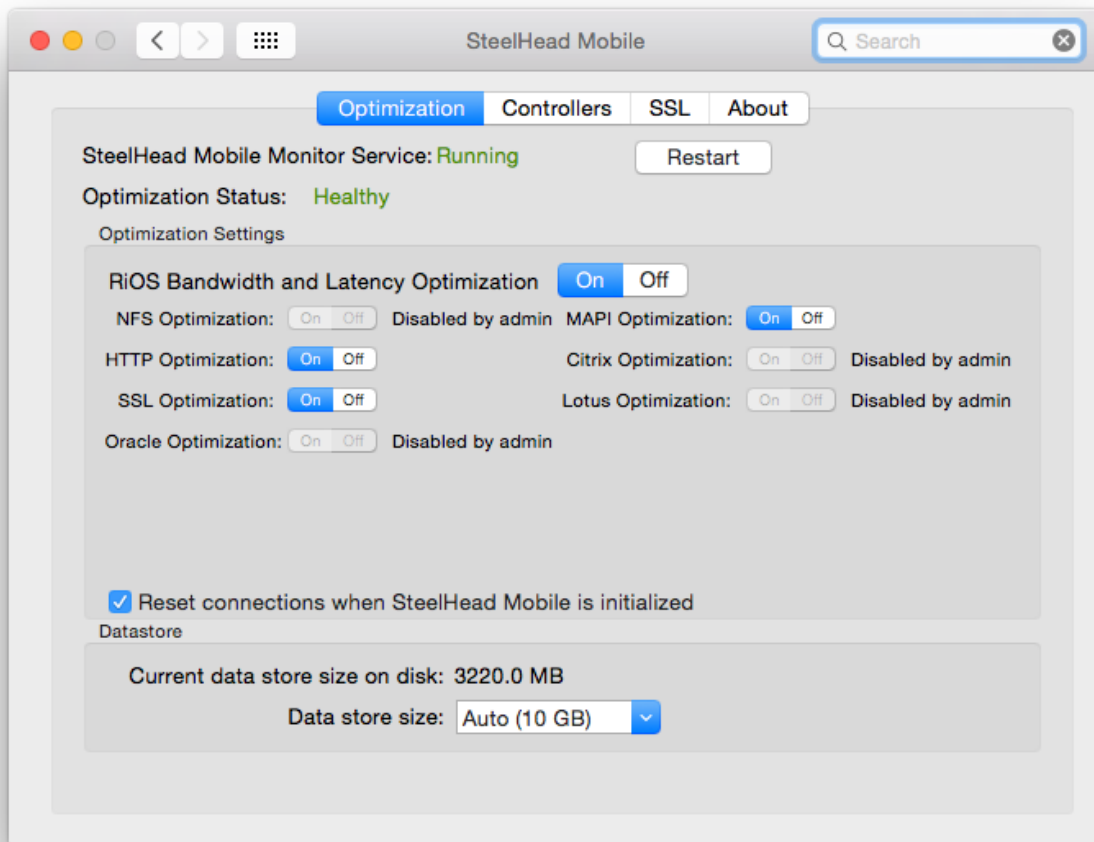


1. **View Log:** View the log files for the SteelHead Mobile Client
2. **Generate Sysdump:** Generate a system dump to upload to your Administrator for troubleshooting.
3. **Generate TCP Trace:** Generate a TCP dump sent to your Administrator for troubleshooting
4. **Detect SteelHeads:** Displays SteelHeads along the network path to a specified destination server
5. **Restart:** Restart the SteelHead Mobile. This is the first step to troubleshooting the client.
6. **Reset Statistics:** Resets the cumulative historical statistics

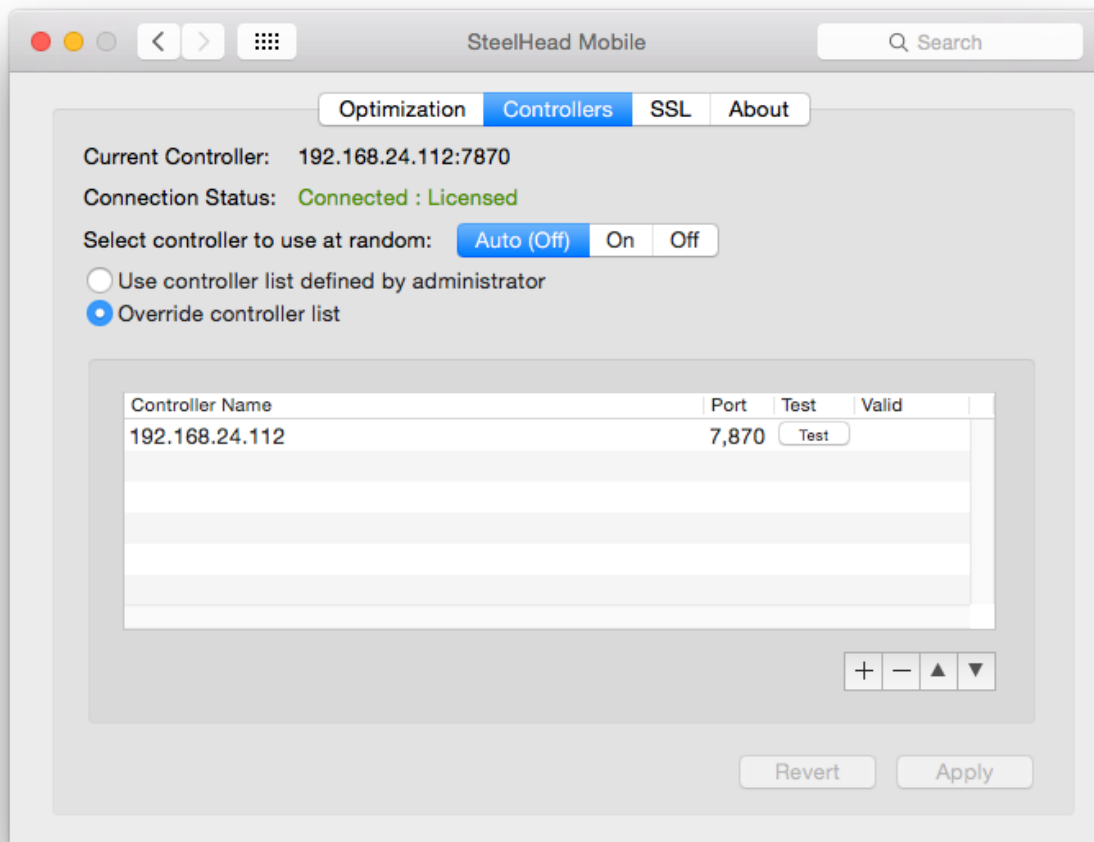
### 4.3. Client Preferences

The SteelHead Mobile client preferences pane appears with three tabs: Optimization, Controllers, and SSL.

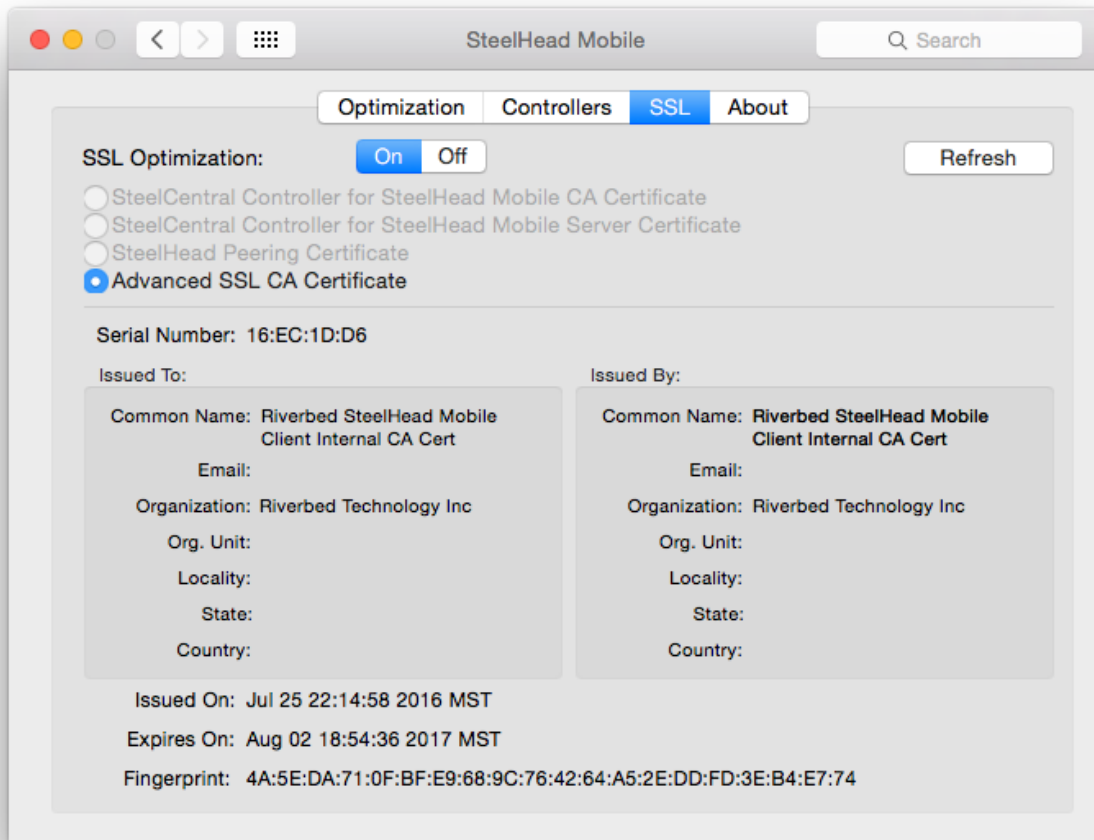
1. The Optimization tab displays current optimization status and enables users to enable optimization, configure connection reset, and set the data store size.



- The Controllers tab displays the current controller and connection status, and enables users to specify controller options and to add and modify controllers.



3. The SSL tab displays the CA certificates and enables users to enable or disable SSL optimization.

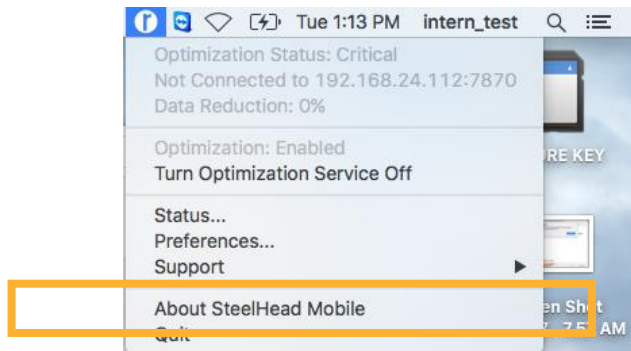




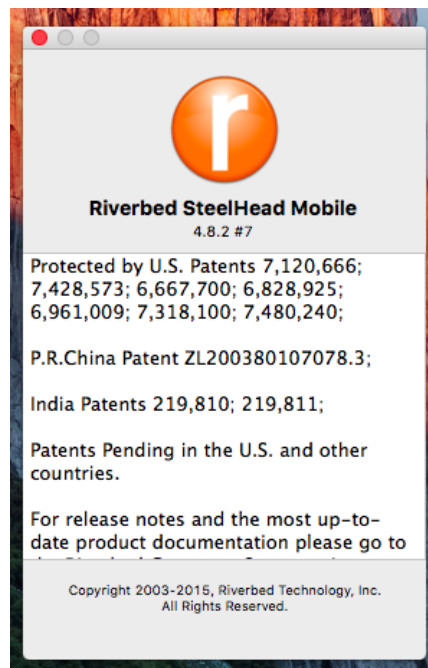
## 5. SteelHead Mobile Client Interactions

### 5.1. About

1. Click on the **Riverbed** icon in the **Taskbar** and then click **About**

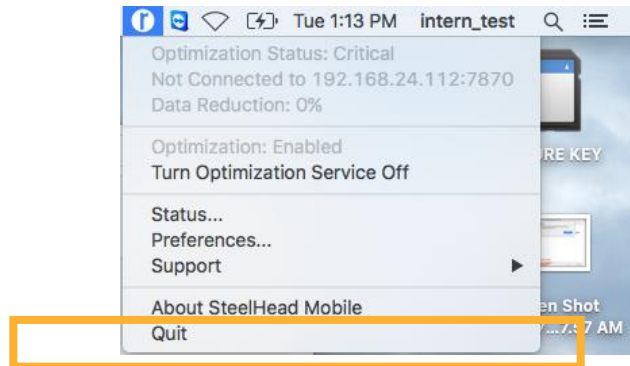


2. The **About** dialogue box will appear and will give you information regarding Patents, Version, and Support.



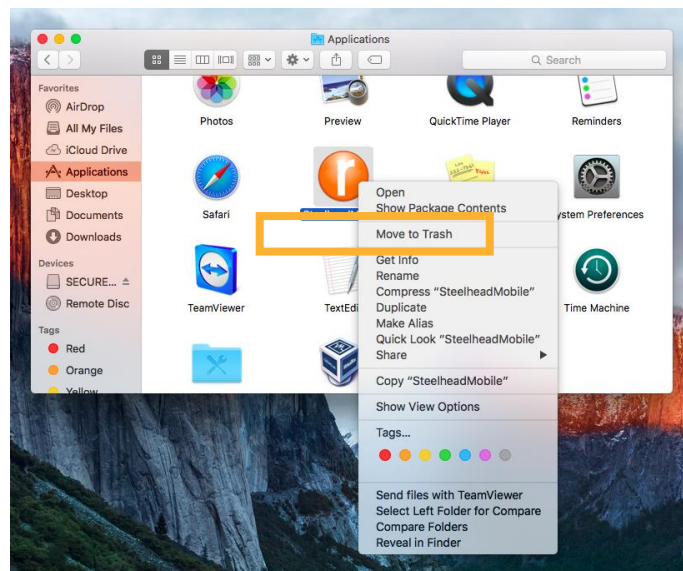
## 5.2. Close Program

1. To close the Riverbed SteelHead Mobile, select **Quit** by clicking on the Taskbar icon.
  - *It is important to note that closing the Riverbed client will NOT disconnect the call. To Disconnect the call, refer to 3.2 Disconnect.*



## 5.3. Uninstall Program

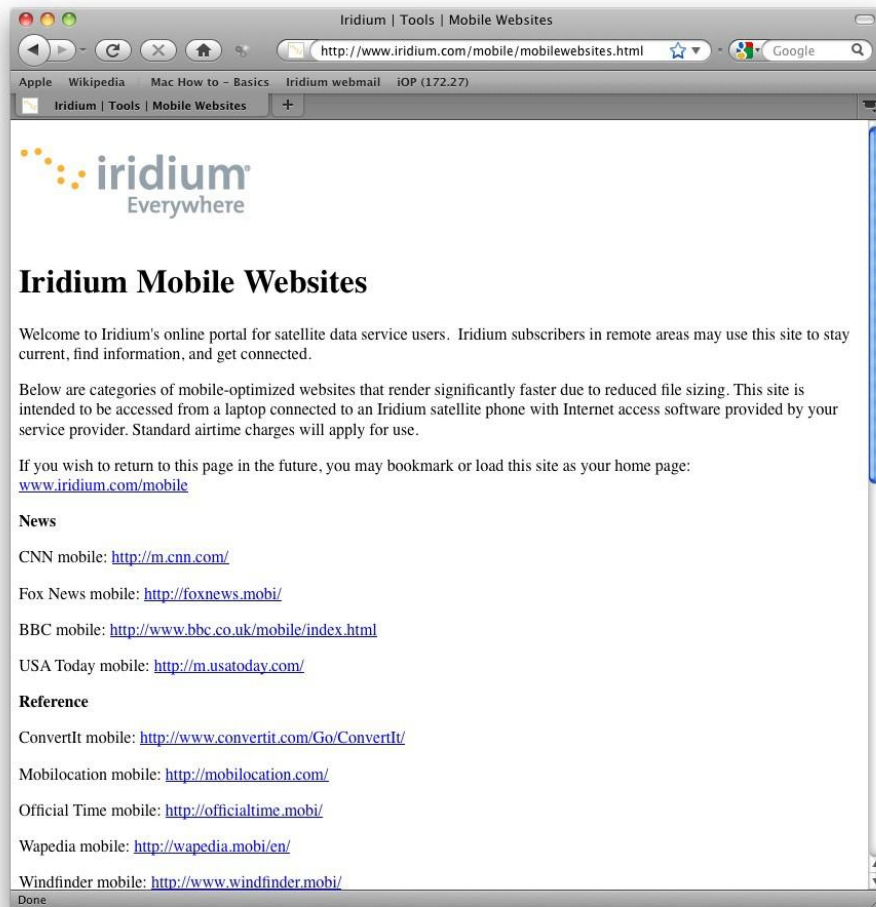
1. To Uninstall the Riverbed SteelHead Mobile application from your computer right-click the **Riverbed** icon in your **Applications** folder and click **Move to Trash**.



## 6. Web Browsing Tips

### 6.1. Mobile Websites

Whenever possible, use the mobile version of a website. Mobile websites are optimized for viewing on mobile devices. Viewing mobile websites while connected to Riverbed SteelHead Mobile will significantly reduce web loading time as compared to the original website. For a list of popular mobile websites, visit the Iridium Mobile Websites page at: <http://www.iridium.com/mobile>



### 6.2. Disconnect After Loading Web Page

To minimize airtime charges, disconnect your Riverbed SteelHead Mobile dial-up connection after loading the desired web page. Re-connect your Riverbed SteelHead Mobile Dial-Up connection when you are ready to view a new web page.

## 7. Emailing Tips

### 7.1. Client-Based Email

Avoid using web-based email software to send or receive email. In web-based email, Internet connection time is spent on:

- Loading the log in web page
- Once logged in, waiting for all your past messages and the web email interface to load on to the web page.
- Waiting for the new messages to be loaded or sent.

Client-based email software, however, will only use the Internet connection to send or receive new emails. All of your past messages as well as the email interface are already available locally from your computer.

Below are a few examples of client-based email software to use and web-based email software to avoid.

Use	Avoid
Mozilla Thunderbird®	Windows Live™ Hotmail
Eudora®	Gmail™
Windows Live™ Mail	AOL Mail.
Outlook Express®	Yahoo!® Mail
Outlook®	Other Internet Service Provider Webmail Service
Entourage®	
Any other client-based email software	

### 7.2. Disconnect After Sending or Receiving New Email

To minimize airtime charges, disconnect your Riverbed SteelHead Mobile dial-up connection after sending or receiving new email. Re-connect your Internet connection when you are ready to send or receive new email.

## 8. Troubleshooting

### 8.1. Direct Internet Dial-Up Connection

#### 1. NETWORK CONNECTION ERROR MESSAGE

##### Symptom

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When I try to connect to Riverbed SteelHead Mobile, I get an error message similar to the one shown below.



##### Cause

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This error message appears if:

- Your Iridium satellite phone or transceiver is not powered on or not plugged into a COM port
- The Iridium satellite phone and transceiver lost connection to the Iridium satellite network or was not registered on the network prior to the call.
- The Riverbed SteelHead Mobile telephone number was changed.

##### Action

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First, make sure your Iridium satellite phone and transceiver is powered on and there is a good physical connection between your phone and transceiver and computer.

Second, verify that the Iridium satellite phone and transceiver registers with the Iridium satellite network before redialing.

Finally, verify the correct telephone number is dialed. **008816000025**

## 9. Frequently Asked Questions

### 9.1. Mac OS X® 10.11 El Capitan or higher compatibility

Currently Mac OS X® 10.11 El Capitan or higher delivers a warning upon install that it doesn't support Riverbed. Click through the warning and the application will still work on your computer.

### 9.2. Computer Applications

Newer computer applications (i.e. Google Chrome, Apple Safari, Adobe products, etc.) will run updates in the background of the application attempting to connect to the internet. This will make your data connection slower and we recommend turning off Auto-Updates for all applications that connect to the internet to improve your data speeds.

The IP address of the offending applications are shown on the Riverbed client window when a call is in progress. The Connections section on the Status page will list every process and IP address the client is trying to reach. As a potential fix, users can then take the target IP address and block it via the computer firewall by adding it to a list on the client computer. If all is well, you should only see your own IP address contacting the license server or your destination Web site, etc.

### 9.3. How to create a dial-up connection

For additional information on creating a Dial-Up connection with your Iridium phone, please see the Iridium RUDICS Description manual posted on ([www.iridium.com](http://www.iridium.com)).