

Riverbed Mobile Controller and Client

March 31, 2008

Introduction

The Steelhead Mobile Controller is a centralized device located on your company's core network. This device, in conjunction with a Steelhead WAN Accelerator, will allow remote users in small offices to enjoy the benefits of WAN acceleration and optimization without having an additional hardware device installed on the client end.

Users install an application called the "Steelhead Mobile Client" on their computers. This software simulated a full sized Steelhead device and will optimize and accelerate file (CIFS) and Exchange / MAPI traffic between it and its Mobile Controller parent.

Unlike its full blown hardware parent, the mobile client will not accelerate or optimize all TCP traffic. The traffic specifically optimized by the mobile controller is: HTTP, CIFS (file) and Exchange / MAPI. Future releases may include support for SQL, FTP and other protocols.

Before We Begin

You will need several things before we begin the installation and configuration of the Steelhead Mobile client.

- A static VPN connection to your company's core network or a VPN client
- The internal IP address of the Steelhead Mobile Controller
- The internal IP address of your company's DNS server
- A link from your network administrator to download the Steelhead Mobile Client

Let's Get Started

Because file and Exchange traffic are not available outside of the network, you must be connected to the internal network schema in some fashion; either hard wire at an office with a static Virtual Private Network (VPN) tunnel or though a standalone VPN client on your computer.

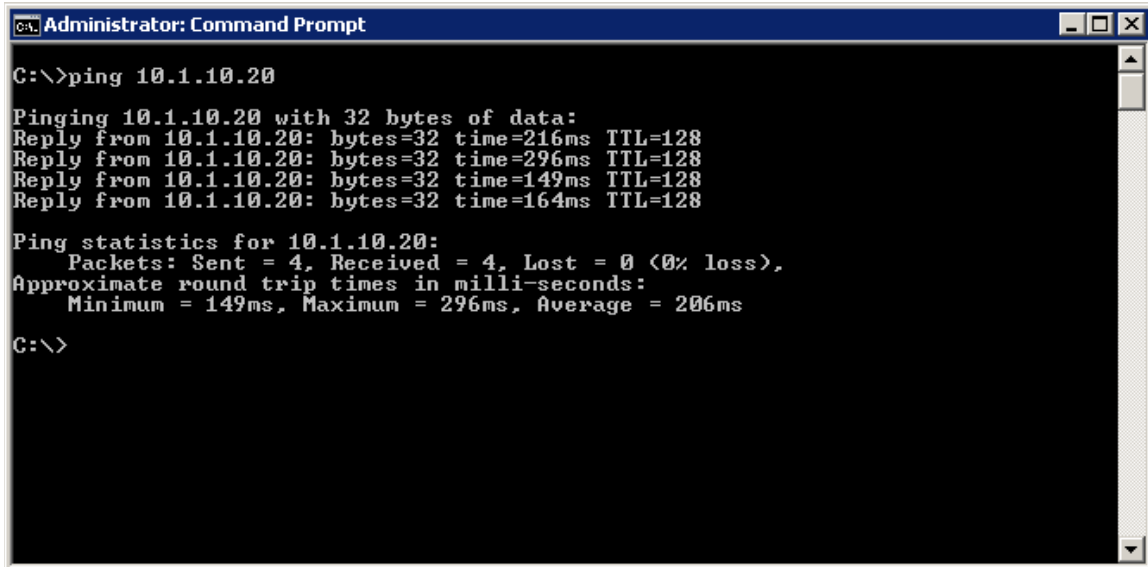
Once you have connected to the network either by plugging in at an office or starting up your VPN client, you can test this connection by pinging your company's internal Domain Name Server (DNS.)

To do this, click "Start" > "Run" and type "CMD" into the box that appears. Then click "OK".

This will start a command prompt. Here you can type the following where x.x.x.x = the internal IP address of your company's DNS server. Your network administrator will be able to provide this address to you:

Ping x.x.x.x

After doing so you should see results similar to the ones (Figure 1) below, if you get "Request Timeout", you are most likely not connected properly to the network.



```
Administrator: Command Prompt
C:\>ping 10.1.10.20
Pinging 10.1.10.20 with 32 bytes of data:
Reply from 10.1.10.20: bytes=32 time=216ms TTL=128
Reply from 10.1.10.20: bytes=32 time=296ms TTL=128
Reply from 10.1.10.20: bytes=32 time=149ms TTL=128
Reply from 10.1.10.20: bytes=32 time=164ms TTL=128

Ping statistics for 10.1.10.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 149ms, Maximum = 296ms, Average = 206ms

C:\>
```

Figure 1

Installing and Starting the Mobile Client

Your network administrator should provide you a link to download the Steelhead Mobile Client. Click on that link if emailed to you or enter it into a web browser such as Internet Explorer or Firefox. If you are prompted to "Run" the application package after download, please do so. If not, locate where the package was downloaded to and run it by double clicking on it.

Use all the defaults for all settings until the application is finished installing.

After the installation is complete, you can start the mobile client by clicking on the newly created "Steelhead Mobile" icon on your desktop.

Once started, a new task tray icon will be added to your task tray (down next to your computer clock.)

Double click on this new icon to open the Mobile Client so we can configure it. Once open, you will have two tabs, click on the "support" tab.

On this screen you will configure the required settings for your Mobile Client.

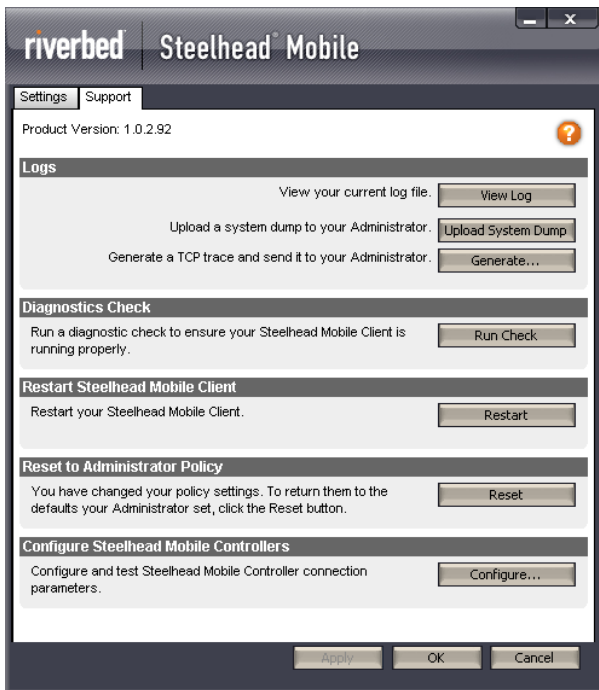


Figure 2

Click on the “Configure...” button, it will bring up the following screen:

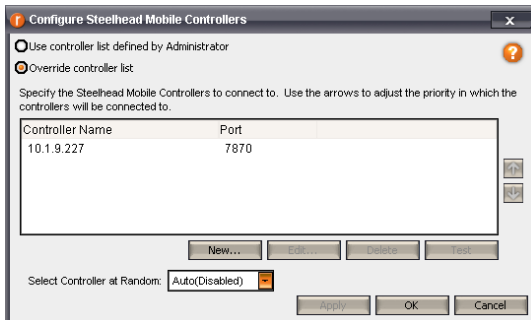


Figure 3

Select the “Override controller list” radio button. If “127.0.0.1” exists in the list, highlight it by clicking once on it, then click the delete button.

To add the address of your company’s Steelhead Mobile Controller, click “New” which will open the following screen:

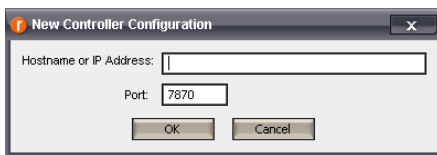


Figure 4

Enter the IP address of the Steelhead Mobile controller provided to you by your network administrator then click “OK”. Click “Apply” then “OK” on the previous screen to close it.

On the “support” screen, click the “Restart” button. This will force the Mobile Client to use the new settings you’ve just entered. After the Mobile Client services have restarted, you may see the following changes in the icon on the task tray:

The following means the connection is initializing:



Figure 5

The following means the connection is established:



Figure 6

Now, if you click the “Settings” tab in the Mobile Client, you should see settings similar the following, most notably an Optimization Status of “Healthy”.

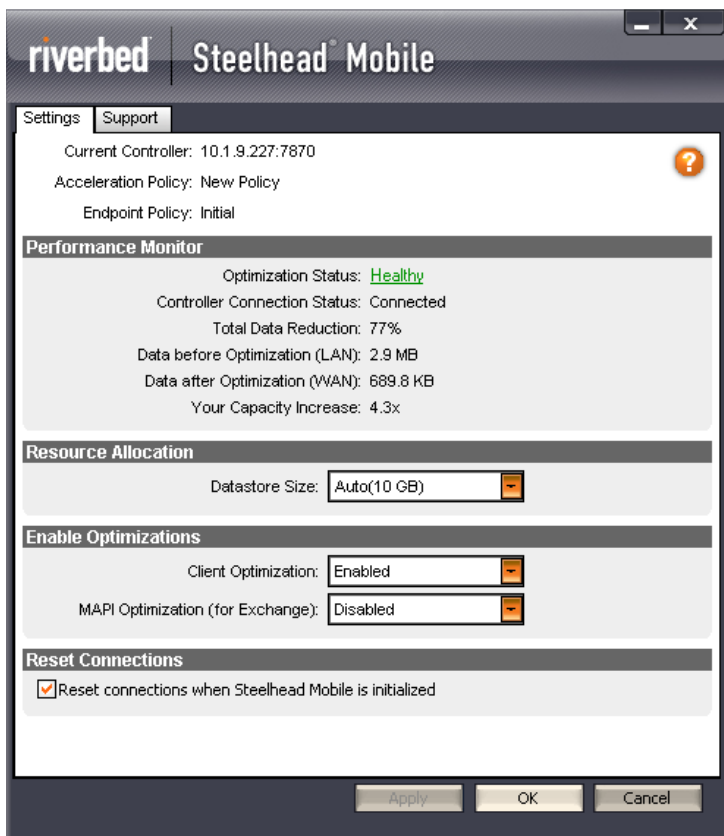


Figure 7

At this point the Mobile Client and Steelhead Mobile Controller should be optimizing traffic across the WAN (Wide Area Network.)

Windows Firewall and other software Firewalls

Optimization communication between Steelhead Mobile controllers and software clients is broadcast on port 7801.

To set the Windows firewall to allow port 7801 begin by clicking “Start” > “Settings” > “Control Panel”. Then, change the control panel view to “Classic”. One of the very last icons will be the Windows Firewall icon. Double click on it to open the Windows Firewall. When the Windows Firewall opens, select the tab “Exceptions” from the top and then click “Add port...” (see Figure 8)

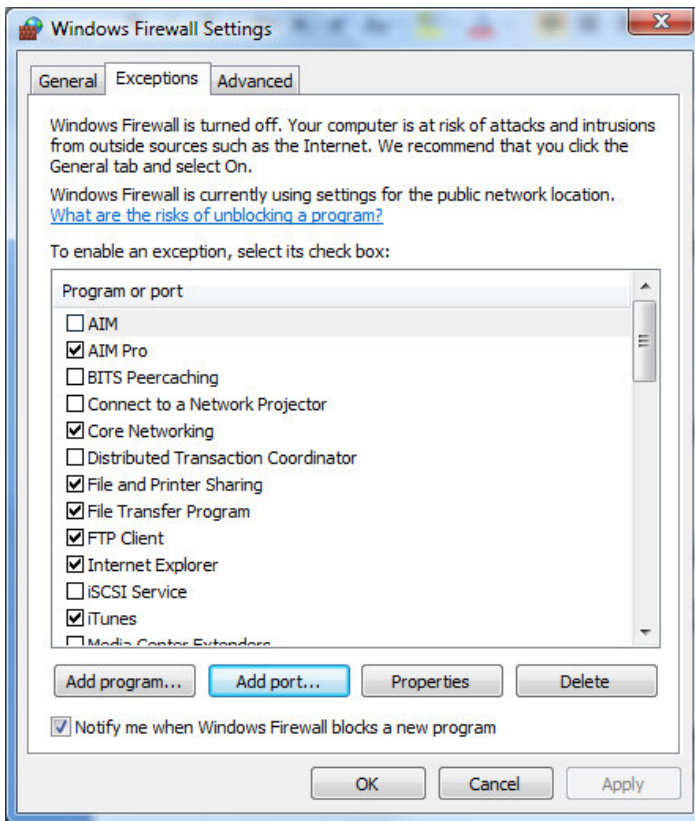


Figure 8

Then in the box that opens up, enter “Riverbed” for the name and “7801” for the port. Leave the radio button set to TCP. (see Figure 9)

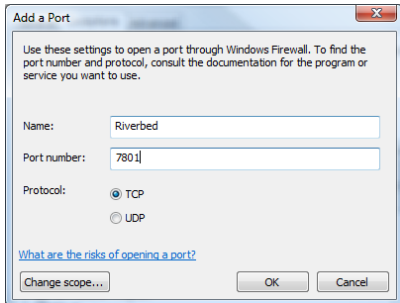


Figure 9

Click “OK” and then click “Apply” and then “OK” to close the Windows Firewall. Close the control panel and open the Mobile Client. Select the “support” tab and click the “Restart” button to restart the Mobile Client services.

Then click the “Settings” tab and verify that after the client has initialized, it is now in a healthy state.

Making the Grade

Generally, the proof is always in the pudding. So instead of saying it’s optimizing, we can prove its performance boost by doing the following:

- 1) Right click on the Mobile Client icon in the task tray and select “Exit”. This will end all optimization services to your computer.
- 2) Open a file share on your company’s file server and open or copy down a file. A good file size to test would be two to nine megabytes in size. Note how long it took for the operation to take and if you opened a file instead of copying to your local computer, close the application you opened it with.
- 3) Double click on the Steelhead Mobile icon on your desktop. After the services are done initializing and the Mobile Clients status is “Healthy”, repeat step 2 noting the time it takes. Again, if you opened a file instead of copying, close the file. This should have been faster as the software and the Mobile Controller are optimizing and compressing the data.
- 4) Repeat step 2 yet again, you should see an even greater performance increase over step 3. This is due to the fact that the bit reference tables the Mobile Client and main office Steelhead use to reconstruct files has already been populated by step 3.