

RedPort Optimizer CrewComm

Advanced Guide for Dealers, Service Providers, and Support Staff

RedPort Router: wXa-153 (Optimizer CrewComm)





Revision History

Date	Date Version	
March 7, 2019	Initial Release (v1.0)	Aaron Dickson





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1. About This Guide

This guide is intended for dealers, service providers, and support staff of the RedPort Optimizer CrewComm (CC) wXa-153 series router. The Optimizer CrewComm is made possible by the partnership of RedPort Global (redportglobal.com) and SMSGlobal (smsglobal.net) to provide the greatest capability and most complete functionality to the customer.

RedPort Global, the leader in OEM and branded satellite services, and SMSGlobal a leader in crew communication solutions, partnered to develop satellite communications solutions for the Maritime and Enterprise markets. The collaboration brings together a wide range of business, operations and crew communication services from each company to provide a new satellite optimization platform for any vessel or remote work-group.

This guide provides the complete set of documentation to address the customer's needs for both an understanding as well as the functional application to utilize the RedPort Optimizer CrewComm solution.

For first time use and setup, it is recommended that a customer begins by reading **Chapter 2** (Introduction to CrewCommCenter Service) through **Chapter 5** (User (subscriber, crewmember) Access and Use). These chapters will provide information about:

- The CrewCommCenter Service architecture.
- Setup and management of services.
- Baseline set of access permissions and restrictions.
- Baseline set of networking permissions and restrictions.

For more in-depth knowledge of the RedPort CrewComm Router functionality and custom usage, it is recommended that a customer visits **Chapter 6** (Introduction to Optimizer CrewComm) through **Chapter 16** (Appendix B). These chapters will provide:

- The RedPort Optimizer CrewComm Router.
- Advanced set of access permissions and restrictions.
- Advanced set of networking permissions and restrictions.

NOTE: Within the CrewCommCenter Service architecture, management of services, accesses, restrictions etc. should be configured through the CrewCommCenter. **Chapters 6 - 16** are presented within this document for special case situations, advanced configuration, and informational basis.

*wXa refers to the webXaccelerator by RedPort, a trademark of Global Marine Networks, LLC.

Introduction to CrewCommCenter Service

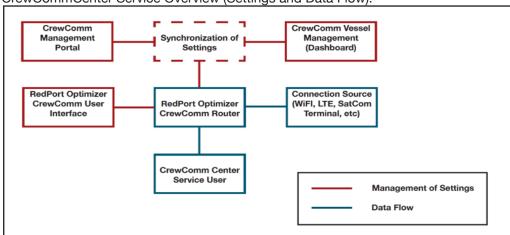
CrewCommCenter Service is a communications management architecture consisting of three separate parts: CrewComm Vessel Management; CrewComm Management Portal; and User. CrewCommCenter System Software resides on and interacts with RedPort Optimizer CrewComm Routers. CrewCommCenter Service provides a complete communications management solution.

2.1. CrewCommCenter Service





CrewCommCenter Service Overview (Settings and Data Flow):



2.1.1. CrewComm Vessel Management (Dashboard)

Vessel Management (See Chapter 3), also referred to as the Dashboard, is the vessel-based portion of the CrewCommCenter Service. Installers, network administrators, and some users log into the Dashboard to establish settings and restrictions that lay on top of the base line set in place by the CrewComm Management Portal for the Vessels within their control.

NOTE: Vessel Management is discussed first within this guide to ensure a proper flow of connectivity for optimal CrewCommCenter Service procedures. Actions within the Vessel Management section need to be accomplished first, before actions within CrewComm Management Portal section of this guide.

Chapter 3 discusses the actions necessary to register and activate the Vessel within the CrewCommCenter Service and the available settings, configuration, and network management tools available at the Vessel level. Vessel Management settings and configurations need to be synchronized with the CrewComm Management Portal for proper CrewCommCenter Service usage.

Vessel Management adds to the base level of configurations and settings to enable and restrict usage from Users on Vessels. Some Vessel Management settings are Ship specific to allow proper network and communications setups within the Vessel and to the off-Vessel network (satellite, cellular, wi-fi, etc.).

2.1.2. CrewComm Management Portal

CrewComm Management Portal (**See Chapter 4**), is the web-based portal portion of the CrewCommCenter Service. Dealers, managers, and some users log into the portal and establish settings and restrictions to lay the base line for Fleets and/or Vessels within their control.

NOTE: CrewComm Management Portal is discussed secondly in this guide, after Vessel Management to provide for a proper flow of setup of the CrewCommCenter Service setup. After initial actions are accomplished within the CrewComm Vessel Management section, then accomplish actions within the CrewComm Management Portal section of this guide.

Chapter 4 discusses the actions necessary to register and activate Vessels and Fleets within the CrewCommCenter Service and the available settings, configuration, and network management tools available at the Portal level. CrewComm Vessel Management Portal settings and configurations need to be synchronized with the CrewComm Vessel Management settings for proper CrewCommCenter Service usage.

CrewComm Management Portal lays down the basic configurations and settings to enable and restrict usage from Users on Vessels and within Fleets.





2.1.3. User Access (subscriber/crewmember)

User Access (See Chapter 5) is the Vessel user/subscriber/crew member portion of the CrewCommCenter Service. The material is provided so that these members can gain access and use of the communications provided from CrewComm Vessel Management and CrewComm Management Portal within the CrewCommCenter Service.

NOTE: User Access is discussed last within this guide as it is the last step in configuring Vessels so that they are properly configured for Users to access communications permitted by CrewComm Management Portal and Vessel Management.

2.2. Key Features and Services

NOTE: Some feature and service availability are dependent on Hardware and/or Plan choice.

CrewCommCenter Service

- Cyber Security: Multi-WAN configuration for failover, OBM, and least-cost routing.
- Firewall & Filtering: Control every aspect of your network for maximum performance.
- Vessel Tracking: Track the vessel position at all times.
- Email: Powerful business email with on-board server and high-efficiency.
- Crew Mail: Private low-data consuming email accounts for crew with webmail access.
- VoIP: Multi-VoIP, Prepaid & Postpaid, low-bandwidth, high-quality, and high-efficiency.
- Web Browsing: Controlled web browsing with domain filtering and blocking of unwanted background data, pre-paid and free allowances.
- Chat: Access control of Facebook Messenger, WhatsApp, WeChat, Viber, Line, Kakao, Hi Chat and more.
- SMS: 2-way global SMS with International and Local gateways in the Philippines.
- Announcements: Vessel or Fleet wide notifications sent directly to crew devices.
- News & Sports: International and local headlines and daily sports updates.
- Media: E-learning server, Se@MeNow social networking, and Low-data games.

CrewComm Management Portal

- Provides centralized administrative control of Vessels and Fleets.
- Minimizes on-board IT management requirements of Vessels and Fleets.
- One stop shop for access, service, network, and data usage management.
- Allows system of access for Vessels for operational communications to include but not limited to: Internet; business style email; simplified crew style email; full chat; low data chat; news; VoIP; and Vessel tracking.

CrewComm Vessel Management

- Provides flexibility needed on Vessel for network administrators to configure and manage internal networks.
- Minimizes on-board IT management requirements of Vessel.
- Provided Vessel network personnel and/or Vessel Captain/Officers ability to further restrict access for purposes
 of mission requirements and/or management of crew members.

User Management

- Provides crew members with Bring Your Own Device capability.
- Facilitates excellent user experience with simple tools and easy use communications with family and friends.
- Permits crew members to have their access (and contact lists) moved from Vessel to Vessel.
- Allows crew members the ability to purchase or top-up access on Vessels that limit access.

2.3. Recommended Vessel Setup Process *Start Here*

To gain access into the CrewCommCenter Service use the following high-level checklist:





NOTE: Service Provider/Dealer will be instrumental with Fleet/Vessel equipment and service recommendations to meet operational requirements.

- 1. Purchase Communication Equipment, RedPort Optimizer CrewComm router, and services from Service Provider.
- · Receive required equipment.
- Receive required logins, passwords, etc.
- 2. Determine system configuration and needs for Vessel prior to completion of Pre-activation of Vessel (See Chapter 3.1) for required information to include:
- Fleet Name for Vessel(s) to be managed under (or desired New Fleet Name).
- Vessel desired Name.
- Captain e-mail address.
- Additional e-mail addresses (managers, officers, owners, Information Technology members).
- Starting parameters (can be changed later) to include: firewall; crew system bypass; domain filtering; SatCom terminal; WAN interface modes; and port forwarding details.
- 3. Complete Pre-activation form (See Chapter 3.1).
- · Retain confirmation information to be used in Vessel Setup.
- 4. Determine who will manage Vessel within your organization.
- As needed, receive CrewComm Management Portal access (user accounts and passwords).
- As needed, receive CrewComm Management Portal usage training.
- 5. Make changes to configuration, networking parameters, access controls, etc. as needed in CrewComm Management Portal (Chapter 4).
- 6. Set up CrewComm Vessel Management and synchronize settings with CrewComm Management Portal (**Chapter 3**).
- As needed, make addition changes to configuration, networking parameters, access controls, etc. in CrewComm Vessel Management (Dashboard).
- Synchronize settings with CrewComm Management Portal.
- 7. Assign Subscriber(s) to Fleet / Vessel(s) through CrewComm Management Portal (Chapter 4).
- Provide Subscribers user name and password and required training.
- Provide Users training to utilize system and provide User guidance (Chapter 5).
- 8. As needed, (for advanced configurations), make changes in RedPort Optimizer CrewComm Router User Interface (UI) (See Chapters 6-14).

3. *CrewComm Vessel Management (Dashboard) Use

In most instances, after Pre-activation (**Chapter 3.1**), configurations will be made via CrewComm Management Portal. When the Vessel is setup and synchronized (**Chapter 3.1-3.4**), all settings, configurations, and access will be complete. Utilize (**Chapters 3.5-3.95**) to make changes/additions to perform operational requirements upon initial setup or in the future as needed.

NOTE: CrewComm Vessel Management access does not provide access to the complete RedPort Router's vast and powerful capabilities. Access to the RedPort Router's complete toolkit of functionality is available through the RedPort User Interface (UI). For complete details of the RedPort UI, go to **Chapter 6 - Chapter 14**.

3.1. Pre-activation Form

1. For each new router installation please first access the Vessel Pre-activation form to pre-register the vessel. Log

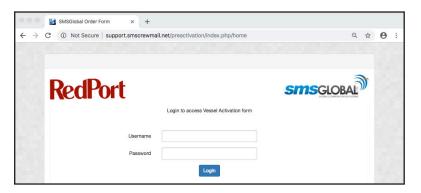




in using the credentials provided to you from order@smsglobal.net.

Use the URL below to access the Pre-activation portal:

support.smscrewmail.net/preactivation/index.php/home



After log in, the Vessel Pre-activation form will appear.



NOTE: On the left-hand side of the screen is a quick navigation menu for Pre-activation form. Clicking quick links from this menu will take you to the section. The first option "Resend Pre-Registration Details" is especially useful for a Captain or customer that has lost their details for final completion of router Registration.



2. License Details:

NOTE: Fields with asterisk (*) are required.

Fleet Name - Click <Fleet> down arrow from the search icon and click <"Fleet of Choice">. This selection will automatically fill out all the system features, activations, settings, and configurations previously configured for the fleet.

Optionally you can click <+Create New Fleet> and create a new fleet name.

Vessel Name - Input a unique vessel name.





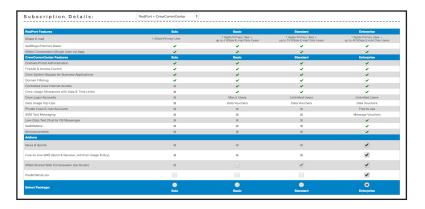
Customer ID - From the drop-down menu, click <"Customer ID of Choice">.

Captain's E-mail Address - Enter an E-mail address. This address will receive activation details.

Optionally you can click <+Add more E-mails> to enter additional E-mails for order notification.

Scroll down on the Pre-activation form to the Subscription Details:

NOTE: A green check mark indicates the option is included in the package, an empty box indicates the service is available and selectable, and an X indicates an unavailable option.



3. Subscription Details:

Click which services you would like to select from:

- RedPort + CrewCommCenter This option presents options from both RedPort and CrewComm Center Service for package selection.
- RedPort This option presents RedPort only options for package selection.
- CrewCommCenter This option presents CrewComm Center Service only options for package selection.

Click a package (cost differences associated with packages) & (package choice dictates future options within the Pre-activation form):

- · Solo See Subscription Details.
- Basic See Subscription Details.
- Standard See Subscription Details.
- Enterprise See Subscription Details.



Generate Crew Login Accounts.

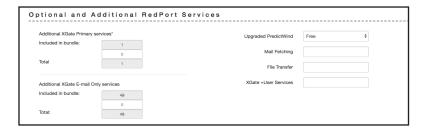
 Number of User IDs to generate - Dependent upon package selection. For Unlimited Users the default number of User IDs to generate will be 30, but a higher number can be specified as needed. Additional User IDs can be allocated after Pre-activation.







- 4. Select News Editions (available with select packages).
- Click tick box beside the desired News Editions.
- 5. Optional and Additional RedPort Services (options are specific to plan choices):



Additional XGate Primary services

- **Included in bundle** Displays the amount of X-Gate services included with the package selected (Solo, Basic, Standard, or Enterprise).
- Add box Click within the center box to add additional X-Gate services (additional fees).
- Total Displays the total of included and additional X-Gate services.

Additional XGate E-mail Only services

- Included in bundle Displays the amount of X-Gate E-mail only services included with the package selected (Solo, Basic, Standard, or Enterprise).
- Add box Click within the center box to add additional X-Gate E-mail only services (additional fees).
- Total Displays the total of number of X-Gate accounts included and additional X-Gate E-mail only services.

Upgraded PredictWind - dependent on selected package, or select from the following if available:

- None This option has no PredictWind.
- Free This option provides the Basic PredictWind capability.
- Standard This option provides Increased capability and planning over the Standard option.
- Professional This option provides Advanced capability and planning.

Mail Fetching - Permits mail fetching. File Transfer - Permits file transfer. XGate +User Services -

Scroll down on the Pre-activation form to the XGate E-mail Settings section (options are specific to plan and optional choices):



- 6. XGate E-Mail Settings:
- No XGate App Usage No XGate Email usage is permitted.
- XGate App using Captive Portal (Crew Paid Access) XGate E-mail permitted only through captive portal.
- XGate App bypassing Captive Portal (Vessel Paid Access) XGate E-mail permitted only through bypass.

Scroll down on the Pre-activation form to the System Communication Settings section (options are specific to plan and optional choices):

NOTE: Parameters might be pre-filled per association of a Vessel to an existing Fleet within the License Details section. This is optional and can still be modified as needed or desired. Changes made to System Communications Settings will affect data usage and airtime costs.







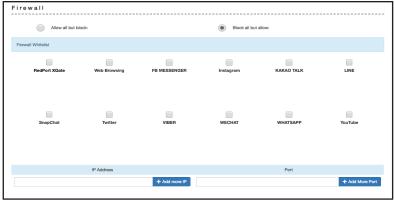
- 7. System Communications Settings:
- Enable Crew Internet Access The status of whether a user is permitted to use Internet, if selected permits crew Internet usage.
- Internet Time Limit (Minutes) Per Crew Account (Default = Daily, Unlimited) The time limit a user may use the Internet (if enabled).
- Internet Data Limit (MB) Per Crew Account (Default = Daily, Unlimited) The data limit a user may use the Internet (if enabled).
- Enable Data Voucher Top-Ups The status of where a user may use data voucher top-ups to extend user usage and limits. If selected allows top-up voucher by users.
- Enable Low Data Chat for Facebook The status of whether a user is permitted to use the build-in low data Facebook chat interface. If selected, the built-in low-data Facebook chat interface is enabled.
- **Enable E-Mail Attachments** The status of whether a user can send and receive messages that contain attachments, if selected permits attachments to email.
- Maximum Size (in KB) Per Outgoing Message (Default = 5 KB) The maximum size of outgoing messages permitted by user, change as desired.
- Daily Limit for Number of Outgoing Messages (Default = Unlimited) The daily limit of messages permitted by user, change limit as desired.
- Total Daily Limit for Incoming Messages Per Crew Account (Default = 100 KB) The daily limit of incoming
 messages per user, change size as desired.
- Maximum Size (in KB) Per Incoming Message (Default = 10 KB) The maximum size per incoming message permitted per user, change size as desired.

Scroll down on the Pre-activation form to the Firewall Settings section (options are specific to plan and optional choices):









- 8. Firewall Settings:
- Allow all but block This allows all except for the IP Addresses and Ports that you manually configure.
- **Block all but allow** This blocks all except for the items that are available to select and IP Addresses and Ports that you manually configure.

Scroll down on the Pre-activation form to the Crew System Bypass for Business Applications section:



- 9. Crew System Bypass for Business Applications information:
- Permits Bypass of settings for user defined Domains or IPs This bypass circumvents the firewall and domain filtering parameters. Caution should be used when permitting bypass.

Scroll down on the Pre-activation form to the Domain Filtering section:



- 10. Click a Domain Filtering Option:
- Allow all This allows all except for the Domains that you manually configure (as well as an OS update option).
- Block all This blocks all except for the Domains that you manually configure.

Scroll down on the Pre-activation form to the SatCom Terminal section:

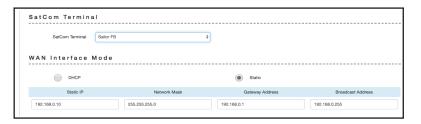




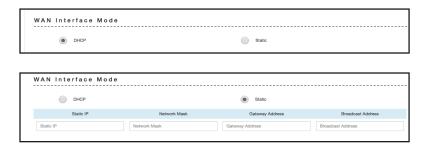




- 11. SatCom Terminal section:
- Click SatCom TERMINAL option from the drop-down list. This will configure WAN Interface Mode settings specific to the SatCom Terminal you select.
- Optionally, you can determine your own WAN Interface Mode settings as desired.



Scroll down on the Pre-activation form to the WAN Interface Mode section:



- 12. WAN Interface Mode:
- DHCP (Dynamic Host Configuration Protocol) automatically provides IP host(s) with IP address.
- Static This permits specific Static IP address, Network Mask, Gateway Address, and Broadcast Address options to meet customer needs.

Scroll down on the Pre-activation form to the Port Forwarding section:



13. Port Forwarding: Permits specific Name, Protocol, Source Port, Destination Port, and Destination IP options to meet customer needs.

Scroll down on the Pre-activation form to the Submit Activation button:

Submit Activation

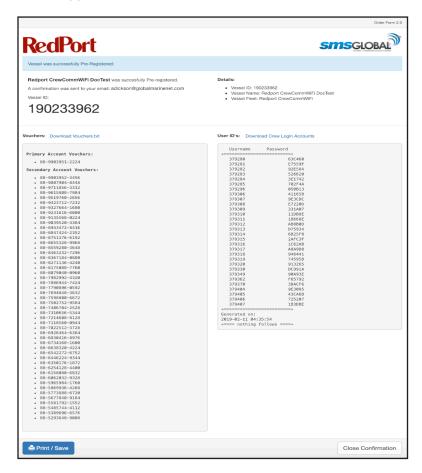






14. Click <Submit Activation> and then click <Submit Activation> on the confirmation window when complete with form details.

A confirmation page will then appear:



Take note of the Vessel ID number. You will use this ID number when activating the router firmware and to synchronize the system settings. The page can be printed and/or saved.

An E-mail with Pre-activation details will be sent to the Captain's E-mail Address specified under License Details.

After a successful Pre-activation, you can now proceed with setting up the router.

3.2. Connecting RedPort Optimizer CrewComm Router to the Internet

1. To connect the RedPort Optimizer CrewComm Router to the Internet, connect a SatCom terminal (via a standard CAT5 or CAT6 cable) into the Router's SAT (Satellite) port. See RedPort Optimizer CrewComm back image below:







2. Turn on the router and use your desktop/laptop to connect to the Router.





3. Click <Connect> or Click on the CrewCommWifi-XXXX link in the Wi-Fi.

If Prompted to enter a password or pin, click <No> or exit pop-up.

4. Open a web browser and type: dashboard.com.

The following log in screen should be displayed:



5. Check if the router is connected to the Internet by Clicking <Check Internet>.

The following pop up will appear:

Checking internet status. Please wait.





If the router is connected to the Internet, the following screen will appear:



6. Click <Ok>.

The following screen will be displayed:



The color changes from gray to green and this indicates that the router is connected to the Internet if the router cannot connect to the Internet, the following screen will be displayed:



7. Click <Ok>.

The following screen will be displayed:



The color changes from gray to red to indicate that the router has no Internet connection. Ensure that the router is connected to the SatCom terminal correctly and that the Ethernet cables are all properly connected.

For further troubleshooting, please log in to the dashboard and configure the router WAN settings to connect to the SatCom terminal trough static or DHCP mode.

Connection of the RedPort Optimizer CrewComm router to the Internet is now complete.

3.3. Log in to the Dashboard

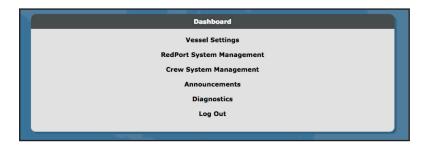






1. To log in to the Dashboard, enter the default password of "crewcommwifi", then Click <Login>. The Password is case-sensitive.

For successful log in, the following menu will be displayed:

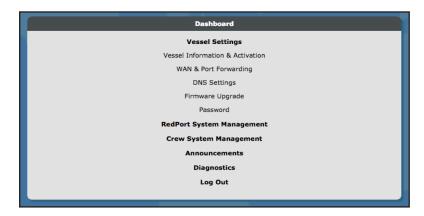


Log in to the Dashboard actions is now complete.

3.4. Vessel Settings & System Activation

Vessel Settings is the administrator page for registering the vessel.

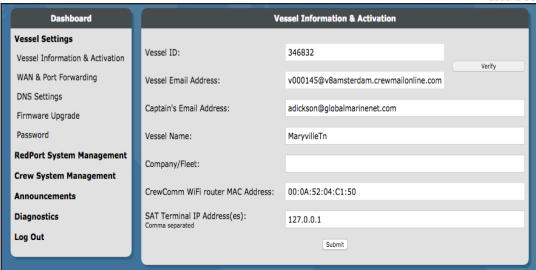
1. Click "Vessel Settings - Vessel Information & Activation".



The following screen will be displayed:







- 2. Enter the following information to register the vessel: (from the Pre-activation form Chapter 3.1):
- Vessel ID
- Captain's E-mail Address (optional)

NOTE: Use the Vessel ID provided when completing the Vessel Pre-activation form.

NOTE: Do not click <Submit> more than once. This will cause multiple registrations of the same Vessel.

- 3. Click <Verify> to check if the information entered is correct.
- 4. Click the <Submit> button to send the vessel registration to the CrewComm Management Portal. The following screen will be displayed:



A confirmation email will be sent to the Captain's E-mail address informing you of successful vessel registration.

The vessel registration will be processed automatically on the CrewComm Management Portal. The registration process will be completed within 5 minutes.

5. When the registration has been processed, go to Crew System Management >Firewall and Click <Synchronize Settings>

The router will fetch the system settings as configured on the vessel Pre-activation form and reboot.

Vessel Settings and System Activation is now complete.

3.5. WAN & Port Forwarding

WAN Interface – displays the type of WAN mode and incoming port forwarding connections that the router is set up with for network connectivity.

On the WAN Interface tab, the following screen will be displayed:





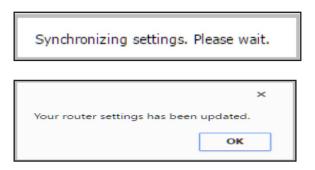


The current parameters may have Synchronized from the CrewComm Management Portal and not require changes. As needed, make corrections or changes to the WAN & Port Forwarding by:

- 1. On WAN Mode, select between DHCP and Static.
- 2. Click <Apply WAN Mode Changes> to synchronize the settings to the router.

See page "Edit WAN Interface settings" for the steps to configure the WAN mode and Port-Forwarding on CrewComm Management Portal.

3. To retrieve settings done on the CrewComm Management Portal, click <Synchronize Settings> to apply changes on the CrewComm System Software on the Dashboard, the following pop-up windows will appear:



The router will then reboot to update the changes.

Synchronization Rules:

- WAN Setting changes from the Dashboard will automatically be synchronized with the CrewComm Management Portal as long as there is an Internet connection.
- Changes from CrewComm Management Portal need to be synchronized from the Dashboard to apply the changes in the router.
- In the event there's a change in the WAN settings from the Dashboard and the CrewComm Management Portal simultaneously, the settings from the Dashboard will take effect if the settings from CrewComm Management Portal are not yet received and synchronized.

WAN & Port forwarding actions are now complete.

3.6. DNS Settings



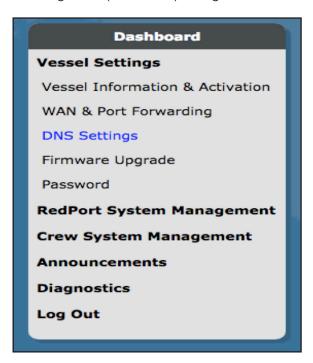


DNS Rules:

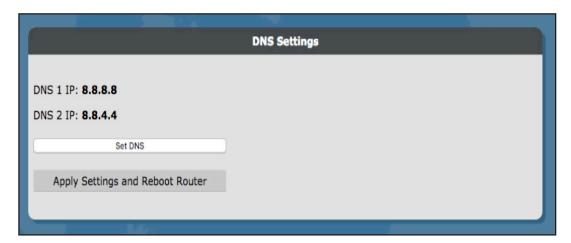
• DNS IP Settings can only be accomplished in the Dashboard. Please make sure to click <Apply Settings and Reboot Router> to synchronize the new settings in the router.

To set the DNS IP:

1. Log in to CrewComm Vessel Management (Dashboard) then go to Vessel Settings > DNS Settings.



The following screen will be displayed:



Set DNS IP automatically

1. Click <Automatic (DNS 1)> to fetch the IP from the SatCom terminal/Internet gateway.

The following pop-up will appear:







2. Click <OK> to confirm.

The following pop-up will appear:



The following screen will appear:



The current IP is now set to the new IP address.

The following pop-up will appear:



The router will automatically reboot.

Set DNS IP manually:

1. Click <Manual>, the following screen will be displayed:

2. Enter the new DNS 1 and DNS 2 IPs then click <OK>

DNS 2 IP serves as a secondary DNS IP in case the other DNS IP goes down.

The router will automatically connect to the backup DNS IP which is the DNS 2 IP.

The following pop-up will appear:



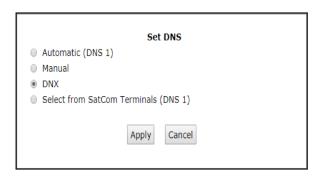
The DNS setting is now saved to the new IP address.





Select DNX:

1. Click <Select DNX> to use the SMSGlobal onshore DNS servers.



2. Click <Apply>

The following screen will appear:



3. Click <Ok>to save the new DNS IP address.

The following screen will appear:



The router will automatically reboot.

Select from SatCom Terminals (DNS 1):

1. Click <Select from SatCom Terminals (DNS 1)> to get the list of available SatCom terminals.





Set DNS		
Automatic (DNS 1)		
Manual		
○ DNX		
 Select from SatCom Terminals (DNS 1) 		
 Cobham sailor 	192.168.0.1	
	192.168.128.100	
 Addvalue Skipper 150/Satlink 250 	192.168.1.35	
Furuno Felcom 500	192.168.1.1	
Patrick	1.2.3.4	
Apply Cancel		

2. Select from the list on what SatCom Terminals to set for the DNS 1 then click <Apply>.

The following pop-up will appear:



3. Click <Ok> to confirm changes.

The following screen will appear:



The following screen will appear:



The router will automatically reboot.

Apply Settings and Reboot Router:

1. To apply the new IP DNS setting, click < Apply Settings and Reboot Router>.



The following screen will appear:





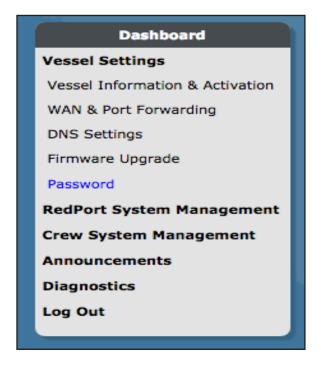


The router will reboot.

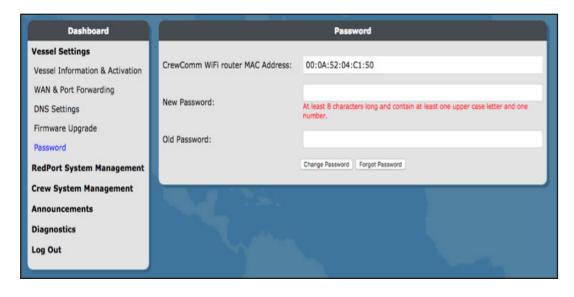
DNS Setting actions are now complete.

3.7. Change Password

1. To change the Dashboard login password, navigate to Vessel Settings, then click <Password>.



The following screen will be displayed:



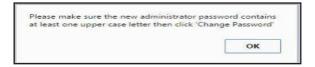
Please make sure that the new password follows these restrictions:





- The password must be at least 8 characters long.
- The password must contain at least one uppercase letter.
- The password must contain at least one number.
- 2. Click < Change Password>.

The following pop-up will be displayed:



3. Click <OK>.

The following screen will be displayed:



Forgot Password:

1. On the CrewComm Vessel Management Dashboard, click the Forgot Password.

The following screen should be displayed:



2. Enter the Captain's Email address, the click <Ok>.

The following screen will be displayed:



3. Check the Captain's email for the new Administrator password.

Dashboard password actions are now complete.

3.8. RedPort System Management

NOTE: Please see service provider/dealer for purchase and activation of RedPort System Management Capabilities (*except Remote Log in). Information obtained from your service provider/dealer will be used to activate and configure RedPort System Management options.

*Remote Login capability is free.





Vessel Settings RedPort System Management Vessel Tracking XGate E-mail VOIP Remote Login XWeb Crew System Management Announcements Diagnostics Log Out

3.8.1. Vessel Tracking

NOTE: Please see service provider/dealer for purchase and activation of Vessel Tracking. Information obtained from your service provider/dealer will be used to activate and configure Vessel Tracking.

NOTE: For more in-depth guidance on the functionality and use of Vessel Tracking, please see redportglobal.com/support/documentation-manuals.

RedPort Optimizer CrewComm Routers provide tracking data using the GPS chip built into satellite terminals including:

- Satellite Terminals Iridium GO!
- · Iridium Extreme
- Inmarsat FleetBroadband
- Inmarsat Fleet One
- Inmarsat BGAN
- IsatPhone Pro and IsatPhone 2
- Iridium Pilot/OpenPort

Using a GPS-enabled satellite device, the Optimizer CrewComm Router can be configured to submit position reports to a central database for viewing on the tracking website. With RedPort Tracking, asset locations and movements – including position, speed, altitude and heading – are tracked in real-time worldwide via GPS updates.

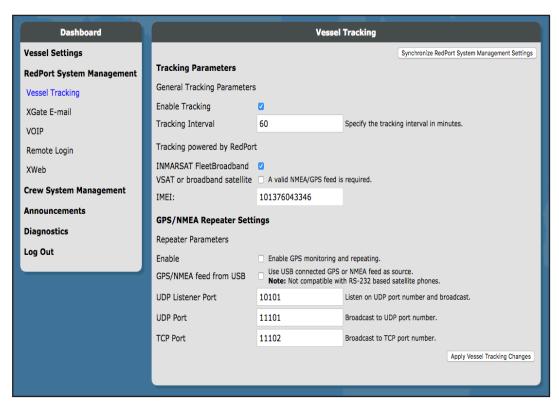






Benefits of Vessel Tracking include but are not limited to:

- Personnel, Vessel, and Fleet Safety 24/7 knowledge of asset location, determining last known location in an emergency incident.
- Manage Vessel Operations to include Porting strategy; Berth scheduling; Port of Call operations/support; turnaround time; en route support; etc.
- Monitoring of Vessel Speed Verifying adherence to company policy established due to: high risk zones;
 Vessel efficiency; or other speed requirement restrictions.
- **Historical data** Used for investigation purposes, legal compliance, or regulations.
- Metrics Provide data for analysis to best maximize profit and sustainability while minimizing asset risk and future best route planning based on Vessel specifics.
- 1. To Enter Vessel Tracking from the Dashboard Main menu screen, click "Vessel Tracking", the following will be displayed:



2. To enable Vessel Tracking click < Enable Tracking > tick box.





- 3. Enter the Tracking Interval in minutes; the default is set to hourly reporting (60 minutes). This means that every 60 minutes a position report will be transmitted over the satellite link. Keep in mind that standard airtime charges will apply to each position report. Adjust the Tracking Interval to meet your needs.
- 4. Go to Tracking powered by RedPort and click the satellite terminal you are using.

NOTE: A valid NMEA/GPS feed is required when using some satellite devices.

The RedPort Optimizer CrewComm Router supports USB and RS-232 NMEA devices allowing multiple applications to share the GPS/NMEA data. If you have a NMEA RS-422 device, adding a RS-422 to RS-232 converter to your setup may allow the sharing of data.

The RedPort Optimizer CrewComm Router does not transmit data but can be configured to receive and repeat GPS/NMEA data from:

- A USB connected GPS or NMEA device.
- A serial port connected GPS or NMEA device with appropriate USB to Serial Adapter.
- 5. Enable GPS/NMEA Repeater Settings by clicking <Enable> tick box.
- 6. Enable USB Connected GPS or NMEA feed by clicking <GPS/NMEA feed from USB> tick box.
- 7. Complete port requirements as needed for listening and broadcast to meet user needs.
- 8. Click <Apply Vessel Tracking Changes> to enable and apply settings.

Vessel Tracking actions are now complete.

3.8.2. XGate Email

NOTE: Please see service provider/dealer for purchase and activation of XGate Email. Information obtained from your service provider/dealer will be used to activate and configure XGate Email.

NOTE: For more in-depth guidance on the functionality and use of XGate Email, please see redportglobal.com/support/documentation-manuals, or more specifically, redportglobal.com/wp-content/uploads/2015/12/Optimizer CrewComm-RedPort-Email-Guide-v1-0.pdf.

This is a full-featured Business/Crew solution that runs on the router. RedPort email is designed specifically for use over satellite connections. It uses block compression, mid-file restart, bigmail quarantine and more to maximize data transfers.

Once enabled, the onsite administrator can manage email for the entire crew. The users can log in to a webmail program to view their email, so they do not need special software on their computer or device. The RedPort Optimizer CrewComm Router is a POP and SMTP server as well, so users can access email using their preferred email client instead of webmail access, if desired.

XGate Email is robust, allows larger file transmittal, and permits Router email storage and management. In most instances, XGate Email will be used as the Business E-mail Solution and the CrewComm Center Service simplified e-mail/SMS solution referenced in **Chapter 5** will be used as the Crew solution. This will permit Business email needs to be met for Captain/Officers in the daily management of the Vessel, while at the same time allowing for Crew morale needs to be met in a simple and data minimized use solution.

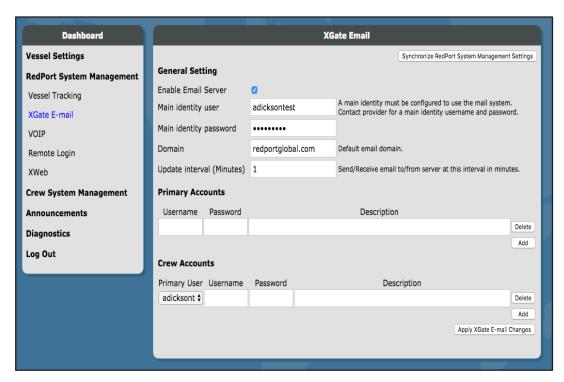








1. To Enter XGate Email - from the Dashboard Main menu screen, click "XGate E-mail", the following will be displayed:



- 2. To Enable XGate email, Enable the Email Server by clicking the check box.
- 3. Main identity user: Enter the user name assigned to the Main Identity Primary Account for email, as given to you by your Dealer/Service Provider.
- 4. Main identity password: Enter the password assigned to the Main Identity Primary Account, as given to you by your Dealer/Service Provider.
- 5. Leave the Email Domain as "redportglobal.com", unless otherwise needed.





- 6. Update Interval (Minutes): Frequency the mail program will automatically log in to the satellite device to send/receive pending email. The default is set to 60 minutes but can be modified to fit business needs.
- 7. Primary and Crew Accounts section is not mandatory but can be configured as needed.

Note: Typically, the Main Identity is the on-site email administrator. The Main Identity must be a Primary Account. There must be at least one primary account present on the system before sub/crew accounts can be created.

8. Click < Apply XGate E-Mail Changes>.

XGate email actions are now complete.

3.8.3. VOIP

NOTE: Please see service provider/dealer for purchase and activation of VoIP. Information obtained from your service provider/dealer will be used to activate and configure VoIP.

NOTE: For more in-depth guidance on the functionality and use of VoIP, please see redportglobal.com/support/documentation-manuals.

Users with smartphones can send/receive voice calls and SMS messages over the following satellite communication setups:

- Sailor FBB terminal requires XGate Phone app.
- IsatHub iSavi requires IsatHub Control app and either IsatHub Voice app or XGate Phone app*.
- Any satellite terminal with a RJ-11 port requires XGate Phone app* AND an ATA adapter.

This configuration allows one voice call or one SMS message at a time and standard satellite voice airtime rates apply.

Multi-Voice capability is available with the optional RedPort VoIP service on any satellite terminal. This VoIP service allows you to make calls for less than standard satellite voice airtime costs and allows up to four users sending and receiving phone calls and/or SMS messages simultaneously.

Multi-VoIP is currently compatible with the following:

- FBB
- BGAN
- VSAT
- RedPort Aurora
- Iridium Pilot
- Thuraya IP
- IsatHub iSavi

The RedPort Optimizer CrewComm Router allows unlimited SIP extensions with free local calling and text messaging within your local area network using the XGate Phone app*.

*XGate Phone app is available for free in the Apple iTunes App Store and in the Google Play store.

By default, there are 4 extensions enabled. Extension 201 is enabled for inbound and outbound calling. The remaining extensions are enabled but are configured for outbound calling only.

Incoming calls will ring on those extensions with Ring enabled.

To enable Ring (or SMS) on an extension simply check the box for the service you want enabled.

When Ring is checked, the smartphone configured with the corresponding Extension will Ring with every incoming





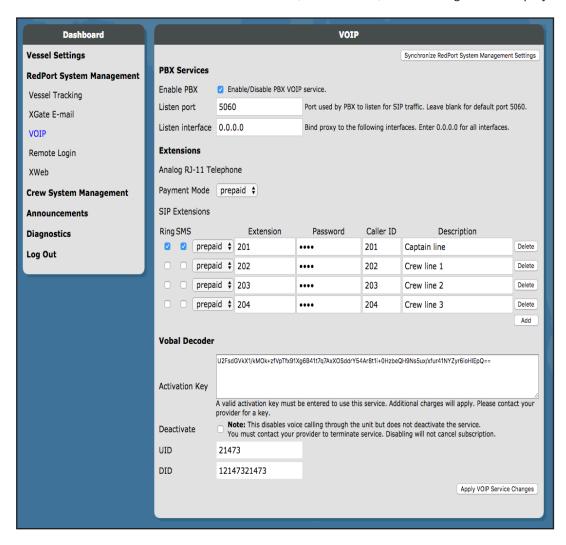
call.

When SMS is checked, that smartphone will receive every incoming SMS message.

To use a smartphone to send/receive phone calls requires the XGate Phone app installed on the smartphone. The XGate Phone app can be found in Apple iTunes App Store for iOS devices and the Google Play store for Android devices.

The smartphone user configures the XGate Phone app with their corresponding SIP Extension. On this page, you can also:

- Change the SIP extension password.
- Change the outgoing Caller ID display.
- Enter a description for your reference.
- 1. To Enter VoIP from the Dashboard Main menu screen, click "VOIP", the following will be displayed:



- 2. To enable VoIP/PBX Services: click the check box next to "Enable/Disable PBX VOIP service". A blue check mark = enabled, an empty check box = disabled.
- 3. Listen Port: Leave the default setting of 5060 or modify as needed.
- 4. Listen interface: Leave the default setting of 0.0.0.0 or modify as needed.





- 5. Payment Mode: Select applicable payment mode of either prepaid or postpaid, from the down arrow menu.
- 6. SIP Extensions: click <Ring> and/or <SMS> tick boxes as needed. Configure extensions, passwords, Caller ID, and Descriptions to meet user need.

NOTE: The activation Key, UID, and DID settings will populate from the CrewComm Management Portal when clicking <Apply VOIP Service Changes> in the next step.

7. Click < Apply VOIP Service Changes>.

As needed, to Deactivate: Ensure the tick box is un-ticked.

8. Click < Apply VOIP Service Changes>.

VoIP actions are now complete.

3.8.4. Remote Login

NOTE: RedPort System Management Remote Login is free of charge.

NOTE: For more in-depth guidance on the functionality and use of Remote Login, please see <u>redportglobal.com/support/documentation-manuals</u>.

Dashboard access does not allow access to the complete RedPort Optimizer CrewComm Router's vast and powerful capabilities. Access to the RedPort Router's complete toolkit of functionality is available through the RedPort User Interface (UI). Remote Login allows access to the UI from a distance user or network administrator. For complete details of RedPort UI use go to redportglobal.com/support/documentation-manuals.

Access is available to the RedPort UI from the RedPort Optimizer CrewComm Router but may (and should be) limited. Full access to the UI can be available through the Remote Login. Remote Support requires an active broadband satellite, Wi-Fi or cell phone link.

1. To Enter Remote Login - from the Dashboard Main menu screen, click "Remote Login", the following will be displayed:



- 2. To enable Remote Login Services: Click the check box to enable access.
- Click <Apply Remote Login Changes>.





When remote support is enabled Remote Access URLs are displayed.

Remote Login will continue being enabled until Disabled from the CrewComm Management Portal, or the router is rebooted.

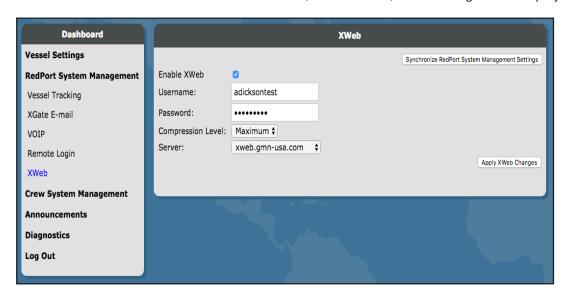
Remote Login actions are now complete.

3.8.5. XWeb (Web Compression)

NOTE: Please see service provider/dealer for purchase and activation of Web Compression. Information obtained from your service provider/dealer will be used to activate and configure Web Compression. For more in-depth guidance on the functionality and use of Vessel Tracking, please see redportglobal.com/support/documentation-manuals.

Enabling Web Compression Service will direct all http traffic to the upstream compression proxy server and return a compressed page to the user. Ads are stripped out, text is compressed, images are re-sampled and more. On average, you will experience 3-5x compression on http traffic, thereby increasing the speed of your connection and the effective per Mb cost of your connection.

1. To Enter XWeb - from the Dashboard Main menu screen, click "XWeb", the following will be displayed:



- 2. To enable XWeb Services: Click the check box to enable access.
- 3. Enter the Username and Password as given to you by your Dealer/Service Provider.
- 4. Click desired Compression Level from the down arrow box.

Compression Level: Set the level of compression that meets your needs. Those on entry level airtime plans should click "Maximum". Those on high data plans may prefer "Standard" or "Minimum".

- Minimum: The basic amount of compression is applied.
- Standard: The normal amount of compression is applied.
- Maximum: The maximum amount of compression is applied.
- 5. Server: Click the down arrow box to select a server as needed, default is "xweb.gmn-usa.com".
- 6. Click < Apply Xweb Changes>.





XWeb (Web Compression) actions are now complete.

4. *CrewComm Management Portal Use

4.1. CrewComm Management Portal Log in

1. To log in to CrewComm Management Portal, type the URL support.crewcommcenter.net/login.php.



To access the CrewComm Management Portal functionality, enter Username and Password and then click <LOGIN>.

2. The following screen will be presented:



CrewComm Management Portal log in is now complete.

4.2. Support

4.2.1. Subscriber

1. To access Subscriber Support, mouse over the "Support", then click "Subscriber".







The following will be displayed:



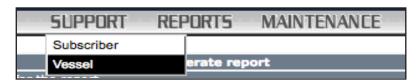
2. Enter the Date range and User ID desired and click <Generate>, the following will be displayed:



Subscriber support actions are now complete.

4.2.2. Vessel

1. To access Vessel Support, mouse over the "Support", then click "Vessel".



2. Enter the Date range and Vessel desired and click <Generate>, the following will be displayed:







Vessel support actions are now complete.

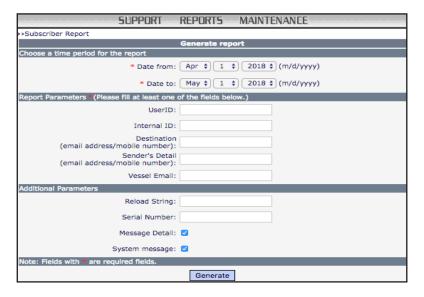
4.3. Reports

4.3.1. Subscriber Reports

1. To access the Subscriber Reports, mouse over the "Reports", then mouse over "Subscriber", then click "Traffic".



The following screen will be displayed:



Subscriber Reports actions is now complete.





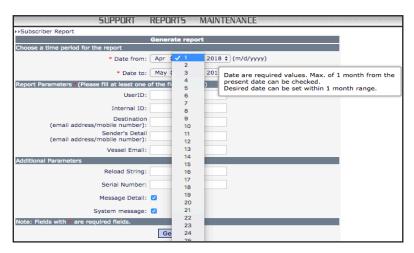
4.3.1.1. Checking the User's Message Details

1. On the Date parameters, input the inclusive transaction period to be checked.

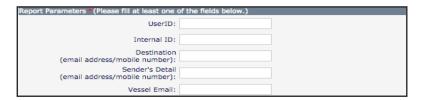


Dates are required values.

2. Click the box with the drop-down arrow to select the date range. You can also search for old transaction records if available by using the drop-down arrow by the year.



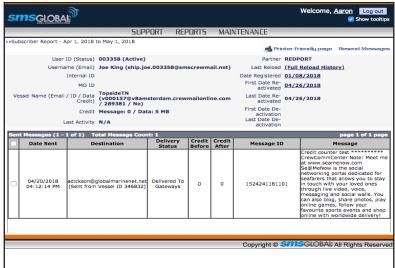
3. On the Report Parameters, input any parameter.



Make sure to input at least one of the fields in the Report Parameters, then click <Generate>, the following will appear:







The search result displays the following:

Subscriber Screen - Header - these are the options for report manipulation, i.e., what to do with the report.

Subscriber Screen User Data:

- Subscriber 6-digit User ID.
- Username and subscriber's assigned email address.
- Subscriber's assigned SMS Global internal ID.
- Subscriber's MO (Mobile Originated) number the equivalent shore mobile number of the User ID; used when sending SMS outside the Philippines.
- Subscriber's Vessel Email where user is currently or most-recently registered.
- Subscriber's Credit available credits of the user.
- Subscriber's Last Activity last known date when user made a transaction.
- Subscriber's Assigned Partner.
- Subscriber's Last Reload date of user's last reload transaction.
- Subscriber's Date Registered Clicking this field shows the registration/reactivation history of the subscriber,
 i.e., all vessels where he was registered.
- · Subscriber's First Date of Re-activation on current vessel.
- Subscriber's Last Date of Re-activation on current vessel.
- Subscriber's First Date of De-activation on current vessel.
- · Subscriber's Last Date of De-activation on current vessel.

Subscriber Screen - Sent Messages record list:

- Date Sent This displays the date the message was sent out from the vessel.
- Destination This displays the email address or mobile number of the shore recipient.
- Credit Before This displays the number of credits the user had before sending the message.
- Credit After This displays the number of credits the use had after sending the message; the difference is the credit/s deducted for the message sent.
- Message ID This displays the message ID assigned to the sent message; clicking the Message ID displays
 the text of the actual message.

Subscriber Screen - Received Messages record list:

- Date Received This displays the email address or mobile number of the shore sender.
- Delivery Status This displays the delivery status of the message.
- Message ID This displays the message ID assigned to the received message; clicking the Message ID displays the text of the actual message.

Checking the User's Message Details is now complete.



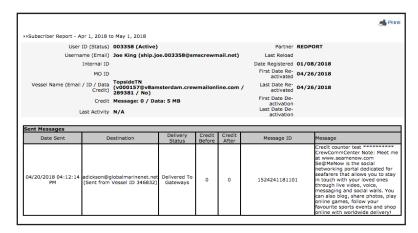


4.3.1.2. Print Report

1. To print the report, check the box in the sent/received messages section to select the messages that you want to be included in the report then click the "Printer friendly page".



The following screen will be displayed:



2. Click "Print" in the top right-hand corner to print the report. Make sure that the default printer is installed in your computer.

Print Report Actions are now complete.

4.3.1.3. Checking a Reload

- 1. Used to check a Subscribers use of an issued Reload String:
- 2. Input the Reload string or serial number that you want to check in the "Reload String" field.

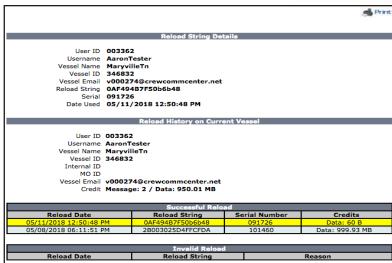


3. Click <Generate> to start searching for the reload string.

If the reload string is valid and found, the following screen will be displayed:





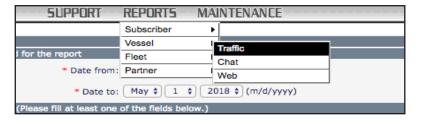


The query displays the User ID and the Date where the reload string was used.

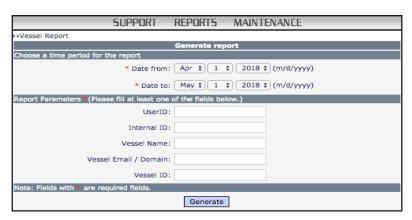
Checking a Reload is now complete.

4.3.2. Vessel Reports

1. To access the Vessel Reports, mouse over the "Reports", then mouse over "Vessel", then click "Traffic".



2. The following screen will be displayed.



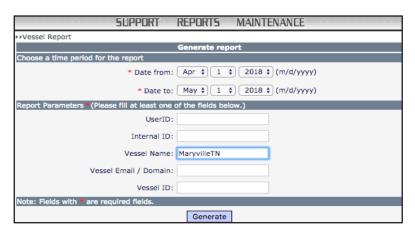
3. On the Date Parameters, click the drop-down to select the desired report date. Make sure that the date is within the one-month date range.



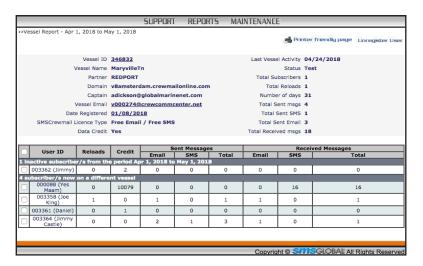




4. On the Report Parameters, input any parameter listed below then click "Generate". The following screen shall be displayed:



5. The following screen will be displayed:



Header Section:

- Report date This displays the date of the report.
- Printer Friendly button This allows printing of the current page.
- **E-mail this report button** This allows emailing of the current report.

Vessel System Information

- SMS Global Internal alphanumeric vessel ID.
- Vessel Name displays the fleet name and vessel name.
- Partner displays the assigned partner for the vessel.
- Domain displays the domain to which the vessel belongs.
- Captain displays the vessel's Captain's name; OPTIONAL.
- Vessel Email email address assigned to SMSCrewMail Ship Server.
- Date Registered displays the date the vessel was registered into our shore servers.
- SMSCrewMail system.
- SMSCrewMail Sending Format displays the protocol used in sending and receiving system messages.
- · Last Vessel Activity displays the date of the last known transaction made on the vessel.
- · Status displays the status of vessel (Production, Test, etc.).
- Total Subscribers displays the total number of subscribers registered on the vessel.
- Total Reloads displays the total number of successful reload transactions made on the vessel for the given period.
- Number of days displays the number of days in the report's transaction period.





- · Total Sent msgs displays the total messages sent from the vessel.
- Sent msgs per day display the number of messages sent per day by the vessel.
- Total Received msgs displays the total messages received by the vessel.
- · Received msgs per day displays the number of messages received per day by the vessel.

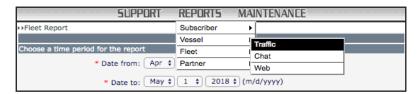
List of Registered Users - displays all the users that are registered on the vessel for the given period.

- User ID.
- · No. of Reloads.
- Credits.
- Sent Msgs.
- Received Msgs

Accessing Vessel Reports is now complete.

4.3.3. Fleet Reports

1. To access the Fleet Reports, mouse over the "Reports", then mouse over "Fleet", then click "Traffic".



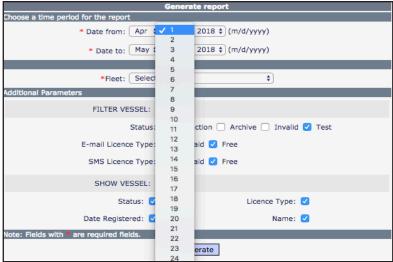
2. The following screen will be displayed:



3. On the Date Parameters, click the drop-down to select the desired report date. Make sure that the date is within the 1-month date range.



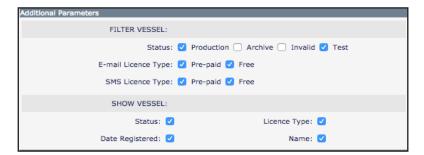




4. On the Report Parameters, input the following required fields to generate the report.



You may also want to include additional search parameters:

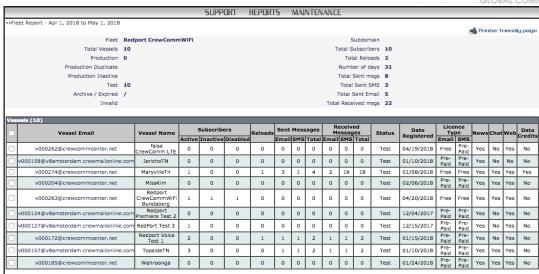


Tick the box of at least one of the additional parameters, then click <Generate>.

5. The following report will be generated:



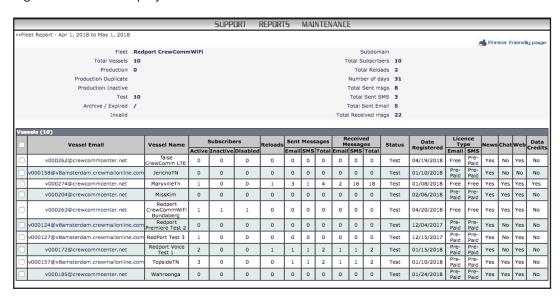




6. To view the information on a particular vessel, click any of the Vessel Emails listed in the report:

ſ	v000158@v8amsterdam.crewmailonline.com	JerichoTN	0	0	
I	v000274@crewcommcenter.net	MaryvilleTn	1	0	
	v000204@crewcommcenter.net	MissKim	0	0	

The following screen will be displayed:



To Print the report generated. Tick the box to select the vessel that will be included in the report, then click the "Printer Friendly" button. The following printable pop-up window will be displayed.



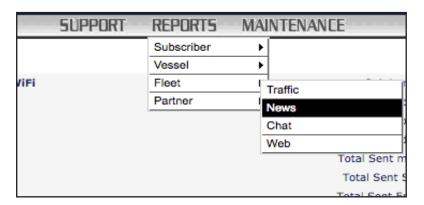
Accessing Fleet Reports is now complete.



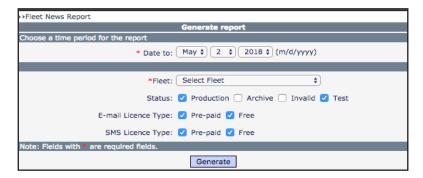


4.3.4. Fleet News

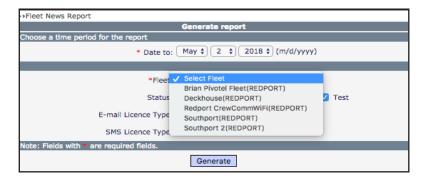
1. To access the Fleet News, mouse over the "Reports", then mouse over "Fleet", then click "News".



2. The following screen will be displayed:



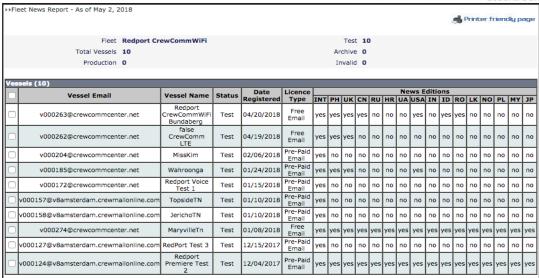
3. On the Date Parameters, click the drop-down to select the desired report date. Click the fleet name from the drop-down list. Click <Generate>.



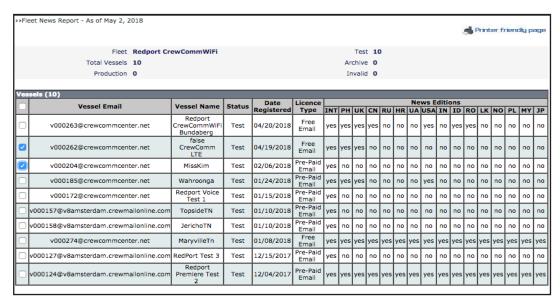
4. The following report will be generated.



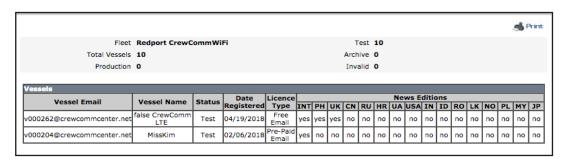




5. To print the report, check the box in the vessel email section to select the messages that you want to be included in the report.



Click <"Printer friendly page">. The following screen will be presented.



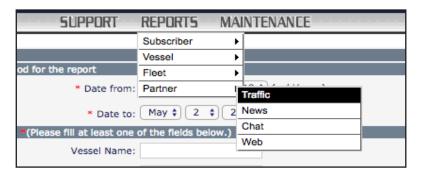
Fleet News actions are now complete.

4.3.5. Partner Reports

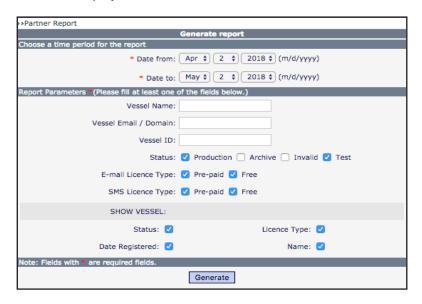




1. To access the Partner Reports, mouse over the "Reports", then mouse over "Partner", then click "Traffic".



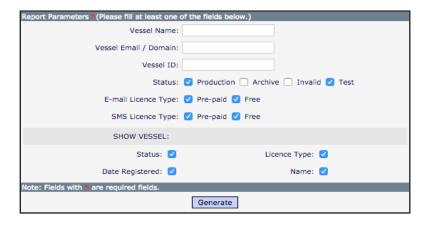
2. The following screen will be displayed:



3. On the Date Parameters, click the drop-down options to select the desired report date. Make sure that the date is within the one-month date range.



4. On the Report Parameters, input the following required fields to generate the report.





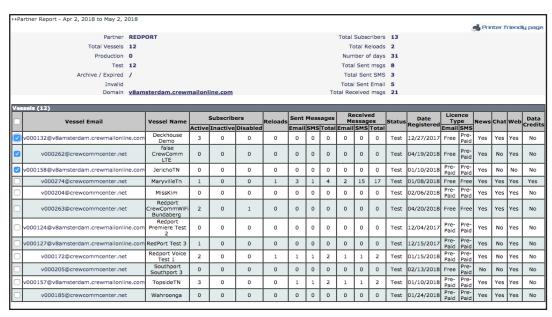


You may also want to include additional search parameters: Tick the box of at least one of the additional parameters, then click <Generate>.

5. The following report will be generated:

														-	Printer frie	endly p	page
	Partner	REDPORT						Total S	ubscr	ibers	13						
	Total Vessels	12						Tot	tal Re	loads	2						
	Production	0						Numb	er of	days	31						
	Test	12						Total	Sent	msgs	8						
	Archive / Expired	/						Total	Sent	SMS	3						
	Invalid							Total	Sent I	Email	5						
	Domain	v8amsterd	am.crewmailor	ıline.co	<u>om</u>		Tot	al Rece	eived	msgs	21						
_	sels (12)																_
es	Vessel Email		Vessel Name	Subscribers		Reloads	Sent Messages		Received Messages			Status	Date	Licence Type			
				Active	Inactive	Disabled		Email	SMS	Total	Email	SMS	Total		Registered	Email	SM
)	v000132@v8amsterdam.crewma	llonline.com	Deckhouse Demo	3	0	0	0	0	0	0	0	0	0	Test	12/27/2017	Free	Pn Pa
)	v000262@crewcommcente	er.net	false CrewComm LTE	0	0	0	0	0	0	0	0	0	0	Test	04/19/2018	Free	Pr Pa
)	v000158@v8amsterdam.crewma	ilonline.com	JerichoTN	0	0	0	0	0	0	0	0	0	0	Test	01/10/2018	Pre- Paid	Pr Pa
כ	v000274@crewcommcente	er.net	MaryvilleTn	1	0	0	1	3	1	4	2	15	17	Test	01/08/2018	Free	Fr
)	v000204@crewcommcente	er.net	MissKim	0	0	0	0	0	0	0	0	0	0	Test	02/06/2018	Pre- Paid	Pr Pa
0	v000263@crewcommcente	er.net	Redport CrewCommWiFi Bundaberg	2	0	1	0	0	0	0	0	0	0	Test	04/20/2018	Free	Fr
)	v000124@v8amsterdam.crewma	ilonline.com	Redport Premiere Test 2	0	0	0	0	0	0	0	0	0	0	Test	12/04/2017	Pre- Paid	Pi Pi
)	v000127@v8amsterdam.crewma	ilonline.com	RedPort Test 3	1	0	0	0	0	0	0	0	0	0	Test	12/15/2017	Pre- Paid	Pi
)	v000172@crewcommcente	er.net	Redport Voice Test 1	2	0	0	1	1	1	2	1	1	2	Test	01/15/2018	Pre- Paid	P P
)	v000205@crewcommcente	er.net	Southport Southport 3	0	0	0	0	0	0	0	0	0	0	Test	02/13/2018	Free	P P
)	v000157@v8amsterdam.crewma	ilonline.com	TopsideTN	3	0	0	0	1	1	2	1	1	2	Test	01/10/2018	Paid	P P
5	v000185@crewcommcente	er net	Wahroonga	0	0	0	0	0	0	0	0	0	0	Test	01/24/2018	Pre- Paid	Pi

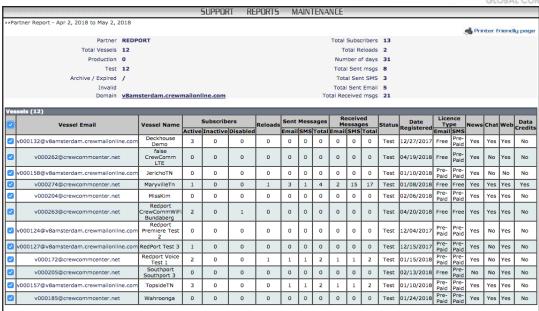
6. To print the report, check the box or boxes in the vessel email section to select the messages that you want to be included in the report.



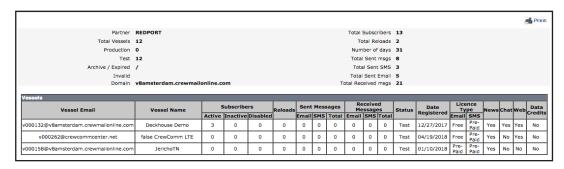
Optionally, you can select all Vessels by clicking the tick box above all individual Vessel tick boxes, left of the "Vessel Email" heading.







Click <"Printer friendly page">. The following screen will be presented.



7. To view the information on a particular vessel, click any of the Vessel Emails listed in the report. The following screen will be presented.



Partner Report actions are now complete.

4.4. Maintenance

4.4.1. CrewComm Management User Account

CrewComm Management Portal User Accounts (also Partner Websupport Accounts) are those that are authorized to create, view, modify, and delete etc. functions/accesses of Fleets, Vessels, and/or Users. Nominally a Service Provider/Dealer would have a CrewComm Management Portal account created first, then he/she could add new Websupport Accounts (members he/she would want to have access to specific Fleets/Vessels. Websupport

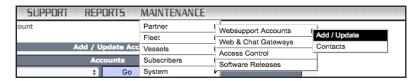




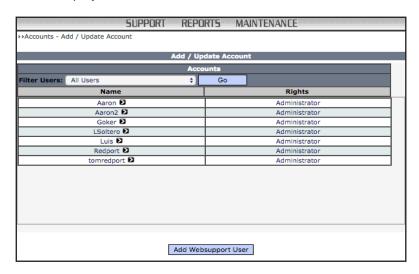
Accounts may have full access or have varying levels of restrictions with their Websupport access.

4.4.1.1. Add User Account

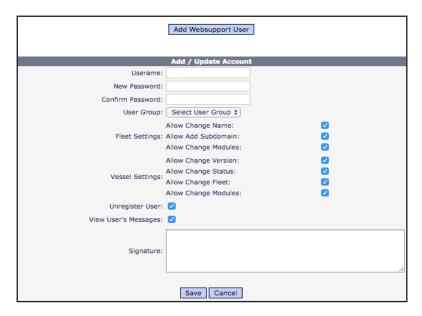
1. To access the Add User Account, mouse over the "Maintenance", then mouse over "Partner", then mouse over "Websupport Accounts", then click "Add / Update".



The following screen will be displayed:



2. Click <Add Websupport User>. The following screen will be added to the bottom of the "Add / Update Account" screen.



- 3. Input the required data:
- **Username and Password** This will accept up to 25 alphanumeric characters (username is case-sensitive), as well as "Confirm Password".





- User Group This will the user to select access rights from the list.
- Administrator This permits the user to add/edit/delete users plus viewing and generating reports.
- User This permits the user to view and generate reports only.
- Unregister User This will allow to the user to manually deactivate user(s) from current vessel.

Fleet Settings:

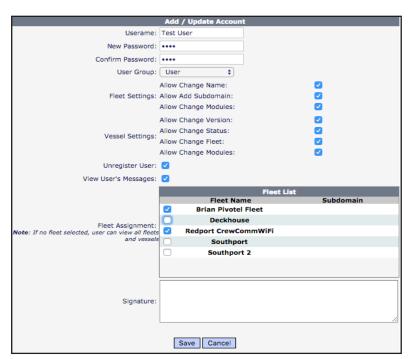
- Allow Change Name This allows a change to the name of a fleet.
- Allow Add Subdomain This allows addition of Subdomains to a fleet.
- Allow Change Modules This allows upgrades of Modules (News, Encryption, Web Browsing, Online chat and advanced vessel settings).

Vessel Settings:

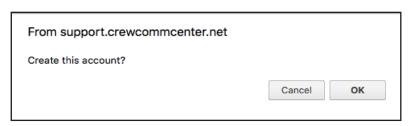
- Allow Change Version This allows upgrades to the version/license type of a vessel from Standard to Free Email.
- Allow Change Status This allows changes to Vessel Status from Test/Demo to Production.
- Allow Change Fleet This allows re-assignments of a vessel(s) to a new fleet.

NOTE: Allowed for upgrading modules only.

- Allow Change Modules This allows upgrade of Modules (News, Encryption, Web Browsing, Online chat and advanced vessel settings).
- **Signature** The input signature message to be used for support emails. This is used when sending a report directly from the WebSupport to an email recipient.



5. Click <Save> to create the account. You will be asked to confirm the creation of the account.

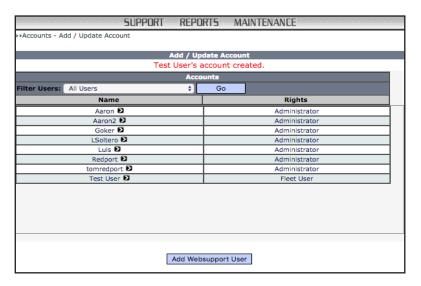






Click <OK> to confirm or click <Cancel> to abort the process.

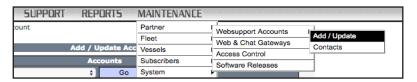
If the Username does not exist a new account will be created, and the following screen will appear:



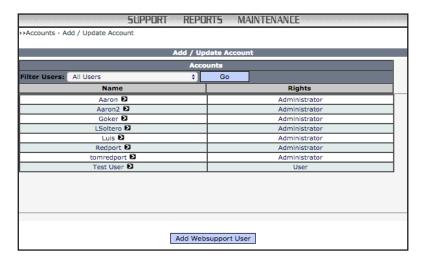
User account is now successfully created.

4.4.1.2. Edit User Account

1. To access the Add User Account, mouse over the "Maintenance", then mouse over "Partner", then mouse over "Websupport Accounts", then click "Add / Update".



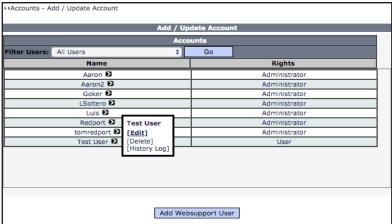
2. The following screen will be displayed:



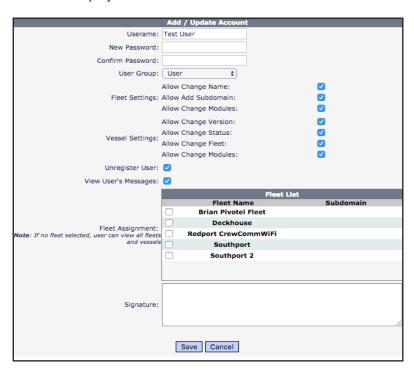
3. To Edit user, mouse over the ">" beside the username, then from the pop-up menu click <Edit>.







4. The following screen will be displayed:



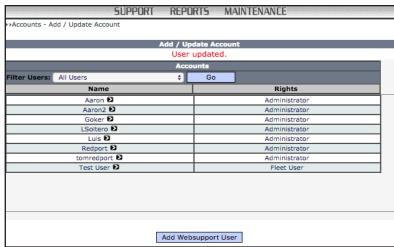
Change the User information then click <Save> to accept changes or click <Cancel> to abort process. You will be asked to confirm the update of the account.



Click <OK> to update or click <Cancel> to abort process. The following screen will be displayed:



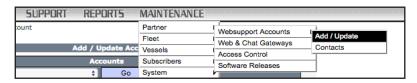




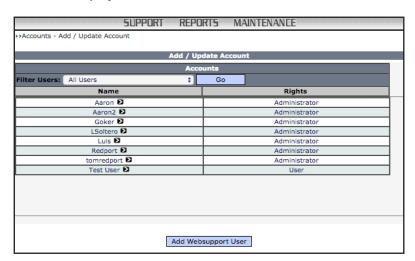
User account is now successfully updated.

4.4.1.3. Delete User Account

1. To access the Add User Account, mouse over the "Maintenance", then mouse over "Partner", then mouse over "Websupport Accounts", then click "Add / Update".



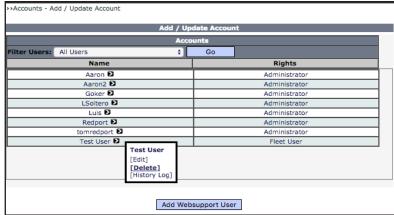
2. The following screen will be displayed:



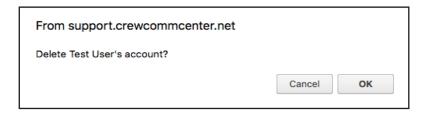
3. To Delete user, mouse over the ">" beside the user name, then from the pop-up menu click <Delete>.



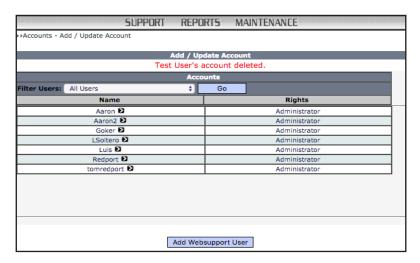




You will be asked to confirm the account deletion.



Click <OK> to Delete or click <Cancel> to abort process. The following screen will be displayed:



User account is now successfully deleted.

- 4.4.2. Partner Account
- 4.4.2.1. Add Partner Websupport Account (See Chapter 4.4.1.1)

See Chapter 4.4.1.1 Add User Account.

4.4.2.2. Edit Partner Account (See Chapter 4.4.1.2)

See Chapter 4.4.1.2 Edit User Account.

4.4.2.3. Delete Partner Account (See Chapter 4.4.1.3)



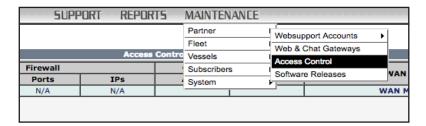


See Chapter 4.4.1.3 Delete User Account.

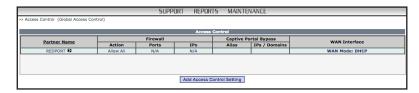
4.4.3. Access Control

4.4.3.1. Access Control - Partner

1. To configure/add Partner Access Control, mouse over the "Maintenance", then mouse over "Partner", then click "Access Control".



The following screen will be displayed:



2. Click <Add Access Control Setting> to Add a new access control setting. The following will be displayed at the bottom of the Access Control page (the multiple screens will be displayed in one flowing representation on the WebSupport page).

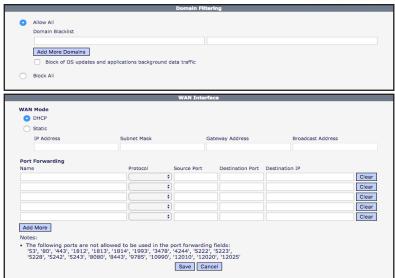




Add Access Co.	ntrol Setting
Firewall S	ettings
Allow All	
Blocked ports	Blocked IPs
Add More Ports	Add More IPs
Note: Accepts one port number or port range per field; Port range is colon separated; Sample: 5000, 6000:6100	Note: Accepts one IP or IP range per field; Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24 192.168.x.x and 10.0.x.x are not allowed to be blocked
○ Close All	
✓ Open Web Browsing	
Allowed IM Networks	
FB Messenger & Facebook Messaging / File Transfer / Audio & Video Call	
Kakao Talk	
Messaging & File Transfer	
Audio Calls & Video Calls LINE	
Messaging / File Transfer / Audio & Video Call	
WeChat Messaging & File Transfer	
Messaging & File Transfer Audio & Video Call	
WhatsApp	
Messaging Audio & Video Call	
Viber	
Messaging & File transfer	
Audio & Video Call Se@MeNow messenger	
Messaging & File Transfer	
Audio & Video Call	
HiChat Messaging / File Transfer & Audio Recording	
Instagram	
☐ Videos / Pictures & Text	
Twitter Videos / Pictures & Text	
Youtube	
☐ Videos & Text	
Snapchat	
Snapchat	
Open ports	Open IPs
Add More Ports	Add More IPs
Note: Accepts one port number or port range per field;	Note: Accepts one IP or IP range per field:
Port range is colon separated; Sample: 5000, 6000:6100	Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24
Notes:	
 Allow All opens all ports when Internet is activated, with option to Close All blocks all ports except the defined ports in the network of 	diagram covering the system user interface
 Open web browsing allows access to the Internet for browsers and IM apps such as FB Messenger, LINE & Se@MeNow Messenger wi 	III have internet access
Open specific IM networks allows selected IM networks to connect	, but web browsing and other ports are blocked
Captive Portal By	pass Settings
Allowed IPs Allas IF	P Address / Domain Name
Add More IPs Notes:	
Captive Portal Bypass IPs / Domain Name will have direct access t Accepts IP Address and Port combination, colon separated; sample	to the satcom connection and the Internet e: 98.138.253.109:5555
ar routiess und rore combination, colon separated; Sample	
DNS Set	tings
DNS 1: No Data DNS 2: No Data	tings







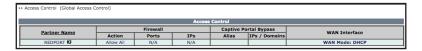
3. Enter the desired settings then click <Save>.

The following screen will be displayed:



4. Click <OK> to apply changes or click <Cancel> to abort changes.

The following screen will be displayed:



5. To Edit partner Access Control settings, mouse over the partner name and then click <Edit>.



The following screen will be added to the bottom of the Access Control WebSupport page (the multiple screens will be displayed in one flowing representation on the WebSupport page).

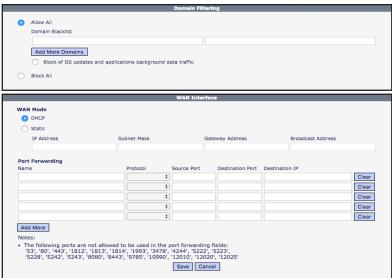




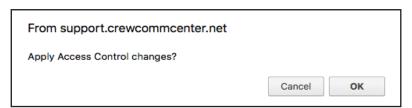
Erewa	il Settings
riiewa	n Settings
O Allow All	
Blocked ports	Blocked IPs
Add More Ports	Add More IPs
Note: Accepts one port number or port range per field;	Note: Accepts one IP or IP range per field; Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24
Port range is colon separated; Sample: 5000, 6000:6100	Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24 192.168.x.x and 10.0.x.x are not allowed to be blocked
O #1	
Close All	
 ✓ Open Web Browsing Allowed IM Networks 	
FB Messenger & Facebook	
Messaging / File Transfer / Audio & Video Call	
Kakao Talk	
Messaging & File Transfer Audio Calls & Video Calls	
LINE	
Messaging / File Transfer / Audio & Video Call	
WeChat	
Messaging & File Transfer Audio & Video Call	
Audio & Video Call WhatsApp	
Messaging	
Audio & Video Call	
Viber Messaging & File transfer	
Messaging & File transfer Audio & Video Call	
Se@MeNow messenger	
Messaging & File Transfer	
Audio & Video Call	
Messaging / File Transfer & Audio Recording	
Instagram	
Videos / Pictures & Text	
Twitter	
Videos / Pictures & Text Youtube	
Videos & Text	
Snapchat	
Snapchat	
Videos / Pictures & Text	
Audio & Video Call	
Open ports	Open IPs
Add More Ports	Add More IPs
Note: Accepts one port number or port range per field;	Note:
Port range is colon separated; Sample: 5000, 6000:6100	Accepts one IP or IP range per field; Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24
Notes:	
Allow All opens all ports when Internet is activated, with option	
Close All blocks all ports except the defined ports in the networ Open web browsing allows access to the Internet for browsers IM apps such as FB Messenger, LINE & Se@MeNow Messenger	and apps using port 80 and 443
Open specific IM networks allows selected IM networks to conn	
	Bypass Settings
Captive Portal	
Captive Portal Illowed IPs Illas	IP Address / Domain Name
llowed IPs	IP Address / Domain Name
llowed IPs	IP Address / Domain Name
llowed IPs	IP Address / Domain Name
Illowed IPs Ilias	IP Address / Domain Name
Illowed IPs	IP Address / Domain Name
Add More IPs Iotas: Captive Portal Bypass IPs / Domain Name will have direct acce	ss to the satcom connection and the Internet
Add More IPs lotes:	ss to the satcom connection and the Internet







6. Enter the desired settings then click <Save>. The following page screen will be displayed:



7. Click <OK> to apply changes or click <Cancel> to abort changes. The following page will be displayed.



Partner Access Control actions are now complete.

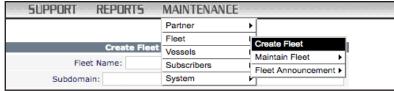
- 4.4.3.2. Access Control Fleet (See Chapter 4.4.4.3)
- 4.4.3.3. Access Control Vessel (See Chapter 4.4.5.4)
- 4.4.4. Fleet
- 4.4.4.1. Fleet Creation

NOTE: New Fleets are submitted to Administrators for approval of settings. New Vessels are automatically set to Fleet settings (if registered/activated with a corresponding Fleet).

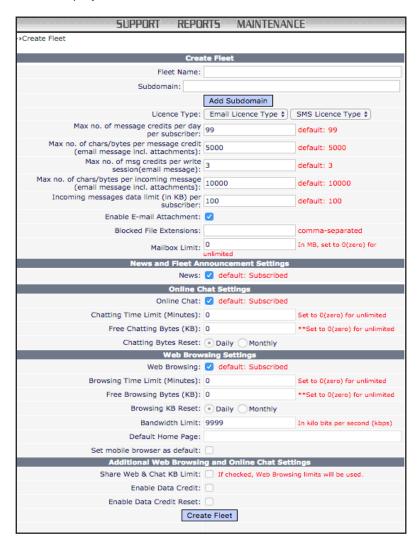
1. To create a new Fleet, mouse over "Maintenance", then mouse over "Fleet", then click "Create Fleet".







The following screen will be displayed:



- 2. Input all the required fields needed:
- Fleet Name The name of the fleet.
- Fleet Subdomain The subdomain associated with a vessel's email address.
- Partner Name The name of the Partner where the fleet belongs.
- Version This is the license type version; choose between Free Email or Standard.
- News The news subscription option, tick box to enable news.
- Online Chat The online chat subscription; tick box to enable online chat.
- Chatting Time per Day The chat time limit per day in minutes. Default is 0 for unlimited. Chat time is reset
 daily.
- Chatting Bytes per Day The chat bytes size limit per KB used. Default is 0 for unlimited. Chat bytes size is
 reset daily.
- Web Browsing The web browsing subscription; subscriber will have access to the Internet; tick box to enable web browsing.
- Browsing Time per Day The browsing time limit per day in minutes. Default is 0 for unlimited. Browsing time





is reset daily.

- Browsing Bytes per Day The browsing bytes size limit per KB used, per day. Default is 0 for unlimited. Limit is reset daily.
- Bandwidth Limit Used to set the limit of bandwidth usage per user.
- Video/Audio/Flash Streaming Optional setting of Blocked or Allowed.
- Max no. of outgoing messages per day per subscriber The maximum daily limit per subscriber for outgoing messages on the vessel. Default is 99.
- Max no. of characters per incoming message The maximum number of characters per incoming message. Default is 3000 characters.
- Max size of incoming messages (in KB) per day per subscriber The maximum daily size (in KB) limit of incoming messages per subscriber. Default is 50KB.
- 3. Click < Create Fleet>.

The following screen will be displayed:



4. Click <OK> to create the Fleet or click <Cancel> to abort changes. The following page will be displayed.

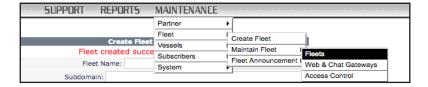


The Fleet is successfully created.

4.4.4.2. Fleet - Maintenance

NOTE: Fleet setting downgrades (Free Email to Prepaid Email, Production to Test, removing subscriptions from modules, etc.) require administrator approval.

1. To maintain a Fleet, mouse over "Maintenance", then mouse over "Fleet", then click "Create Fleet".



2. The following screen will be displayed:







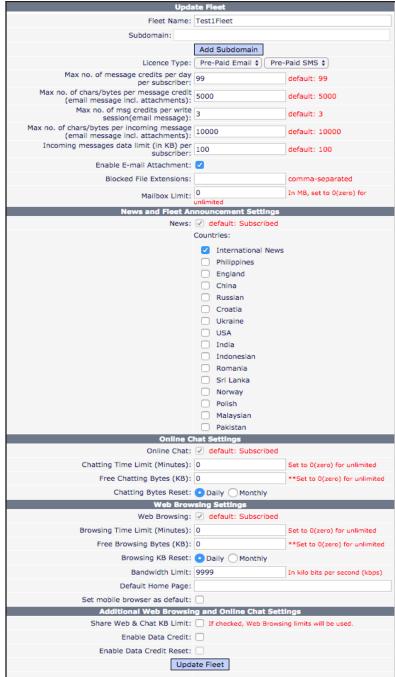
3. To edit the Fleet, click <Edit> under the Fleet ID.

Fleet ID	Fleet Name	Registered Date	Fleet Subdomain	Licence Type	Approval Status	News	Chat	Web	Out msg/day	Chars/day	In msg/day
215603620180502184717 [Edit] [History Log]	Test1Fleet	05/02/2018		Pre-Paid Email	Pending	Yes	Yes	Yes	99	10000	100
320748420180131212632 [Edit] [History Log]	Southport 2	01/31/2018			Approved	Yes	Yes	Yes	99	10000	100

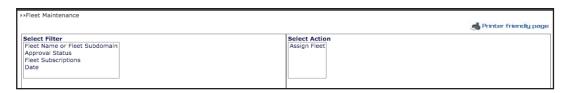
The following screen will be displayed:







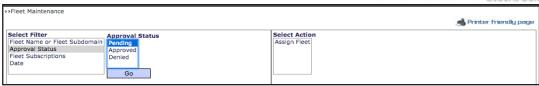
You can also search for or sort through Fleets using the "Select Filter" option located above the Fleet listing area.



Clicking the Approval Status will cause the Approval Status selection box to be presented:







4. Click the "Approval Status" that you want to search, then click <Go>. The following screen will be displayed:



5. Make desired setting change(s) then click < Update Fleet>. The follow screen will be displayed:



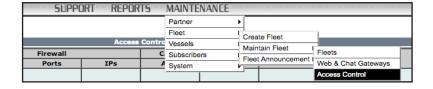
6. Click <OK> to Edit the Fleet or click <Cancel> to abort changes. The following page will be displayed.



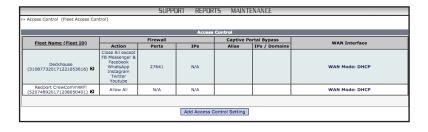
The Fleet Maintenance is successfully complete.

4.4.4.3. Fleet - Access Control

1. To maintain Fleet Controls, mouse over "Maintenance", then mouse over "Fleet", then mouse over "Maintain Fleet", then click "Access Control".



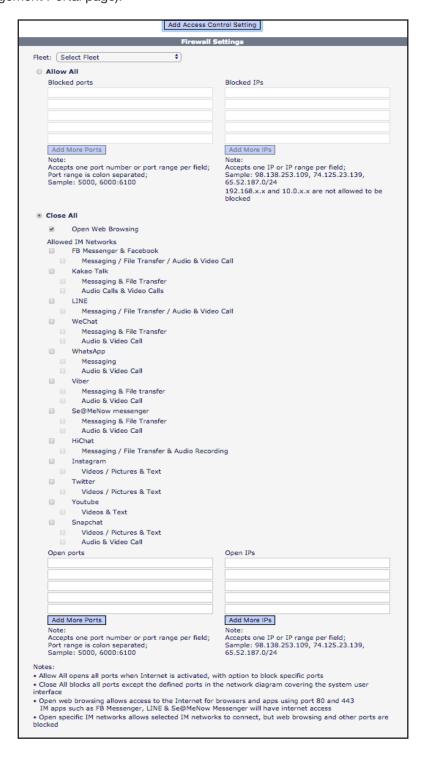
2. The following screen will be displayed:





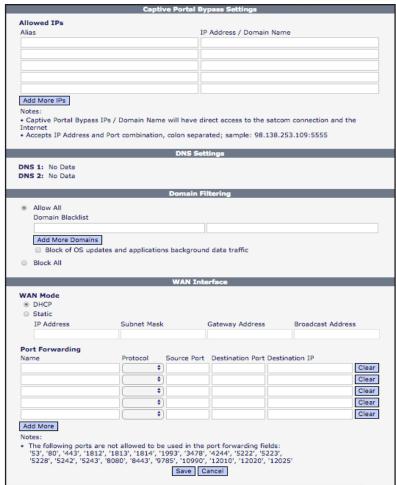


3. Click <Add Access Control Setting> to add a new access control setting. The following screens will be added to the bottom of the Access Control (Fleet Access Control) page, (presented in one flowing representation on the CrewComm Management Portal page):

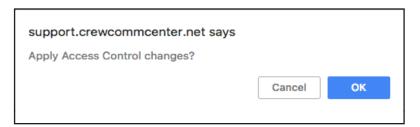








4. Enter the desired settings then click <Save>.



5. Click <OK> to Apply Access Control or click <Cancel> to abort changes. The following page will be displayed.



The Fleet Access Control is successfully completed.

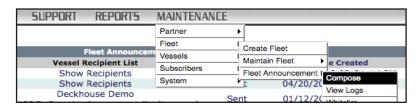
4.4.4.4. Fleet - Announcements

1. To compose Fleet Announcements, mouse over "Maintenance", then mouse over "Fleet", then mouse over





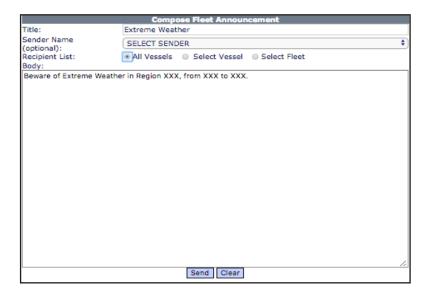
"Fleet Announcements", then click "Compose".



2. The following screen will be displayed:



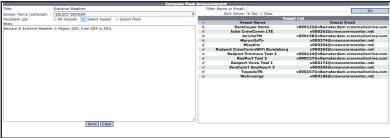
- 3. Compose desired Fleet Announcement. Choose where to send the Fleet Announcement.
- All Vessels (Click <All Vessels>):



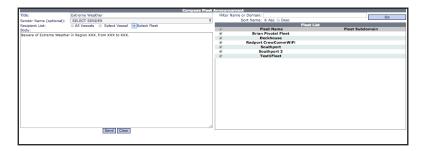
Select Vessel (Click <Select Vessel>):



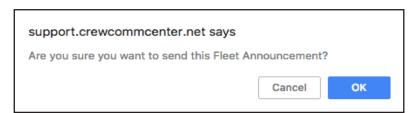




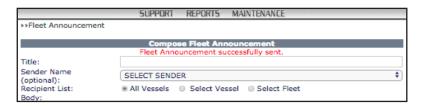
4. Select Fleet (Click <Select Fleet>):



5. After typing desired Fleet Message and making sender selections, click <Send>. The following screen will be displayed:

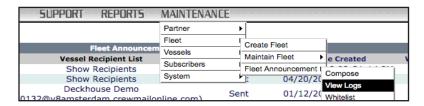


6. Click <OK> to send Fleet Announcement or click <Cancel> to abort. The following page will be displayed.



The Fleet Announcement is successfully created and sent.

1. To view a history of Fleet Announcements, mouse over "Maintenance", then mouse over "Fleet", then mouse over "Fleet", then click "View - Logs".



The following screen will be displayed:







2. Click "Message Title" under the Title Heading to view message:



- 3. Click <Resend to all> to resend the original message.
- 4. Click "Show Recipients" or "Recipient Name" under the Vessel Recipient List Heading to view recipients:



5. Click <Resend to all> to resend the original message.

The Fleet Announcement viewing is complete.

4.4.5. Vessel

4.4.5.1. Vessel - Activation / Registration

Vessel activation / registration is the process of adding a new Vessel (and Router) to the CrewCommCenter Service. New Vessel Activation / Registration takes place by first pre-registering the Vessel in one of two ways. Once a Vessel is pre-registered, it is approved by Administrators.

- Pre-activation form: Easiest, quickest, and most effective process of pre-registration. The form can be used
 by personnel that do not have access to the CrewComm Management Portal. See Chapter 3.1 Pre-activation
 Form.
- Pre-register within in CrewComm Management Portal: Process that is similar to the form but accessed directly through the portal by personnel that have access to the CrewComm Management Portal.

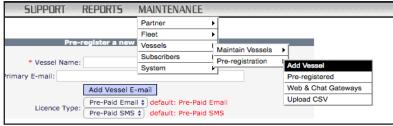
4.4.5.1.1. Without pre-activation form (less preferred method)

NOTE: Pre-registered vessels must be assigned to an Approved Fleet. Pre-registered vessels are automatically set to the Fleet's approved default settings. Distinct settings can be set for any vessel that overrides the default values.

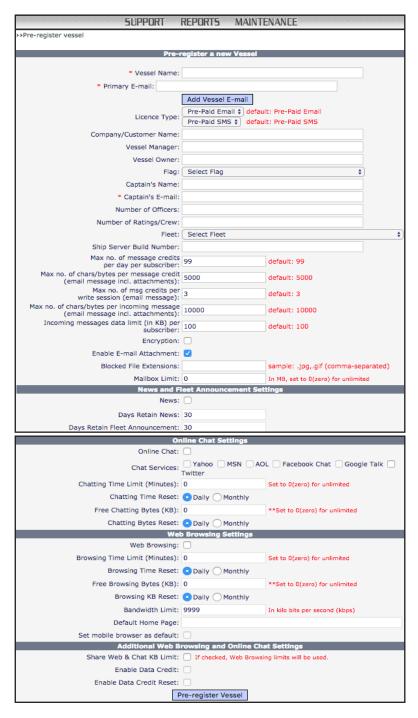
1. To pre-register a new vessel, mouse over "Maintenance", then mouse over "Vessel", then mouse over "Pre-registration", then click "Add Vessel".







2. The following screen will be displayed:







NOTE:

- Fields marked with a red *(asterisk) to the left of the field name are required to be completed.
- Fields that have red text to the right of the field name are Partner's default values.
- When a Fleet is selected, the Fleet's default values would then be shown in red. Changes made to the values overrides the default settings.
- 3. Input the required fields as well as non-required if desired, then click <Pre-register Vessel>. The following screen will be displayed:



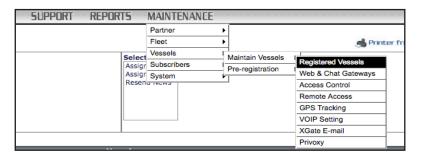
4. Click <OK> to Pre-register the vessel or click <Cancel> to abort. The following page will be displayed.



The vessel Pre-registration through the CrewComm Management Portal without the Pre-activation form is now complete.

4.4.5.2. Vessel - Maintenance

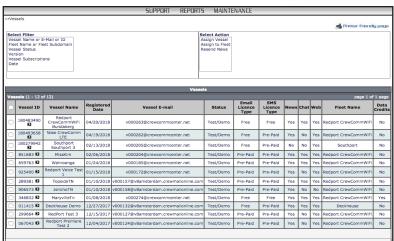
1. To access all registered vessels, mouse over "Maintenance", then mouse over "Vessels", then mouse over "Maintain Vessels", then click "Registered Vessels".



The following screen will be displayed:







You can make the Registered Vessel search more restrictive by using the "Select Filter" and/or "Select Action" selections:



2. Hover over the "Vessel Name" under the Vessel Name heading to expose vessel specific options:



View: Click <View> - Displays an overview of Vessel Information and Settings.





	A Print		
	Vessel Information		
Vessel ID:	906573		
Vessel Name:	JerichoTN		
Domain:	v8amsterdam.crewmailonline.com		
E-mall:	v000158@v8amsterdam.crewmailonline.com		
Mac Address:	00:0B:52:76:23:89		
IP Address:	127.0.0.1		
Captain:	adickson@globalmarinenet.com		
Email Licence Type:	Pre-Paid Email		
SMS Licence Type:	Pre-Paid SMS		
Vessel Status:	Test/Demo		
Registered Date:	01/10/2018 12:00:00 AM		
Max no. of message credits per day per subscriber:			
Max no. of chars/bytes per message credit (email message incl. attachments):	5000		
Max no. of msg credits per write session (email message):	3		
Max no. of chars/bytes per incoming message (email message incl. attachments):	10000		
Incoming messages data limit (in KB) per subscriber:	100		
If max size exceeded, forward percentage of message:	80%		
Enable E-mail Attachment:	Yes		
Blocked File Extensions:			
Mailbox Limit:	10 MB		
Ne	ews and Fleet Announcement Settings		
News:	Yes		
	Countries:		
	International News		
Days Retain News:	30		
Days Retain Fleet Announcement:	30		
	Internet Access Settings		
Low Data Chat:			
Internet Access:	No		
	Close		

Edit: Click <Edit> - Displays Vessel Information and Settings that are modifiable.





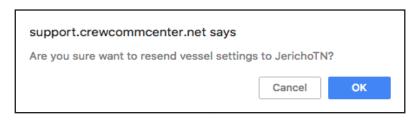
	Vessel Information	
Vessel ID:		
* Primary Vessel Name:		
Message Code:	DEFAULT \$	
Ship Server Mailbox ID Used:		
POID Used:		
	v8amsterdam.crewmailor	
	v000158@v8amsterdam.	
Captain:	adickson@globalmarinen	et.com
Mac Address:	00:0B:52:76:23:89	
IP Address:	127.0.0.1	
Licence Type:	Pre-Paid Email \$ Pre-	Paid SMS ‡
Sending Format:	○ Unicode ○ Normal	
* Vessel Status :	Test/Demo \$	1
Expire:		
	Redport CrewCommWIF	i
Max no. of message credits per day per subscriber:	999	
Max no. of chars/bytes per message credit	5000	
(email message incl. attachments):		
Max no. of msg credits per write session (email message):	3	
Max no. of chars/bytes per incoming message	10000	
(email message incl. attachments):		
Incoming messages data limit (in KB) per subscriber:	100	
If max size exceeded, forward percentage of message:	80% \$	
Enable E-mail Attachment:		
Enable SMS Attachment:		
Blocked File Extensions:		sample: .jpg,.gif (comma-separated)
Mailbox Limit:	10	In MB, set to 0(zero) for unlimited
News a	nd Fleet Announcement	Cottings
N		. settings
News:	✓	. Secungs
	Countries:	
	Countries:	
	Countries: International New Philippines England	
	Countries: International New Philippines England China	
	Countries: International New Philippines England	
	Countries: International New Philippines England China Russian Croatla Ukraine	
	Countries: International New Philippines England China Russian Croatia Ukraine USA	
	Countries: International New Philippines England China Russian Croatla Ukraine	
	Countries: International New Philippines England China Russian Croatia Ukraine USA India	
	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka	
	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania	
	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian	
	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan	
Days Retain News:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan	
	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan	is
Days Retain News: Days Retain Fleet Announcement:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 Internet Access Setting	is
Days Retain News: Days Retain Fleet Announcement: Low Data Chat:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 Internet Access Setting	ış
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 Internet Access Setting	is
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 30 Internet Access Setting	ns gesenat ☑ Google Talk ☑ Twitter
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 30 Internet Access Setting	ış
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access: Time Limit (Minutes): Time Reset:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Pollish Malaysian Pakistan 30 Internet Access Setting Yahoo Facebook Cl	ns gesenat ☑ Google Talk ☑ Twitter
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access: Time Limit (Minutes): Time Reset: Free Data (KB):	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 Internet Access Setting Yahoo Facebook Cl	nat Google Talk Twitter Set to 0(zero) for unlimited
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access: Time Limit (Minutes): Time Reset: Free Data (KB):	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 30 Internet Access Setting Yahoo Facebook Cl	nat Google Talk Twitter Set to 0(zero) for unlimited
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access: Time Limit (Minutes): Time Reset: Free Data (KB): Data Reset:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 Internet Access Setting Yahoo Facebook Cl	hat Google Talk Twitter Set to 0(zero) for unlimited e Data Credit' is unchecked
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access: Time Limit (Minutes): Time Reset: Free Data (KB): Data Reset:	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 Internet Access Setting Yahoo Facebook Cl	hat Google Talk Twitter Set to 0(zero) for unlimited e Data Credit' is unchecked
Days Retain News: Days Retain Fleet Announcement: Low Data Chat: Chat Services: Internet Access: Time Limit (Minutes): Time Reset: Free Data (KB): Data Reset: Addit	Countries: International New Philippines England China Russian Croatia Ukraine USA India Indonesian Romania Sri Lanka Norway Polish Malaysian Pakistan 30 30 Internet Access Setting Yahoo Facebook Cl	hat Google Talk Twitter Set to 0(zero) for unlimited e Data Credit' is unchecked

3. Click < Update Vessel> to accept vessel settings changes or click < Cancel> to abort changes.





4. Resend Settings: click < Resend Settings > - Sends settings to the vessel.



5. Click <OK> to resend vessel settings or click <Cancel> to abort. The following page will be displayed.



Vessel Traffic Report: click < Vessel Traffic Report> - Displays Vessel Report generation form (with the Vessel ID pre-filled from vessel selected).



7. Click <Generate> to display the report:



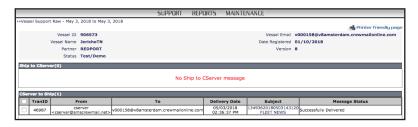
RAW Vessel Support: Click <Vessel Traffic Report> - Displays Vessel Support Raw generation form (with the Vessel ID pre-filled from vessel selected).



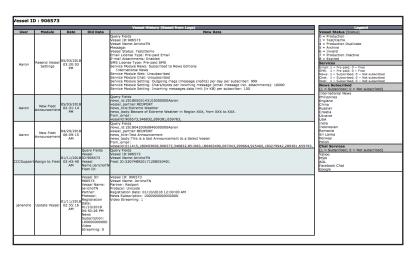




6. Click <Generate> to display the report:



History Log: Click < Vessel Traffic Report> - Displays Vessel History based on logs (includes a legend).

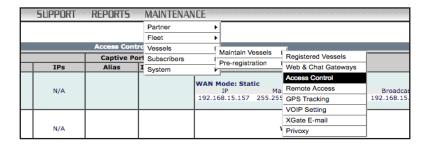


Vessel Maintenance is complete.

4.4.5.3. Vessel - Access Control

4.4.5.3.1. New Settings

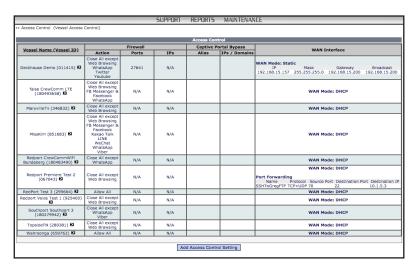
1. To access all registered vessels, mouse over "Maintenance", then mouse over "Vessels", then mouse over "Maintain Vessels", then click "Access Control".



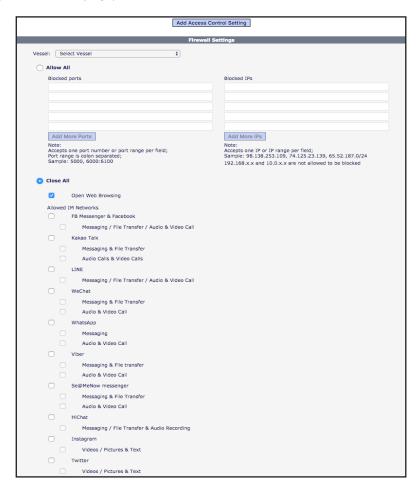




The following screen will be displayed:



2. Click <Add Access Control Setting> to add a new access control setting. The following screens will be added to the bottom of the Access Control (Vessel Access Control) page, (presented in one flowing representation on the CrewComm Management Portal page):









3. Click desired vessel from the drop-down list:



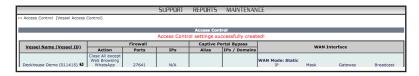
4. Enter the desired settings, and then click <Save>. The following screen will appear:







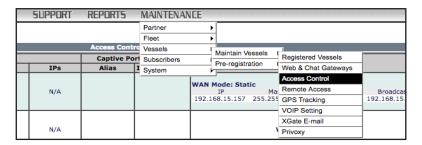
5. Click <OK> to apply access control settings or click <Cancel> to abort. The following page will be displayed.



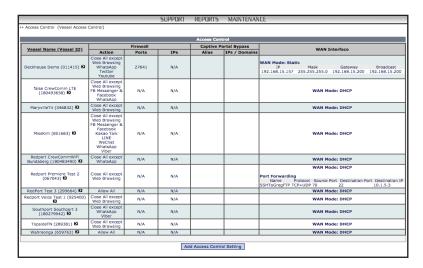
Vessel access control setting creation is now complete.

4.4.5.3.2. Edit Settings

1. To access all registered vessels, mouse over "Maintenance", then mouse over "Vessels", then mouse over "Maintain Vessels", then click "Registered Vessels".



The following screen will be displayed:



2. Hover over the ">" to the right of the "Vessel Name" under the Vessel Name heading, then click <Edit>. The following screens will be added to the bottom of the Access Control (Vessel Access Control) page, (presented in one flowing representation on the CrewComm Management Portal page):

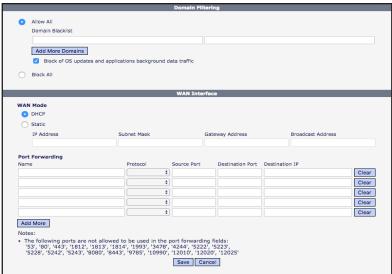




	Add Access Co	
Vesse	el: JerichoTN \$	Settings
	Allow All	
	Blocked ports	Blocked IPs
	Add More Ports Note:	Add More IPs Note:
	Accepts one port number or port range per field; Port range is colon separated; Sample: 5000, 6000:6100	Accepts one IP or IP range per field; Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24
	Sample: 5000, 6000:6100	192.168.x.x and 10.0.x.x are not allowed to be blocked
0	Close All	
	Open Web Browsing	
	Allowed IM Networks	
	FB Messenger & Facebook Messaging / File Transfer / Audio & Video Call	
	Kakao Talk	
	Messaging & File Transfer	
	Audio Calis & Video Calis	
	LINE Messaging / File Transfer / Audio & Video Call	
	Messaging / File Transfer / Audio & Video Call WeChat	
	Messaging & File Transfer	
	Audio & Video Call	
	□ WhatsApp	
	Messaging Audio & Video Call	
	□ Viber	
	Messaging & File transfer	
	Audio & Video Call Se@MeNow messenger	
	Se@MeNow messenger Messaging & File Transfer	
	Audio & Video Call	
	HiChat	
	Messaging / File Transfer & Audio Recording Instagram	
	☐ Instagram ☐ Videos / Pictures & Text	
	Twitter	
	Videos / Pictures & Text	
	☐ Youtube	
	Videos & Text	
	Snapchat Videos / Pictures & Text	
	Audio & Video Call	
	Open ports	Open IPs
	Add More Ports	Add More IPs
	Note: Accepts one port number or port range per field;	Note: Accepts one IP or IP range per field;
	Accepts one port number or port range per field; Port range is colon separated; Sample: 5000, 6000:6100	Sample: 98.138.253.109, 74.125.23.139, 65.52.187.0/24
Notes		
• Allo	over All opens all ports when Internet is activated, with option to se All blocks all ports except the defined ports in the network of	
• Ope	se All blocks all ports except the derined ports in the network of en web browsing allows access to the Internet for browsers and apps such as FB Messenger, LINE & Se@MeNow Messenger wi	nd apps using port 80 and 443
Aire.	apps such as FB Messenger, LINE & Se@Menow Messenger wi en specific IM networks allows selected IM networks to connect	
• Ope		sypass Settings
• Ope	Captive Portal B	
	Captive Portal By	
Allow	ved IPs	IP Address / Domain Name
Allow	ved IPs	IP Address / Domain Name
Allow	ved IPs	IP Address / Domain Name
	ved IPs	IP Address / Domain Name
Allow	red IPs I	IP Address / Domain Name
Allow Allas Allas	red IPs I I I I I I I I I I I I I	
Allow Allas Add Notes	red IPs I I I I I I I I I I I I I I I I I I	s to the satcom connection and the Internet







3. Enter the desired settings, and then click <Save>. The following screen will appear:



4. Click <OK> to apply access control settings or click <Cancel> to abort. The following page will be displayed.



Vessel access control setting modification is now complete.

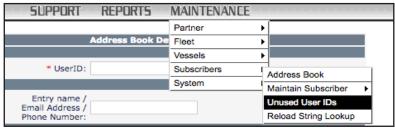
4.4.6. Subscriber (User on Vessel)

4.4.6.1. Subscriber - Creation

NOTE: Subscriber IDs are pre-created by CrewCommCenter Service administrators. There is an ample amount of subscriber IDs pre-created for activation as needed. Each User on a Vessel will need to have a User ID and be given the ID and Password to utilize the CrewCommCenter Service User Portion.

Subscriber creation is accomplished by assigning an "Unused User ID" to a name and vessel.

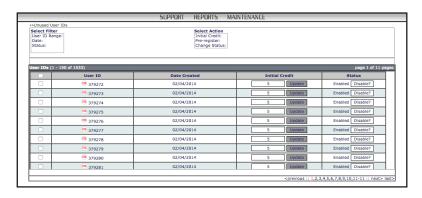
1. To access Unused User IDs, mouse over "Maintenance", then mouse over "Subscribers", then click "Unused User IDs".



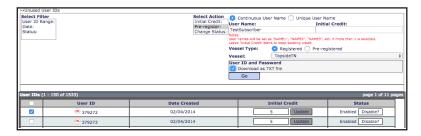




The following screen will be displayed:



2. To select one subscriber for "Creation/Activation", click the box beside the user ID desired, then click <"Preregister"> under the "Select Action" area.



- Continuous User Name: Fill in name that will be shown in user login.
- Unique User Name: Fill in name that will be shown in user login.
- Vessel Type: Assign user to a registered or pre-registered vessel.
- Vessel: From drop-down menu, click vessel to assign user to.
- User ID and Password: Click <"Download as TXT file"> box and username and password will be downloaded to be sent to user.
- 3. Click <Go> when the desired settings are complete. The following will be displayed:



4. Click <OK> to create/assign user or click <Cancel> to abort. The following page will be displayed:



The downloaded file will contain a Username of six characters and a Password of six characters.

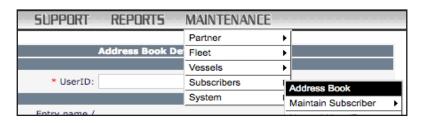
The Subscriber / User ID (Vessel User) is now available and assigned to the desired vessel for use.

4.4.6.2. Subscriber - Address book (modify contacts)

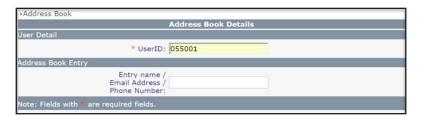




1. To access User Address book(s), mouse over "Maintenance", then mouse over "Subscribers", then click "Address Book".



2. From the window displayed, enter UserID.



The following will be displayed:



This screen displays all of the contact details saved in the specified User's address book. New contacts can be added, current contact can be edited and/or deleted.



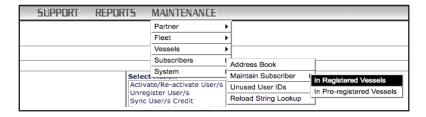


Viewing of User address book is now complete.

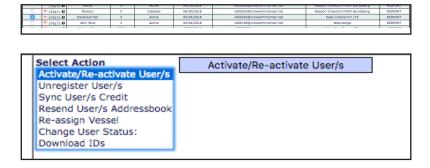
4.4.6.3. Subscriber - Maintenance

4.4.6.3.1. Subscriber - Activate / Re-activate User/s

1. To access User IDs for Maintenance, mouse over "Maintenance", then mouse over "Subscribers", then mouse over "Maintain Subscribers" then click "In Registered Vessels".



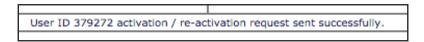
2. Click <tick box> next to desired user(s), then click <Activate/Re-activate User/s> from the "Select Action" list:



3. Click <Activate/Re-activate User/s> button, the following will be displayed:



4. Click <OK> to activate selected user/s or click <Cancel> to abort. The following page will be displayed:



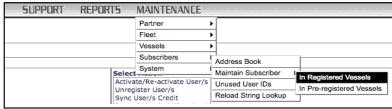
Activation/re-activation for the selected user(s) is now complete.

4.4.6.3.2. Subscriber - Unregister User/s

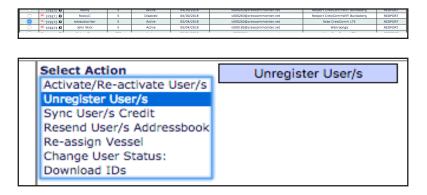
1. To access User IDs for Maintenance, mouse over "Maintenance", then mouse over "Subscribers", then mouse over "Maintain Subscribers" then click "In Registered Vessels".







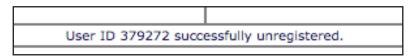
2. Click <tick box> next to desired user(s), then click <Unregister User/s> from the "Select Action" list:



3. Click <Unregister User/s> button, the following will be displayed:



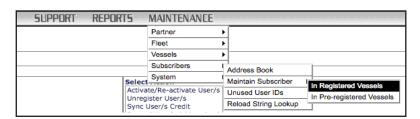
4. Click <OK> to Un-register user/s or click <Cancel> to abort. The following page will be displayed:



Unregister of the selected user(s) is now complete.

4.4.6.3.3. Resend User/s Address Book

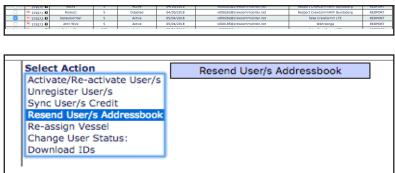
1. To access User IDs for Maintenance, mouse over "Maintenance", then mouse over "Subscribers", then mouse over "Maintain Subscribers" then click "In Registered Vessels".



2. Click <tick box> next to desired user(s), then click <Resend User/s Addressbook> from the "Select Action" list:



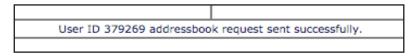




3. Click <Resend User/s Addressbook> button, the following will be displayed:



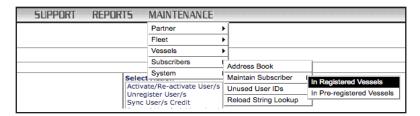
4. Click <OK> to resend addressbook of selected user/s or click <Cancel> to abort. The following page will be displayed:



Resending the addressbook for the selected user(s) is now complete.

4.4.6.3.4. Re-assign Vessel

1. To access User IDs for Maintenance, mouse over "Maintenance", then mouse over "Subscribers", then mouse over "Maintain Subscribers", then click "In Registered Vessels".



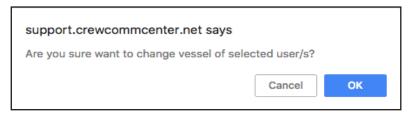
2. Click <tick box> next to desired user(s), then click <Re-assign Vessel> from the "Select Action" list:



3. Click <Re-assign Vessel> button and the following will be displayed:







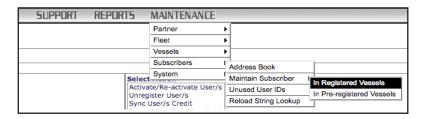
4. Click <OK> to Re-assign Vessel of the selected user/s or click <Cancel> to abort. The following page will be displayed:



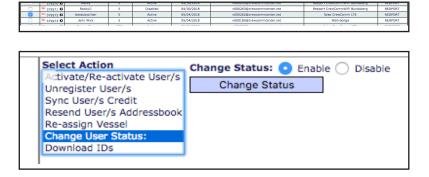
Re-assign Vessel for the selected user(s) is now complete.

4.4.6.3.5. Change User Status

1. To access User IDs for Maintenance, mouse over "Maintenance", then mouse over "Subscribers", then mouse over "Maintain Subscribers" then click "In Registered Vessels".



2. Click <tick box> next to desired user(s), then click <Change User Status> from the "Select Action" list:



3. Click < Change User Status> button, the following will be displayed:



4. Click <OK> to change user state (enable or disable) of selected user/s or click <Cancel> to abort. The following page will be displayed:



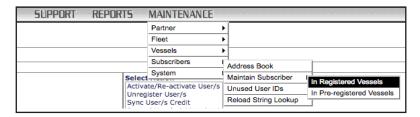


User ID 379272 successfully enabled.

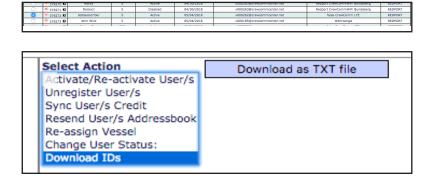
Change User Status for the selected user(s) is now complete.

4.4.6.3.6. Download IDs

1. To access User IDs for Maintenance, mouse over "Maintenance", then mouse over "Subscribers", then mouse over "Maintain Subscribers" then click "In Registered Vessels".



2. Click <tick box> next to desired user(s), then click <Download IDs> from the "Select Action" list:



3. Click < Download as TXT file>, the following will be displayed:

support.crewcommcenter.net says

The following IDs have already been downloaded, do you want to continue?

379272

4. Click <OK> to Download the TXT file of IDs of selected user/s or click <Cancel> to abort. The following page will be displayed:

Download IDs for the selected user(s) is now complete.

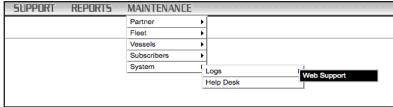
4.4.6.4. System

4.4.6.4.1. System - Logs

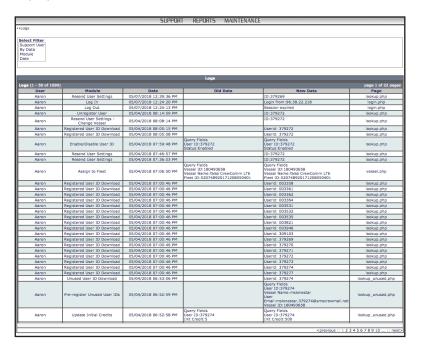
1. To view system level logs, mouse over "Maintenance", then mouse over "System", then mouse over "Logs" then click "Web Support".



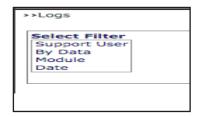




The following will be displayed:

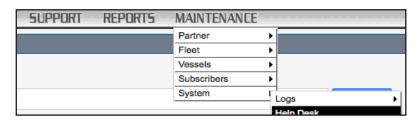


Log data can be further refined through select filter:



4.4.6.4.2. System - Help

1. To view system help, mouse over "Maintenance", then mouse over "System", then mouse over "Logs" then click "Help Desk".



The following screen will be displayed:







You can search for topics using the "Search help" box:



For example, entering "Vessel activation", yields the following:







You can submit or view previously submitted trouble tickets to administrators:



You can also read through articles, presentations, and manuals to gain knowledge and resolve issues:



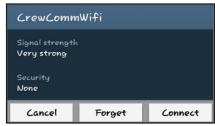
System help usage is now complete.

5. *User (subscriber, crew member) Access and Use

5.1. Log in to CrewCommWifi as a User

1. Connect to the CrewCommWifi network with your device (desktop/laptop/tablet/mobile phone) by using device/OS specific Wi-Fi network search option:











- 2. Click < Connect> or double-click <"Network Name">.
- 3. Open a browser and one of the following URLs:
- <u>10.1.5.1</u>
- · <u>1.1.1.1</u>
- <u>crewcommcenter.net</u>
- <u>crewcommcenter.com</u>

The CrewCommCenter login page will open:

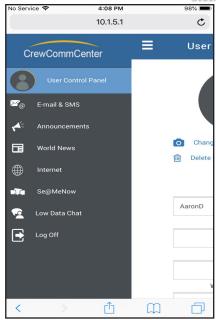


- 4. Enter Login ID and Password, then click <Login>.
- 5. First registration will prompt user to insert a username with a max of 15 characters. Click <Ok> when complete. Registration will be completed within 10 minutes.
- 6. Enter Login ID and Password, then click <Login>, the Main Page will be displayed in one of two ways:









Clicking the following will open the 'Split Main Page' as shown in the second picture above:



CrewCommWifi log in is now complete.

5.2. E-mail & SMS services

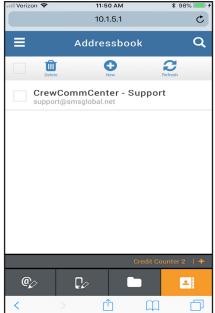
1. To use E-mail & SMS services, click <E-mail & SMS> from the CrewCommCenter home page:



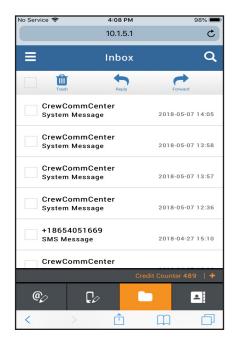
The User Addressbook is shown. Saved addresses will be displayed and new addresses can be input from this location. You can return to this area of the E-mail & SMS section by clicking the orange shaded tab at the bottom, far right.







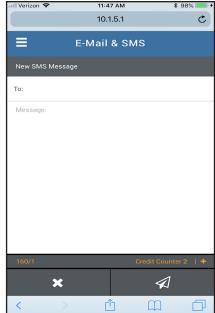
Clicking the orange shaded tab at the bottom, second from the right will display the Inbox section. This area is where current messages will reside. You can reply, forward, or delete messages:



Clicking the orange shaded tab at the bottom, third from the right will display the SMS message drafting section. You can send SMS messages (160 Character limited) to phone numbers from this area:







From the CrewCommCenter User Main page, licking the orange shaded tab at the bottom, fourth from the right will display the e-mail message drafting section. You can send e-mail messages (5000 Character limited) from this area:



2. From the screen and using the message of your choice, click the "Arrow Image" to send, "x" to disregard.

Depending on the Vessel settings, User messaging will fall under:

- Full Access: Allowed to send unlimited e-mail and SMS messages.
- **Daily Limited:** Allowed to send a specific number of e-mail and SMS message, that upon reaching the limit, will not be allowed to send anymore until the Daily Limit resets, in one day.
- Session Limited: Allowed to send a specific number of e-mail and SMS messages in one session, that upon reaching the limit, will not be allowed to send anymore until a new session.
- **Credit Access:** Provided some or no credits to begin, each message using a credit, when credits are exhausted they may be either provided or sold to the User.
- Some other similar access style or program.

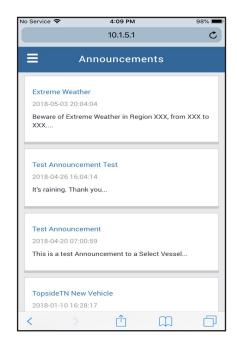




E-mail & SMS service usage is now complete.

5.3. View Announcements

1. To view Vessel Announcements, click <Announcements> from the CrewCommCenter home page, the following will be displayed:



2. To view the message body, click <"Title"> of announcement to expand full message. Announcements may be viewed, but not deleted and will remain in this section until removed by administration or Vessel settings.

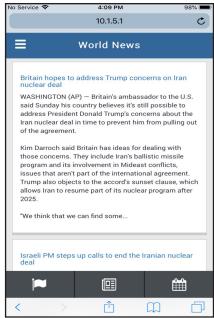
Announcement viewing is now complete.

5.4. View World News

1. To view World News, click < World News> from the CrewCommCenter home page, the following will be displayed:







2. To view the message body, click <"Title"> of World News to expand full message. News events may be viewed, but not deleted and will remain in this section until removed by administration or Vessel settings.

World News viewing is now complete.

5.5. Internet Use

1. To use Internet, click <Internet> from the CrewCommCenter home page, the following will be displayed:



2. Click <Activate Internet>, when connected the following will be displayed:







- 3. To browse Internet, open a separate browsing window and type desired URL.
- 4. When Internet access is no longer needed, click < Deactivate Internet>, the following will be displayed:



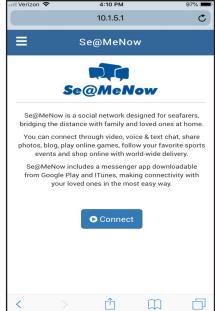
Internet use is now complete.

5.6. Se@MeNow Use

1. To use Se@MeNow, click <Se@MeNow> from the CrewCommCenter home page, the following will be displayed:







2. Click <Connect>, if not currently connected to the Internet through the User app, you will be redirected to connect to the Internet. After connection, repeat Step 1. If you are connected to the Internet, the following will be displayed:



If this page is not displayed on Pop-up, enable pop-ups on your device and repeat Step 1.

3. Enter Se@MeNow Username and Password for use.

Se@MeNow use is now complete.

5.7. Low Data Chat Use

1. To use Low Data Chat, click <Low Data Chat> from the CrewCommCenter home page, the following will be displayed:







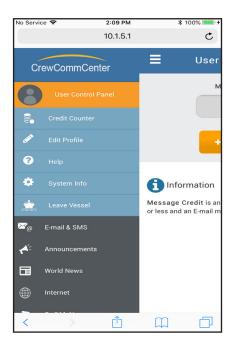
2. Click desired Chat Services, then enter Username and Password.

NOTE: Only the Text functions of the Low Data Chat apps will be functional, maximizing use while minimizing data usage.

Low Data Chat Usage is now complete.

5.8. User Control Panel

1. To use the User Control Panel, click <User Control Panel> from the CrewCommCenter home page, the following will be displayed:



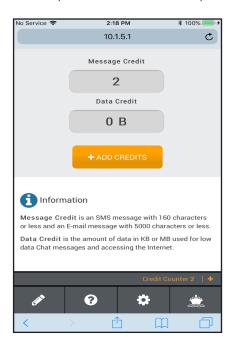
5.8.1. Credit Counter (and adding Credits to User account)



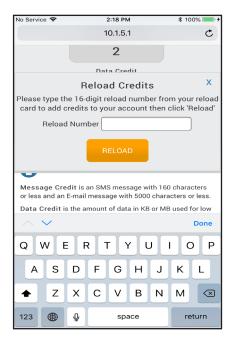


Discussed in **Chapter 4.2** (E-mail & SMS services) and **Chapter 4.5** (Internet Use), there will be times when a User has run out of Message and Data Credits. To add credits to a User account that have been supplied:

1. To check current Credits or to add Credits, click < Credit Counter>, the following will be displayed:



2. Click <+ ADD CREDITS>, the following will be displayed:

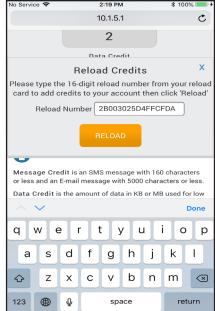


NOTE: Message Credit pin codes are 16-digit and are a one-time use pin. Data Credit pin codes are 16-digit and are a one-time use pin.

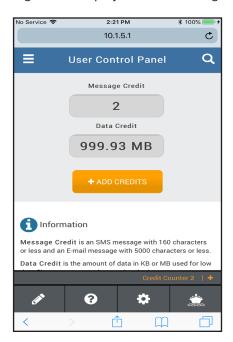
Enter Credit Pin, The Data Credit Pin used for this example is "2B003025D4FFCFDA".







3. Click <RELOAD>, the system will advise a one hour wait time until the Credits will be available. When the Credits have been applied, the following will be displayed when clicking <Credit Counter>:



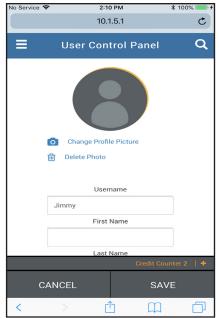
Credit Counter usage is now complete.

5.8.2. Edit Profile

1. To edit User Profile, click <Edit Profile>, the following will be displayed:







Edit options include:

- Change Profile Picture.
- · Delete Photo.
- Enter Username.
- First Name.
- Last Name.
- Work ID Number.
- 2. Click <Save> to save optional profile User Information.

Edit profile is now complete.

5.8.3. Help

1. To access Help Options, click <Help>, the following will be displayed:



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2. Click on desired help link to access help details on desired subject.

Help Option Usage is now complete.

5.8.4. System Info

1. To access System Info, click <System Info>, the following will be displayed:



Information presented includes:

- · Email: Details of Vessel specific costs and limits.
- SMS: Details of Vessel specific costs and limits.
- World News: Details of News sources available on the Vessel.
- Announcements: Details of Announcements.
- Vessel Media: Details of media.
- Internet Access: Details of Internet costs and limits.
- Access Control: Details of Vessel specific access controls.

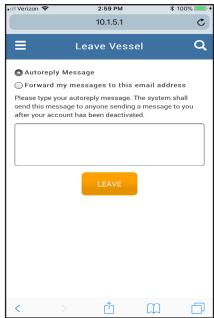
System viewing is now complete.

5.8.5. Leave Vessel

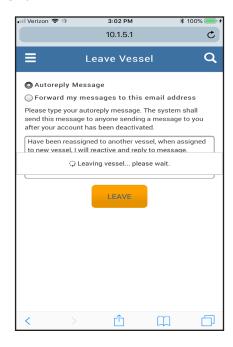
1. To Leave Vessel, click <Leave Vessel>, the following will be displayed:





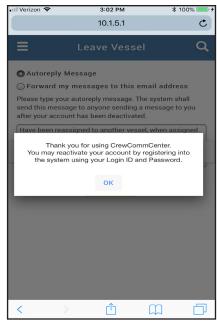


2. Complete Autoreply or Forwarding options if desired, then click <Leave>, the following will be displayed:









NOTE: To reactivate account, log into the system at a future time either on the same Vessel or a new Vessel.

Leaving Vessel is now complete.

6. **Introduction to the RedPort Optimizer CrewComm Router and UI

NOTE: Within the CrewCommCenter Service, management of services, accesses, restrictions etc. should be configured through the CrewComm Management Portal. **Chapters 6 - 16** are presented within this document for special case situations, advanced configuration, and informational basis.

Global Marine Networks (GMN), the leaders in advancing satellite data speeds and services, helps Fixed and Mobile Satellite Services providers and their customers by offering the industry's fastest, most reliable and easy-to-use email, web, VoIP and other hardware and software services to maritime, oil and gas, first responder and business continuity users. The company's products include XGate high-speed satellite email, weather and oceanographic data software, and vessel tracking systems.

Ship to shore network management solutions are sold by GMN under the RedPort Global brand name at redportglobal.com and as white-label solutions for the world's premier satellite data service providers.

The RedPort Optimizer CrewComm is a VoIP gateway and data router that provides an all-in-one solution for those looking to get the most out of all available data connections including long-range cellular, Wi-Fi, and satellite broadband services.

6.1. RedPort Optimizer CrewComm (CC) Router Model Overview

6.1.1. wXa-153 RedPort Optimizer CrewComm Router (CC)

The wXa-153 CC series router is a 2-port version of the RedPort Optimizer CrewComm.

6.2. Key Features

Designed specifically for use with satellite broadband terminals:

- Compatible with virtually any IP-based satellite broadband terminal.
- Replaces a standard router that is typically added to any satellite broadband installation.





- Powerful firewall accommodates virtually any common installation scenario, with features including block or allow any range of port, IP address and protocols.
- Logging/Reporting to keep track of usage.
- · Wi-Fi hotspot makes setup and use easy for crew with compatible computers and tablets.
- Supports RedPort Email Service.
- Supports Shared Web Compression.
- · GSM Compatibility with optional GSM modem and your own SIM card.
- · GPS NMEA Repeater reads the built-in GPS in any satellite broadband terminal and rebroadcasts via WiFi.
- Supports voice calling and SMS messages using smartphones connected to the local network.

6.3. Services Included

- Voice PBX allows smartphones to send/receive calls to others on the local area network for free, or over the satellite link at standard satellite airtime rates. Requires a supported satellite terminal. See Chapter 5.7.
- SMS Messaging allows smartphones to send sms messages to others on the local area network for free, or over the satellite link at standard satellite airtime rates. **See Chapter 9.4.**
- GPS NMEA Repeater allows other devices onboard/on-site to read your GPS location. For example, a navigation program running on an iPad could be used on your boat, or you could get weather information tailored to your location. **See Chapter 9.6.**
- GSM Compatibility allows Internet connectivity via your GSM modem or cell phone with your own SIM card. See Chapter 12.8.2.
- File Sharing Network Shares allows the sharing of files among Windows and Mac computers via WiFi, without the requirement of a wired local network of computers. **See Chapter 9.8.**

6.4. Premium Services Available

The following additional services are available. Contact your RedPort dealer to purchase.

- RedPort Email is a multi-user satellite email service. Crew and/or passengers can access their RedPort
 Email account via smartphones, tablets or computers. See the RedPort Email Administrator's Guide for more
 information about this service. See Chapter 9.3 and the Optimizer RedPort Email Guide.
- Shared Web Compression routes all web traffic through a proxy service that works with an onshore server to deliver 3-5 times average web compression, along with virus detection and ad blocking. **See Chapter 9.2.**
- GPS Tracking Using a GPS-enabled device, submit position reports to a central database for viewing on the tracking website. See Chapter 9.5.
- RedPort VoIP Service Transform your satellite device into a multi-user unit. Up to four users can send/receive
 phone calls and/or SMS (text) messages simultaneously. Experience significant price reduction in outbound
 calls when using VoIP in lieu of standard satellite airtime rates. Requires a supported satellite terminal. See
 Chapter 9.7.5.

7. Important Things to Know Before Getting Started

7.1. More Than Just a Router

The RedPort Optimizer CrewComm is more than just a router. It has some enhanced proxy services in addition to basic routing capabilities. There are three major data components:

- 1. Proxy Server(s) when Transparent proxy is enabled, all traffic on port 80 (http port) is redirected through the internal proxy server. This allows URL and DNS filtering (whitelist and blacklist sites), some content filtering (i.e. remove flash video) and you can turn on http logging to see what URLs are being accessed by the users. You also have the option to communicate upstream to a compression proxy server.
- 2. Firewall A full-featured firewall is included. Block or allow IP address/ranges, port ranges, different protocols. Rules can be applied to any path in and out of the router. In a multi-wan environment, each interface can have separate rules applied.





7.2. Designed Use of the RedPort Optimizer CrewComm

This router is designed for use in a multi-comm device environment for one or more users with the convenience of BYOD (bring your own device) for crew and passenger access to Email, Web Browsing and Voice. The idea is that you, as the installer or network administrator, will configure the router, using these guidelines, before installing it at its ultimate destination.

NOTE: Prior to installation, review (See Chapter 8.3.1) How to Secure Your Router.

Once installed, the onsite administrator will log in and land on the Home page. The Home page has the common tasks that will be used locally: create users, create and manage crew email accounts, etc.

7.3. How it Works at First Launch (Out of the Box)

We ship the router ready for use with Voice and SMS are enabled for use with compatible satellite devices, and Automatic Failover is configured in the order of Wi-Fi Network > GSM > WAN1(Sat1) > WAN2(Sat2) to take advantage of the typically lower cost connections of Wi-Fi Networks and GSM, if/when they are available.

Prior to making modifications to the router configuration, please see (**See Chapter 7.4**) How Data Flows Through the Router to determine the customization required to best meet your needs.

Best Practice is to have a knowledgeable technician (someone who knows about proxy servers, firewalls, and routers) go through and generate a custom configuration.

Using the guidelines in Appendix A, the installer will want to address the following areas prior to first use:

- Configure the internal proxy server (Transparent Proxy).
- Configure GSM (requires configuration of PPP interface).
- Configure automatic failover/load balancing.
- Configure SMS.
- Configure Voice PBX.

OPTIONAL:

- Enable the upstream proxy for the benefit and cost savings of Shared Web Compression Service.
- Enable RedPort VoIP Service for savings on voice calls.
- Configure GPS interface.

In a fleet environment, the custom configuration can be recorded and used on another Optimizer CrewComm router within the organization.

NOTE: This router is shipped to you with all WAN ports open, POP and SMTP are open to the WAN if you enable Email, if you enable the PBX it is listening on all ports. Without further configuration, this could leave you vulnerable to unwanted traffic. Please review (See Chapter 8.3.1) How to Secure Your Router.

7.4. How Data Flows Through the Router

It is important to understand how data flows through the router, so you can customize your configuration.

7.4.1. Default Configuration:

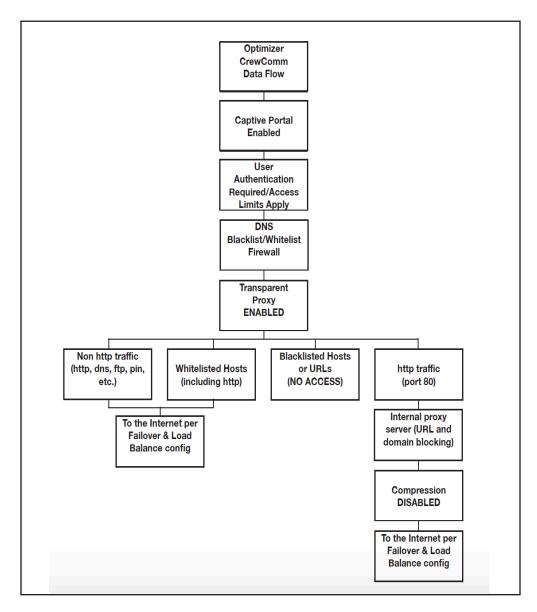
- Internal Transparent Proxy for http URL and content filtering enabled.
- · Firewall open.
- DNS open.
- SMS enabled, for compatible satellite devices.
- Voice Capability for compatible satellite devices, disabled.
- Automatic Failover/Load Balance (All Traffic) Wi-Fi > GSM > WAN1 > WAN2.





- · Web Compression Service disabled.
- RedPort Email Service disabled.
- · GPS Tracking Service disabled.
- · RedPort VoIP Service disabled.

You have several methods available for controlling user access to the Internet: you can whitelist and/or blacklist hosts and URLs; you can modify the firewall, you can modify the load balance to allow only certain traffic types through a certain interface.



Once a user logs in data can take one of three paths:

- 1. Non-http traffic goes straight to the Internet: https, dns lookups, ftp, ping, scp, etc. The firewall rules are totally open so there is nothing blocking full access to the Internet.
- 2. Traffic to a Whitelisted Host in the Captive Portal, including http, goes straight to the Internet, bypassing the internal proxy server. If you whitelist a webserver, that traffic goes straight to the Internet, bypassing the internal proxy server, so there is no filtering. Typically, you would not want to whitelist a webserver; however, you may want to whitelist a mail server, or a vpn. (See Chapter 9.1).



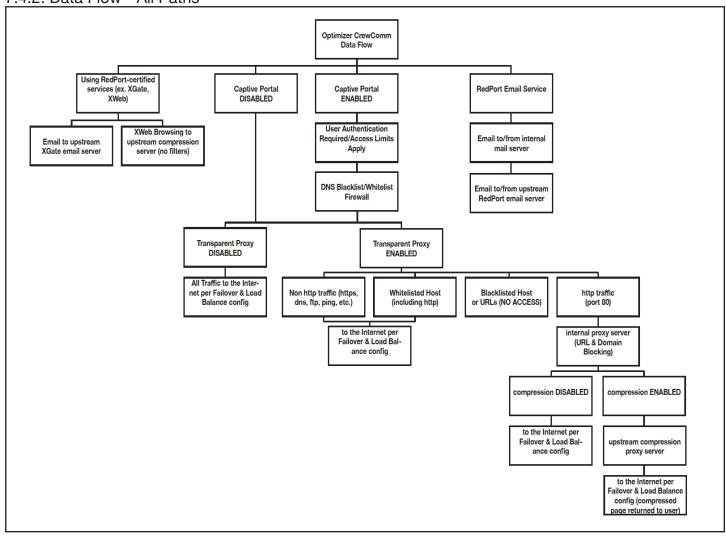


- 3. All http traffic (on port 80), that is not Whitelisted, and only http (not https or secure traffic) is intercepted and redirected to the internal proxy server. This is known as transparent proxy. The internal proxy server does URL blocking and domain blocking. Also, the internal proxy server can speak to an upstream proxy server to provide compression (premium service--fees apply). Traffic through the internal proxy server can take one of several paths, dependent upon whether or not compression is enabled.
- In the default state of compression DISABLED, all traffic goes straight to the Internet.
- With compression enabled, all http traffic goes to the upstream compression proxy server and returns a
 compressed page. Ads are stripped out, text is compressed, images are resampled and more. On average, you
 will experience 3-5x compression on http traffic, thereby increasing the speed of your connection and your per
 Mb cost of your connection.
- With compression enabled, Whitelisted Hosts or URLs bypass the upstream compression proxy server and go straight to the Internet, bypassing compression.

Blacklisted Hosts or URLs have no Internet access, regardless of compression status. (See Chapter 9.2.2).

Setup is required for the GSM Interface

7.4.2. Data Flow - All Paths



7.5. Navigating the User Interface





Access to the user interface depends upon how you log in to the router. There are two logins available: admin and superadmin. (See Chapter 8.1).

The user interface is divided into sections; use the tabs to access the required service or information.

On many pages in the user interface you will see three buttons in the bottom corners:



- Reset: Returns the page to its previous saved state.
- Save: Saves the changes but does not yet apply the changes.
- Save & Apply: Saves the changes and applies them to the router configuration. In some cases, the router must reboot to apply the change. If reboot is required, it will be noted on the page.

8. Getting Started - User Interface Access

In a typical situation, the Optimizer CrewComm router arrives to you with the following services enabled:

- Internal Transparent Proxy for Web Filtering.
- SMS Messaging using smartphones (for compatible devices).
- GPS/NMEA Repeater.
- · Voice Capability using smartphones (for compatible devices).

There are also services available that are disabled:

- Web Compression (additional fees may apply).
- RedPort Email (additional fees may apply).
- GPS Tracking (additional fees may apply).
- RedPort VoIP for multi-user calls and SMS (additional fees may apply).

This guide is designed to help you understand how the router works so you can customize the configuration to meet your needs.

8.1. Access the Home Page

To access the router's Home page, you must log in to the router. This can be accomplished in several ways however, the most popular method is to:

1. Connect to the Wi-Fi Hotspot created by the router using a PC. Connect to the Wi-Fi Hotspot just like you would any other Wi-Fi connection:

On a Windows PC, go to: Windows Start > Control Panel > Network Connections.

On a MAC, go to: Apple > System Preferences > Network.

The Network Name will look something like: 'CrewCommWiFi-XXXX' where 'XXXX' is the last four digits of the Optimizer CrewComm's Mac address. Click this wireless network.

For alternative Home Page access methods, see the Optimizer CrewComm QuickStart Guide.

- 2. Open a web browser and type: <u>10.1.5.1:8080</u>.
- 3. The Optimizer CrewComm ships with two existing administrative accounts:





- Admin for normal day-to-day operation by the onsite administrator.
- · Superadmin for configuration and maintenance by the installer/technician, etc.

8.1.1. Onsite Administrator Login (Admin)

Onsite Administrator: username=admin, password=webxaccess.

This login opens to the Home page and gives the onsite administrator access to portions of the user interface and the ability to perform common tasks such as:

- Send/receive email (if email is enabled).
- · Manage crew email accounts (if email is enabled).
- · Monitor the system status.
- Manage the local Wi-Fi setup (change the network name, password, etc.).
- · Modify traffic routing if configured for Manual mode.
- Enable remote support for diagnostics and/or maintenance.
- · Change the router password for the admin account, if necessary.
- Reboot the router, if necessary.

See the Optimizer CrewComm Onsite Administrator Guide for information in administering the most-used features.

8.1.2. Installer/Network Administrator Login (Superadmin)

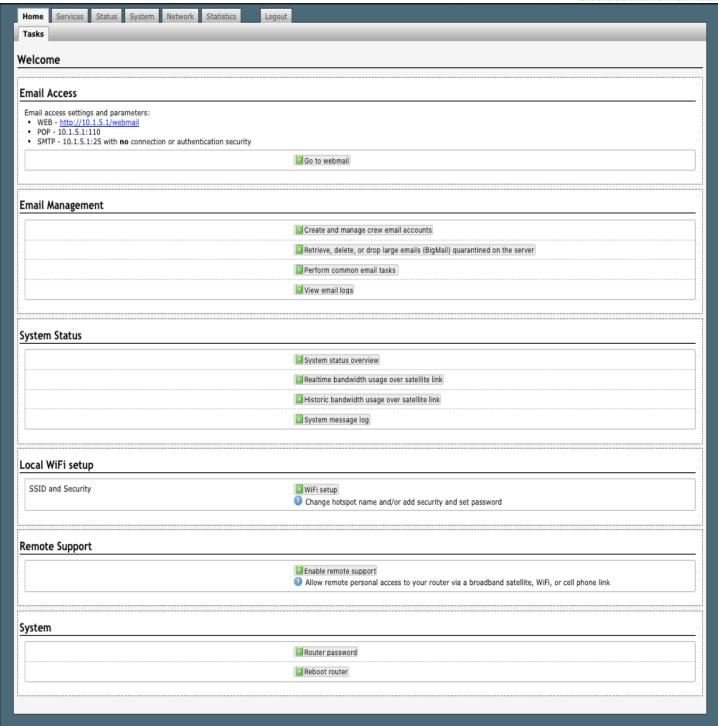
Technician: username=superadmin, password=webxaccess.

This login opens to the Home page and provides full access to the user interface for configuration and maintenance of the router.

Once logged in, you will see the router's Home page.







This Home Page is the onsite administrator's gateway to the most used features. See the Optimizer CrewComm Onsite Administrator Guide for Home Page details and use.

From the Home Page you have access to the remaining sections of the user interface.

Services: Allows access to all the services available on the router.







Each service is contained in its own tab under the Services section. This is where you will enable/disable the services and configure them for use.

Status: Displays how much memory the router is using, who is connected via Wi-Fi and other information you may find useful.



The System Log contains detailed information of the router's performance. It will report error messages and can be useful when troubleshooting connection issues. Realtime Graphs report how much data is being using by the different interfaces. All Status information is Read Only.

System: Contains some of the router's basic settings for you to configure plus a few maintenance functions.



Use this section to set your time zone, change the 'admin' and/or 'superadmin' password, flash new firmware to the router, reboot the router if necessary. Profiles is a way to 'clone' the router configuration for use on another Optimizer CrewComm router.

Network: Contains access to the network Interfaces, the Firewall, and Failover and Load Balancing setup.

Home	ne Services				Statistics		, , , , , , , , , , , , , , , , , , , ,	
Interfa	ces W	ifi DH	CP and DNS	Hostnames	Static Routes	Diagnostics	Firewall	PPP

Use this section to configure network interfaces, run diagnostics, or modify the firewall. You can also change the Failover sequence and configure the load balance.

Statistics: Contains information about resource usage.

Home	Services	Status	System	Network	Statistics	Logout	
Graphs	Setup						

8.2. How to Use with Default Setup

We ship the router ready for use as follows:

- Anyone with an existing Primary Account with a RedPort-certified compression email service (such as XGate) and/or web browsing account (such as XWeb) is able to immediately use the router to send/receive email or browse the web. There are no Internet access restrictions when using these services. They simply connect their computer, iOS or Android device to the Optimizer CrewComm's wireless network, set the email Connection Type to "Optimizer CrewComm xxxx" where xxxx represents the satellite connection. See the XGate Help file for more information.
- · Voice is enabled for use with compatible satellite devices using standard satellite airtime. (See Chapter 9.7).
- SMS is enabled for use with compatible satellite devices using standard satellite airtime. (See Chapter 9.4).
- Firewall is Open allowing all traffic to pass. (See Chapter 12.6).

This out-of-the-box configuration works well for single broadband users with an XGate and/or XWeb primary account and can be suitable for the multi-interface, multi-user environment where each person has a separate primary XGate email and/or XWeb browsing account.

If in a mutli-user environment we recommend the optional RedPort Email service for easy access and management of crew accounts. (See Chapter 9.3) Additional fees may apply. Contact your service provider for current pricing.

Enabling Web Compression Service will direct all http traffic to the upstream compression proxy server and return a compressed page to the user. Ads are stripped out, text is compressed, images are resampled and more. On average, you will experience 3-5x compression on http traffic, thereby increasing the speed of your connection and the effective per Mb cost of your connection. (See Chapter 9.2). Additional fees may apply. Contact your service provider for current pricing.





Transform your satellite device into a multi-user voice unit with the optional RedPort VoIP Service. Up to four users can send/receive phone calls and/or SMS (text) messages simultaneously. Experience significant price reduction in outbound calls when using VoIP in lieu of standard satellite airtime rates. Requires a supported satellite terminal. (See Chapter 9.7). Additional fees may apply. Contact your service provider for current pricing.

NOTE: This router is shipped to you with all WAN ports open, POP and SMTP are open to the WAN if you enable Email, if you enable the PBX it is listening on all ports. Without further configuration, this could leave you vulnerable to unwanted traffic. Please review (**See Chapter 8.3.1**) How to Secure Your Router.

8.3. Router Security

By default, your router is open to the Internet:

- WAN ports are open.
- · Voice PBX, if enabled, is listening on all ports.
- POP and SMTP are open to the WAN, if Email is enabled.

This setup could leave you vulnerable to unwanted traffic. Note that ports open to the Internet on satellite systems that have public IP addresses are vulnerable to attackers that run dictionaries trying to guess usernames and passwords on the router. These dictionary attacks, at best, can result in large amounts of accounted traffic; and, at worst, they are a security breach that could endanger communications on the vessel. Systems open to the public Internet must take special precautions to secure the router from intrusion.

Web Proxy is not a problem, by default, unless you make changes since the software, by default, only listens to traffic on the LAN.

Before you block the WAN ports, read the next chapter. Blocking the WAN ports at this stage may lock you out of the router. We've built in some measures to help minimize that possibility, but please pay special attention when making router configuration modifications.

8.3.1. How to Secure Your Router *IMPORTANT*

First, confirm that the Disable anti-lock rule setting is "Unchecked" in System > System Settings. (See Chapter 11.1). If it is checked, you want to uncheck it to Enable the anti-lock rule. The anti-lock rule prevents the administrator from inadvertently locking him/herself out of the router when programming firewall rules.

Confirm that in Network > Firewall > Firewall Rules that the first rule "BLOCK WAN" is disabled. If you Enable (check) this rule you will lock yourself OUT of the router, unless the antilock rule is enabled (unchecked). If you lock yourself out of the router you must perform a factory reset.

Confirm that in Services > Web Compression and Filtering > Advanced that Listen Interfaces is set to LAN. Do not change this to WAN unless you desire proxy service through the WAN port. If changing the default configuration to listen on the WAN, then firewall rules must be created to allow access to the proxy listen port (port 3128 by default).

Go to System > Router Password and change the router password for both the "superadmin" and the "admin" access. (See Chapter 11.2).

If RedPort Email is enabled, the POP and SMTP servers are listening on ALL ports, so they are open to the WAN, leaving them vulnerable. If you enable RedPort Email, you should configure the firewall to block all but desired email traffic. (See Chapter 12.6). Note that the BLOCK WAN firewall rule, if enabled, will prevent access to these ports.

If Voice PBX is enabled, it is listening on all ports. You can specify the Interface to Listen or you can leave it to listen on all interfaces and use a firewall rule to restrict traffic (**See Chapter 12.6**). Note that the BLOCK WAN firewall rule, if enabled, will prevent access to these ports.





If planning to access the web user interface over the WAN port, then create firewall rules with higher precedence than the BLOCK ALL rule that allow traffic from your Internet IP address to the router.

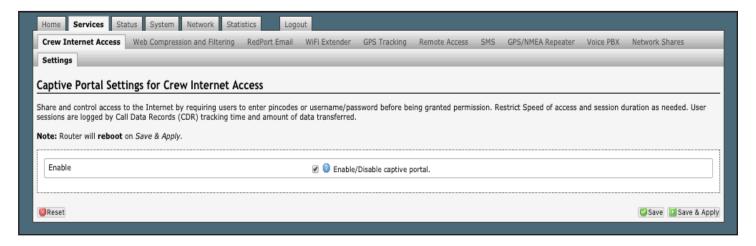
NOTE: Ports 80, 443 and 22 are open, if not disabled.

When you have completed and tested your configuration and are confident that it is working as desired, you can remove the Anti-Lock rule in System > System Settings. (See Chapter 11.1).

Now you can Enable the BLOCK ALL from WAN firewall rule in Network > Firewall > Firewall Rules.

9. Services

9.1. Crew Internet Access (Captive Portal)



9.2. Web Compression and Filtering

This section is used to:

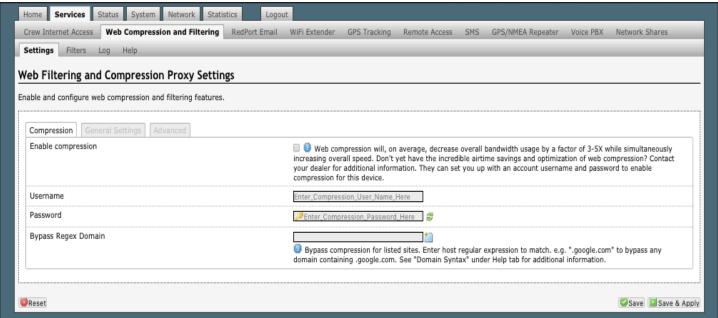
- Configure filters for the internal proxy server when compression is not enabled.
- Enable compression so that traffic is passed to the upstream proxy server.
- · Configure filters for the proxy server (internal or upstream).
- · View traffic logs.

9.2.1. Settings

Requires 'superadmin' login.







9.2.1.1. Compression

Requires 'superadmin' login.

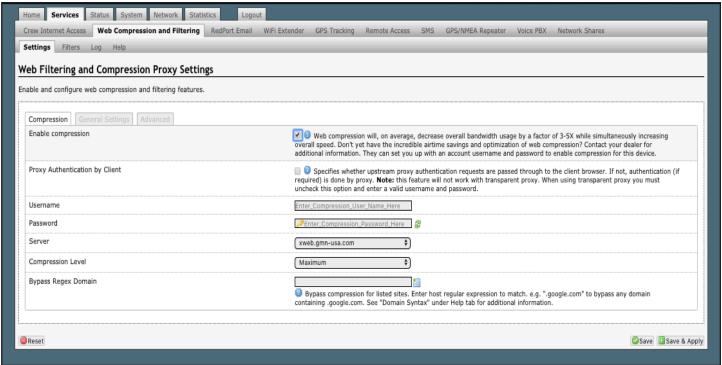
By default, the router is shipped with web compression Disabled. Web compression is a premium service that carries an additional charge. Contact your service provider for details and pricing.

- **Enable Compression:** If you have purchased Shared Web Compression service, click the check box to Enable compression. The page will expand, see With Compression Enabled below.
- **Username:** Enter the Username given to you by your service provider. This username is specific to the compression service.
- **Password:** Enter the Password given to you by your service provider. This password is specific to the compression service.
- Bypass Regex Domain: This is the 'whitelist' of sites that should not be compressed. To add a site, click the Add icon. Proper syntax must be used to successfully bypass compression. See the Help tab for guidance and examples of using regular expressions.

With Compression Enabled, the page expands to reveal Proxy Authentication by Client, Server, and Compression Level.



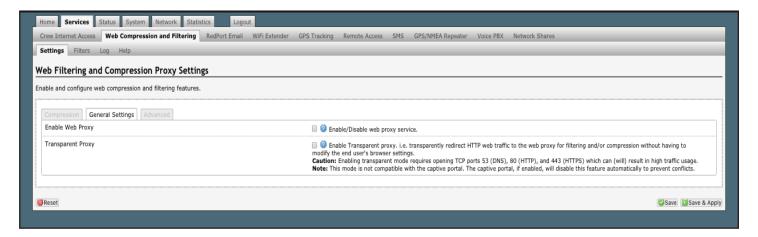




- **Proxy Authentication by Client:** If this is checked, then the authentication happens at the user end, which means that when a user goes to any web page, they will be prompted for a username and password.
- Server: Do not change this unless instructed to do so by your service provider.
- **Compression Level:** Set the level of compression that meets your needs. Those on entry level airtime plans should click "Maximum". Those on high data plans may prefer "Standard" or "Minimum".

9.2.1.2. General Settings

Requires 'superadmin' login.



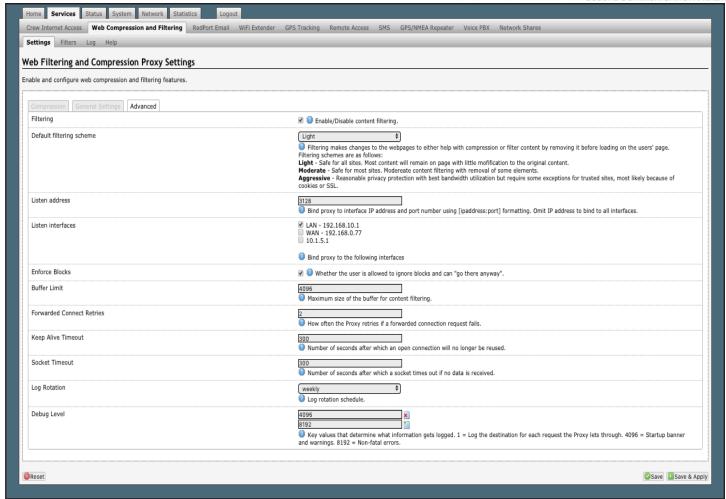
9.2.1.3. Advanced Settings

Requires 'superadmin' login.

Under normal operating conditions there is little to change here. See the next page for exceptions.







Some items of interest include:

- Default Filtering Scheme: This setting affects the amount of content filtering that is applied to a web page by
 removing elements before presenting it to the end user. It determines the amount of filtering to be done to the
 page. "Light" has the least impact and is not recommended for those on low data airtime plans. "Aggressive"
 has the most impact and is suggested for the best bandwidth utilization. The Aggressive setting blocks
 YouTube, flash,etc.
- **Debug Level:** The settings here determine what will show on the Web Compression and Filtering 'Log' page Adding the debug level of "1", all URLs will be logged and will appear on the Log page, one line per URL.

NOTE: Utilization of debug level 1 is not recommended for normal operation. The Log files are kept in RAM and with debug level 1 activated you run the risk of RAM filling up, the Swap Partition filling up and the router may crash.

BEST PRACTICE: Activate debug level 1 for testing that your setup is working as you intend, i.e. the proxy server working as expected, whitelists and blacklists are working. Deactivate debug level 1 when testing is complete.

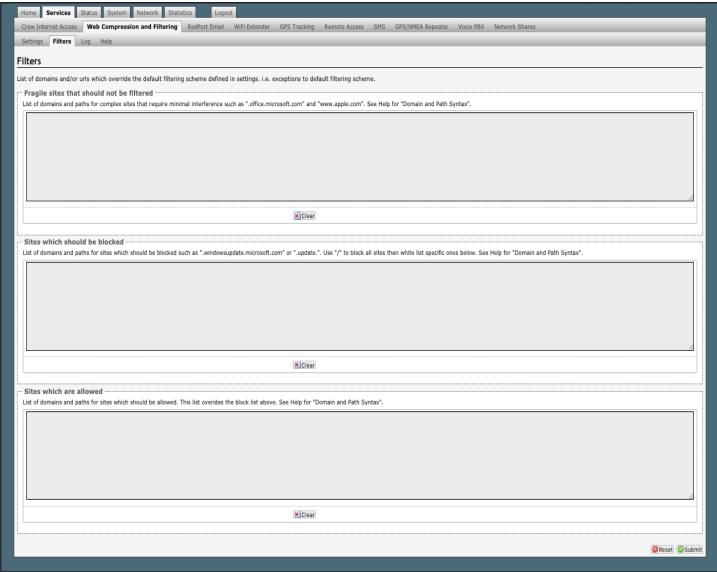
9.2.2. Filters

Requires 'superadmin' login.

By default, you have control over what sites are ALLOWED (whitelist) and what sites are BLOCKED (blacklist) and some control over content filtering without having compression enabled. See next page for details.







There are three filter categories:

- Fragile Sites: List sites that you want the content kept intact without any modification.
- Sites Blocked: The blacklist; users are prevented from viewing these sites.
- Sites Allowed: The whitelist; these sites are allowed for viewing. This list overrides the blocked list.

Filters respond to POSIX Regular Expressions (**See Chapter 9.2.4**). Example: If you place a slash (/) in Sites Blocked then the entire Internet is blocked (blacklist). Enter the whitelist in the Sites Allowed section. If any of the allowed sites should be accessed without any content filtering, enter that site in the Fragile sites section as well.

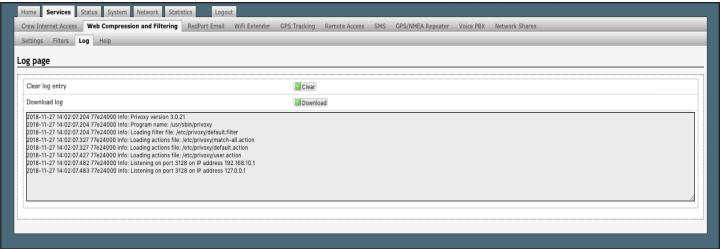
9.2.3. Log

Requires 'superadmin' login.

The Log shows activity on the router. How much activity is logged is determined by the entry in Web Compression and Filtering > Settings > Advanced > Debug Level. Descriptions of debug levels can be found in the Help tab (See Chapter 9.2.4).







Log files are kept in RAM and are rotated weekly, by default. You can change the Log Rotation schedule in Web Compression and Filtering > Settings > Advanced > Log Rotation.

Log files can be downloaded to a .csv file if history must be maintained.

9.2.4. Help

Requires 'superadmin' login.

For your convenience the Help page includes:

- · A list of Debug Levels and their description.
- A brief explanation and some examples of the POSIX Regular Expressions that must be used for the Domain and/or Path Syntax when creating Filters.

If you are unfamiliar with POSIX regular expressions, a web search should reveal more detailed explanations and tutorials.

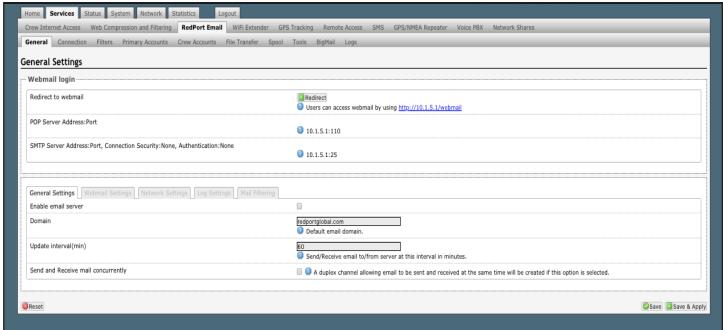
9.3. RedPort Email

Requires 'superadmin' login.

This is a full-featured Crew solution that runs on the router. RedPort email is designed specifically for use over satellite connections. It uses block compression, mid-file restart, bigmail quarantine and more to maximize data transfers.







Once enabled, the onsite administrator can manage email for the entire crew. The users can log in to a webmail program to view their email, so they do not need special software on their computer or device. The Optimizer CrewComm is a POP and SMTP server as well, so users can access email using their preferred email client instead of webmail access, if desired.

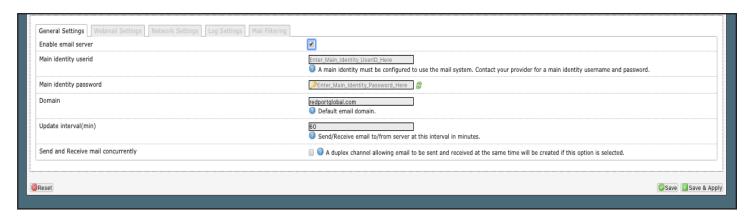
Contact your service provider for details and pricing.

The onsite administrator using the 'admin' login to the user interface does not have access to the RedPort Email Settings.

9.3.1. Enable and Configure RedPort Email

Requires 'superadmin' login.

In the RedPort Email General Settings:



- 1. Enable Email Server: Click the check box to enable email.
- 2. Main Identity Userid: Enter the username assigned to the Main Identity Primary Account for email, as given to you by your service provider.

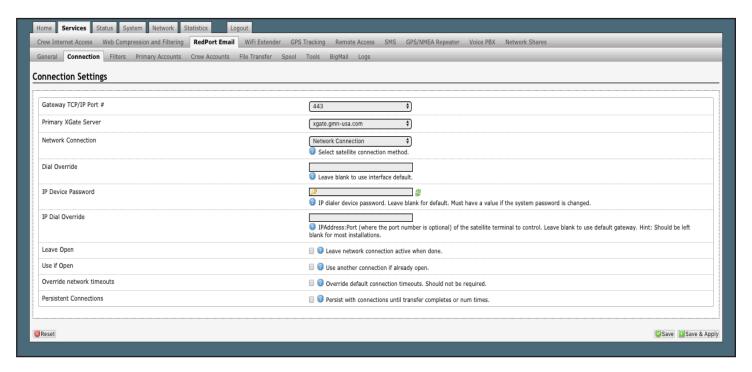




- 3. Main Identity Password: Enter the password assigned to the Main Identity Primary Account, as given to you by your service provider.
- 4. Update Interval: This is how often (expressed in minutes) the mail program will automatically log in to the satellite device to send any pending email and to receive any email pending. The default is set to 60 minutes but can be modified to fit business needs. (See Appendix A of the RedPort Email Guide for information on email block compression and its impact on Update intervals.)
- 5. Click <Save>.

NOTE: Typically, the Main Identity is the onsite email administrator. The Main Identity must be a Primary Account. There must be at least one primary account present on the system before sub/crew accounts can be created. (See Chapter 9.3.2) for more information regarding primary accounts.

6. Go to the Connection tab:



7. Click on <Network Connection> to open up the drop-down menu.





webXacc Globalstar webXacc Thuraya webXacc Iridium OpenPort webXacc Isatphone JRC Fleet Broadband webXacc HNS BGAN Explorer BGAN(100/110) webXacc MSAT USA webXacc Iridium Direct Internet ✓ Network Connection Sabre1 Skipper FBB Sailor Fleet Broadband Iridium OpenPort webXacc MSAT CAN Explorer BGAN(not 100/110) HNS BGAN

8. Click the appropriate setting for your satellite connection method. This tells the router which satellite device you are using and instructs the router to bring up the connection prior to attempting to send email. Otherwise, it will attempt to send email before the connection is up and because it cannot open the socket to the server it will fail due to a timeout error.

The router supports both Managed and Unmanaged connections for broadband terminals.

9. Click <Save & Apply> to apply the change.

For more comprehensive information about RedPort Email setup and use, please see the separate document, Optimizer CrewComm - RedPort Email Guide.

9.3.2. Primary Accounts

Requires 'superadmin' login.

The Main Identity must be a Primary Account. There must be at least one primary account present on the system. The username and password are assigned to you by your service provider.

Typically, there is only one Primary Account, however RedPort Email allows access to multiple primary accounts, if needed. For example, a fleet manager that travels from vessel to vessel would have a primary account and would need access to that account from each vessel in the fleet.

Primary accounts have access to email whether on or off the vessel as the account exists on the GMN/RedPort mail servers.

Primary accounts also have access to Filters to customize settings to meet the account needs. These filters include:

- Mail Management including BigMail (See RedPort Email Guide for details).
- Inbound Mail Filter (See RedPort Email Guide for details).
- Outbound Mail Filter (See RedPort Email Guide for details).

The Primary Account receives all Email system messages.

The email address of the primary account will be: username@redportglobal.com. See Appendix A of the RedPort Email Guide for information on using a custom domain name for the email address.





BEST PRACTICE: The Main Identity Primary Account is reserved for the Onsite Email Administrator. The Onsite Email Administrator does NOT have a crew/sub account. With this arrangement, the Onsite Email Administrator will receive the system messages that cannot be viewed via a crew/sub account.

Once the Primary Account is setup, the onsite administrator can setup and manage the sub/crew accounts.

Please see the RedPort Email Guide for comprehensive information on the use of RedPort Email service.

9.4. SMS Messaging

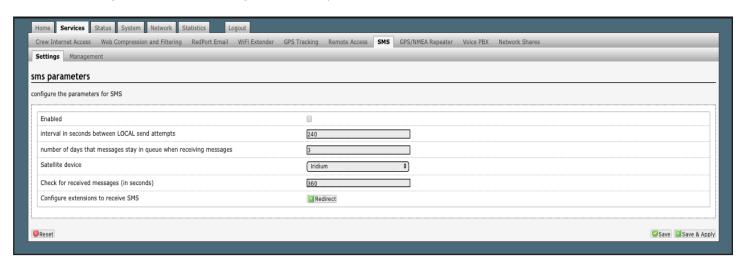
Requires 'superadmin' login.

If using a compatible satellite device, it is possible to send and receive SMS messages directly from the Optimizer CrewComm router and to route incoming SMS messages to one or more smartphones connected to the local wireless network.

9.4.1. SMS Settings

Requires 'superadmin' login.

Use Settings to enable and configure the SMS parameters.





- 1. Click the check box to enable SMS.
- 2. Click the appropriate Satellite device from the drop-down menu.
- 3. Click <Save & Apply>.

9.4.2. Configure SIP Extensions to Receive SMS Messages

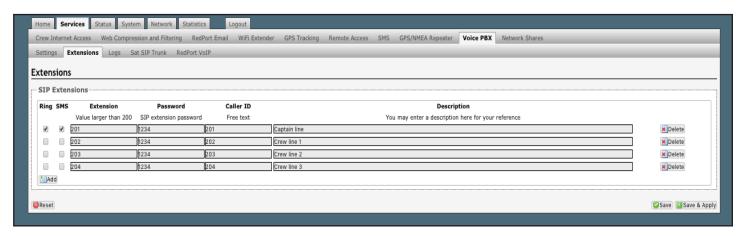
Requires 'superadmin' login.

With SMS enabled, click <Redirect> (see SMS Settings screen above) to configure which extensions are to receive





incoming SMS messages.



To enable an extension to receive SMS messages, use the check box in the SMS column. For more information on configuring SIP Extensions see (See Chapter 9.7.1).

9.4.3. How to Send/Receive SMS Messages

To use a smartphone or tablet to send/receive SMS messages requires XGate Phone App installed on the smartphone or tablet. The XGate Phone App can be found in Apple iTunes App Store for iOS devices and the Google Play store for Android devices.

Using the smartphone or tablet Settings, connect to the Optimizer CrewComm wireless network 'CrewCommWiFi-xxxx'.

Open the XGate Phone App. Click <Chat> to send a SMS message or to view a SMS message received.

Only one SMS message can be sent at a time. Standard SMS message rates apply.

Multi-user Voice and SMS is possible with the optional RedPort VoIP service. Contact your service provider for details.

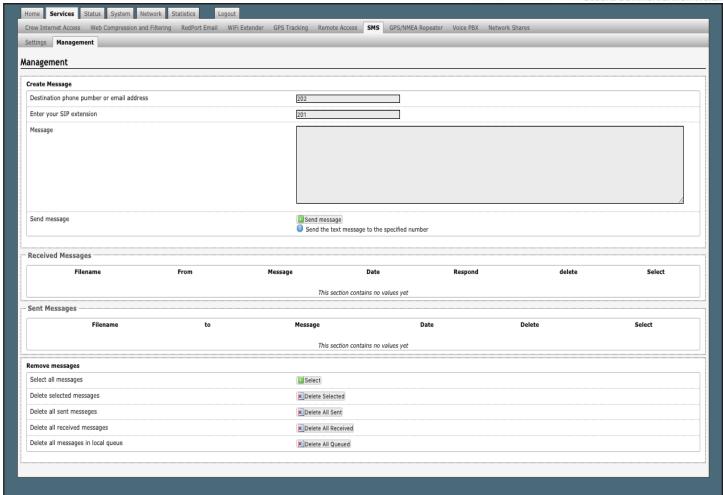
9.4.4. SMS Management

Requires 'superadmin' login.

With SMS enabled you can send SMS messages directly from the Optimizer CrewComm user interface and you can manage SMS messages that have been sent and received.







9.5. GPS Tracking

Requires 'superadmin' login.

If you wish to have tracking service using your satellite device, the RedPort Optimizer CrewComm offers GPS Tracking service powered by GSatTrack or Tracking service via SMS message.

9.5.1. Tracking Powered by RedPort with GSatTrack

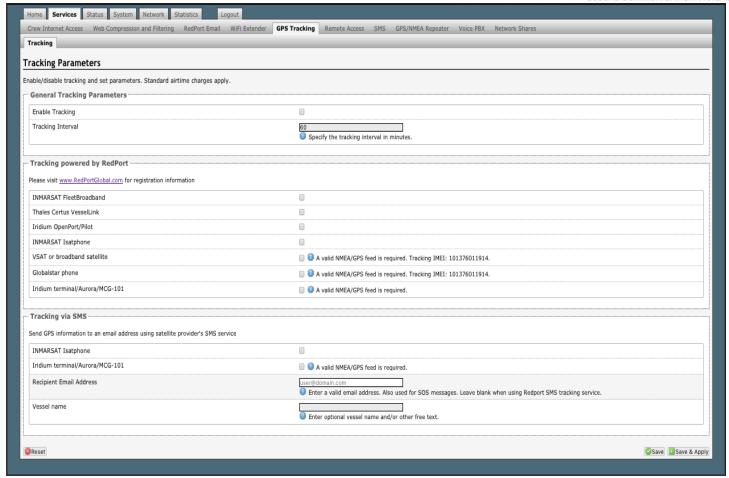
Requires 'superadmin' login.

Using a GPS-enabled satellite device, the Optimizer CrewComm can be configured to submit position reports to a central database for viewing on the tracking website.

This tracking service must be purchased separately. See your satellite service provider for details.







- 1. Enable Tracking by clicking the check box.
- 2. Enter the Tracking Interval in minutes; the default is set to hourly reporting (60 minutes). This means that every 60 minutes a position report will be transmitted over the satellite link. Keep in mind that standard airtime charges will apply to each position report. Adjust the Tracking Interval to meet your needs.
- 2. Go to Tracking powered by RedPort and click the satellite terminal you are using.

NOTE: A valid NMEA/GPS feed is required when using some satellite devices.

3. Click <Save & Apply>.

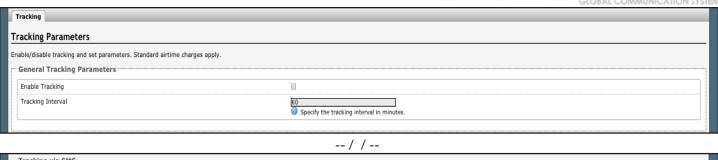
9.5.2. Tracking via SMS

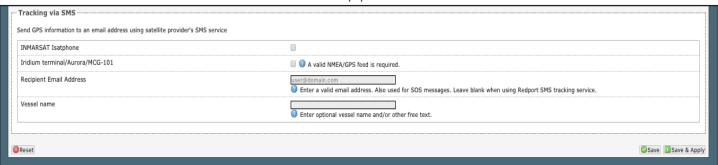
Requires 'superadmin' login.

If using certain satellite devices, GPS information can be sent to an email address using your satellite provider's SMS service. Standard SMS charges may apply; check with your satellite airtime provider for details.









- Enable Tracking by clicking the check box.
- 2. Enter the Tracking Interval in minutes; the default is set to hourly reporting (60 minutes). This means that every 60 minutes a position report will be transmitted via the SMS service provided by your satellite provider network. Keep in mind that standard SMS charges may apply to each position report. Adjust the Tracking Interval to meet your needs.
- 3. Go to Tracking via SMS and click which satellite device you are using. At this time, tracking via SMS is available with the Inmarsat IsatPhone, Iridium handheld 9575 Extreme, Iridium GO! or an Iridium terminal such as the Pilot.

NOTE: A valid NMEA/GPS feed is required when using an Iridium terminal.

- 4. Enter the recipient's email address. The SMS message with the GPS information will be sent to this email address at the interval entered in Step 1.
- 5. Click <Save & Apply>.

9.6. GPS/NMEA Repeater

Requires 'superadmin' login.

The Optimizer CrewComm supports USB and RS-232 NMEA devices allowing multiple applications to share the GPS/NMEA data. If you have a NMEA RS-422 device, adding a RS-422 to RS-232 converter to your setup may allow the sharing of data.

The Optimizer CrewComm does not transmit data but can be configured to receive and repeat GPS/NMEA data from:

- · A USB connected GPS or NMEA device.
- A serial port connected GPS or NMEA device with appropriate USB to Serial Adapter.

9.6.1. Equipment Setup

A physical connection is required from the source (GPS/NMEA device) to the Optimizer CrewComm.

9.6.1.1. USB NMEA Device





When using a NMEA device that supports a USB connection, connect the NMEA device to the USB port on the rear of the Optimizer CrewComm with an appropriate USB to NMEA device cable as indicated by the NMEA device manufacturer.



NOTE: It is not recommended to have a USB Satphone and GSM modem connected at the same time via a USB Hub. It may create conflicts.

The Optimizer CrewComm will broadcast the GPS signal over Wi-Fi, so you can connect your computer to the Wi-Fi network in order to establish a successful connection with your destination software.

9.6.1.2. RS-232 NMEA Device

With Serial Port Connector:

When using a NMEA device with Serial Port connection, a USB to Serial Adapter (PL-2303HX or FTDI Chip) is required.

NOTE: While all standard USB to serial adapters may work, the PL-2303HX and the FTDI Chip are the only USB to Serial Adapters that we recommend as compatible with the RedPort Optimizer CrewComm.



Connect the NMEA device to the USB port on the rear of the Optimizer CrewComm with an appropriate USB to Serial Adapter.

The Optimizer CrewComm will broadcast the GPS signal over Wi-Fi, so you can connect your computer to the Wi-Fi network in order to establish a successful connection with your destination software.

Without Serial Port Connector:

Some NMEA devices do not have a serial port; instead they have a group of wires extending from the back or bottom of the unit. These devices require proper wiring to a serial port.

As the Optimizer CrewComm does not transmit, it only repeats the data you will only need two of the wires. The Receive (RD) wire goes to pin 2 and the Ground (SG) wire goes to pin 5.





A simple solution is to use a terminal block as shown here. Simply connect the RD wire to pin2 and the SG wire to pin 5. Then connect the terminal block to a PL-2302HX or a FTDI Chip USB to serial adapter as noted above.



9.6.1.3. Connecting Multiple NMEA Devices

It is possible to connect up to four NMEA devices if you have the proper hardware. It will require a USB to RS-232 4-port Hub or a RS-232 4-port terminal block that you would simply plug into the Optimizer CrewComm USB port.

NOTE: The RedPort Optimizer CrewComm supports RS232. If you have a NMEA RS-422 device, adding a properly wired RS-422 to RS-232 converter to your setup may allow the sharing of data.



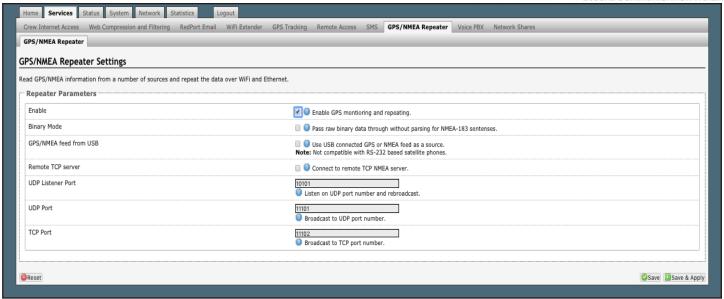
9.6.2. GPS/NMEA Repeater Parameters Configuration

Requires 'superadmin' login.

In order for the destination software to properly route the GPS data you must configure the GPS/NMEA Repeater Parameters in the Optimizer CrewComm User Interface.







- 1. Enable Click this check box to Enable GPS monitoring and repeating.
- 2. GPS/NMEA feed from USB Click this when connecting a GPS or NMEA device via USB cable.
- 3. NMEA Baud Rate Using the drop-down menu, click the baud rate required for the destination software. By default, most NMEA 183 devices (GPS) and applications use 4800 baud for this setting.
- 4. UDP Listener Port Enter the UDP port number that the GPS is connected to. The default is set to the standard UDP Listener Port for NMEA 183 devices of 10101.
- 5. UDP Port Enter the UDP port number to broadcast the GPS data to. The default is set to the standard UDP Port for NMEA 183 devices of 11101.

NOTE: Configure the destination software to match this port number; or, change this entry to match the requirements of the destination software.

6. TCP Port - Enter the TCP port number to broadcast the GPS data to. The default is set to the standard TCP Port for NMEA 183 devices of 11102.

NOTE: Configure the destination software to match this port number; or, change this entry to match the requirements of the destination software.

The data will be broadcast to both the UDP Port and the TCP Port. It is important to make sure that these two ports are NOT set to the same port number.

To use the GPS Repeater feature, your computer must be connected to the Optimizer CrewComm Wi-Fi network or directly connected to one of the Optimizer CrewComm Ethernet ports (i.e. the BIZ port and the WAN ports, by default, are open).

9.7. Voice PBX

Requires 'superadmin' login.

Users with smartphones can send/receive voice calls and SMS messages over the following satellite communication setups:

Sailor FBB terminal - requires XGate Phone app*. (See Chapter 9.7.4).





- IsatHub iSavi requires IsatHub Control app and either IsatHub Voice app or XGate Phone app*. (See
 Optimizer CrewComm Voice iSavi Addendum for information on how to pair the iSavi with the Optimizer
 CrewComm).
- Any satellite terminal with a RJ-11 port requires XGate Phone app* AND an ATA adapter. (We support the Grandstream HT701 and the Cisco SPA 112).

This configuration allows one voice call or one SMS message at a time and standard satellite voice airtime rates apply.

Multi-Voice capability is available with the optional RedPort VoIP service on most satellite terminal. This VoIP service allows you to make calls for less than standard satellite voice airtime costs and allows up to four users sending/receiving phone calls and/or SMS messages simultaneously. (See Chapter 9.7.5).

As of this writing, Multi-VoIP is compatible with the following:

- FBB
- BGAN
- VSAT
- RedPort Aurora
- Iridium Pilot
- Thuraya IP
- IsatHub iSavi

The RedPort Optimizer CrewComm allows unlimited SIP extensions with free local calling and text messaging within your local area network using the XGate Phone app*.

*XGate Phone app is available for free in the Apple iTunes App Store and in the Google Play store.

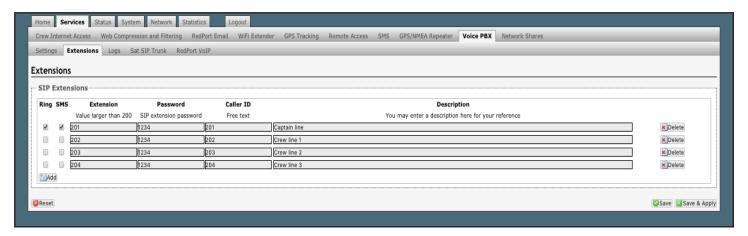
9.7.1. Setup Extensions

Requires 'superadmin' login.

By default, there are 4 extensions enabled. Extension 201 is enabled for inbound and outbound calling. The remaining extensions are enabled but are configured for outbound calling only.

Incoming calls will ring on those extensions with Ring enabled.

To enable Ring (or SMS) on an extension simply check the box for the service you want enabled.



When Ring is checked, the smartphone configured with the corresponding Extension will Ring with every incoming call.

When SMS is checked, that smartphone will receive every incoming SMS message.





To use a smartphone to send/receive phone calls requires the XGate Phone app installed on the smartphone. The XGate Phone app can be found in Apple iTunes App Store for iOS devices and the Google Play store for Android devices.

The smartphone user configures the XGate Phone app with their corresponding SIP Extension.

On this page, you can also:

- Change the SIP extension password.
- Change the outgoing Caller ID display.
- Enter a description for your reference.

9.7.1.1. How to Make/Receive Voice Calls

Using the smartphone or tablet Settings, connect to the Optimizer CrewComm wireless network 'CrewCommWifi-XXX' where 'XXXX' is the last four digits of the CrewComm Mac address.

Open the XGate Phone App to make and receive calls.

NOTE: Standard voice calling rates apply.

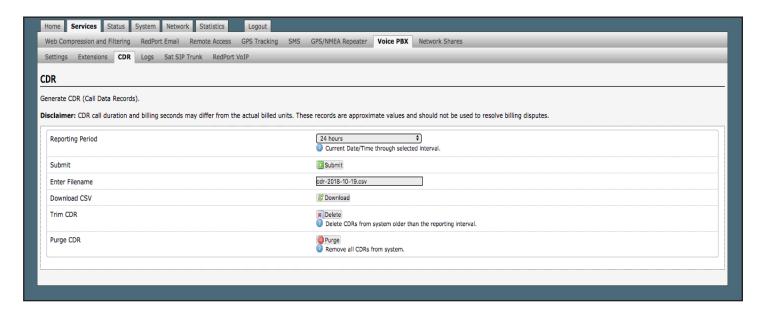
Only one phone call can be active at a time. (Multi-user Voice and SMS is possible -- up to four consecutive sessions -- with the optional RedPort VoIP service. Contact your service provider for details. (See Chapter 9.8.4).

NOTE: Inmarsat IsatHub (iSavi) users. Please see Appendix C for the iSavi Quick Start Guide containing information and instructions for setup and use of the Optimizer CrewComm with the iSavi terminal for voice calls and SMS messaging.

9.7.2. CDR (Call Data Records)

Requires 'superadmin' login.

It is possible to view and download the Call Data Records. The Call Data Records stored on the RedPort Optimizer CrewComm are approximate values and should not be used to resolve billing disputes. They are presented here for your convenience.





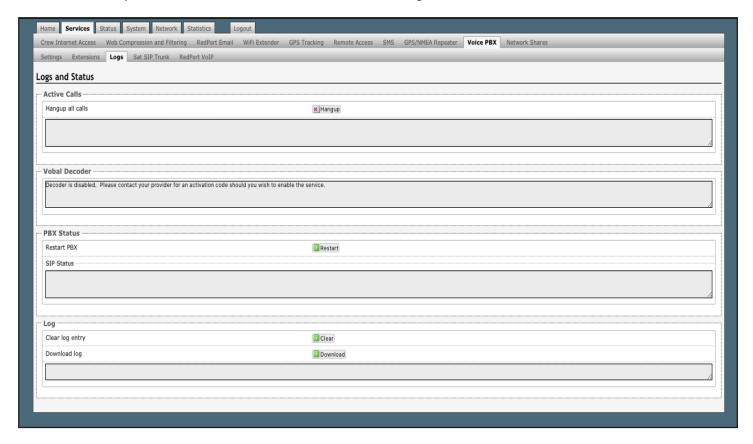


On active systems, the call data records can quickly use up memory. It is recommended that you periodically Trim CDR or Purge CDR records from the system.

9.7.3. Logs

Requires 'superadmin' login.

This screen provides PBX status information and some management.



- Active Calls: Displays all active channels in use. Click <Hangup> to immediately hang up all active calls.
- Vobal Decoder: Displays the VoIP Activation Key when RedPort VoIP service is enabled. (See Chapter 9.7.5).
- PBX Status: Displays the current status of all SIP extensions. Click <Restart> to reboot the PBX service.
- Log: Displays the current Log of PBX usage. Click <Clear> to remove the log content. Click <Download> to Open or Save the PBX Log.

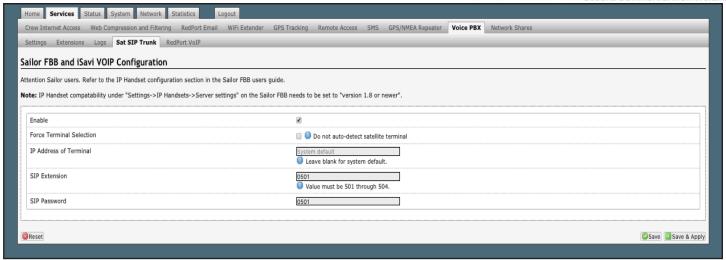
9.7.4. Sat SIP Trunk (for Sailor FBB terminal only)

Requires 'superadmin' login.

Use this screen to enable and configure SIP calling when using a Sailor FBB terminal.







NOTE: You may need to edit the IP Handset configuration in the Sailor FBB user interface. Settings > IP Handsets > Server Settings on the Sailor FBB must be set to version 1.8 or newer. (Refer to the Sailor FBB users guide for how to access the Sailor FBB Settings).

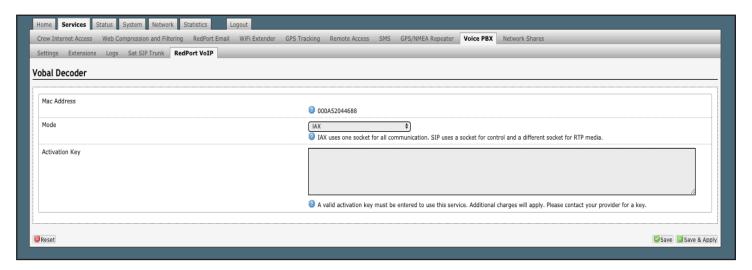
9.7.5. RedPort VoIP Activation

Requires 'superadmin' login.

With optional RedPort VoIP service, up to four users can send/receive phone calls and/or text messages simultaneously. Outbound calls are typically less expensive VoIP calls than standard circuit switch (PSTN) calls at regular satellite airtime rates. Contact your satellite service provider to purchase the RedPort VoIP service.

When the service is activated, you will be given a "Key". This key is a long alpha-numeric string that must be entered into the RedPort Optimizer CrewComm user interface.

Enter the Key and click <Save & Apply>.

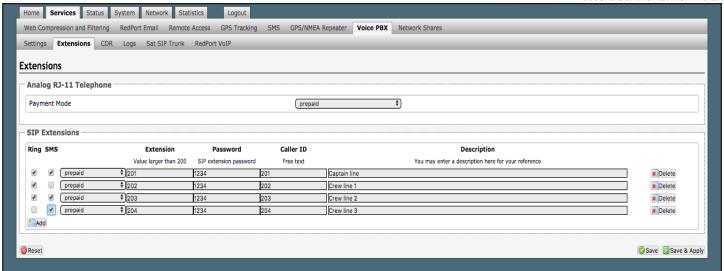


With RedPort VoIP service activated, the new RedPort VoIP telephone number is displayed.

Configure the SIP extensions for Ring and/or SMS by clicking the checkbox next to the SIP extension. (See **Chapter 9.7.1**).







Click the payment method of each SIP extension (prepaid or postpaid). There must be at least one postpaid line. By default, Line 1 always Postpaid.

On this page, you can also:

- Change the SIP extension password.
- Change the outgoing CallerID display.
- · Enter a description for your reference.

In the example above, when an incoming call arrives, only the phones with extensions 201, 202, and 203 will ring. Incoming SMS messages will appear on the phones of the Captain Line, Crew Line 2, and Crew Line 3.

When the configuration of the SIP extensions is complete, click <Save & Apply>.

9.8. Network Shares

Available to both 'admin' and 'superadmin' login.

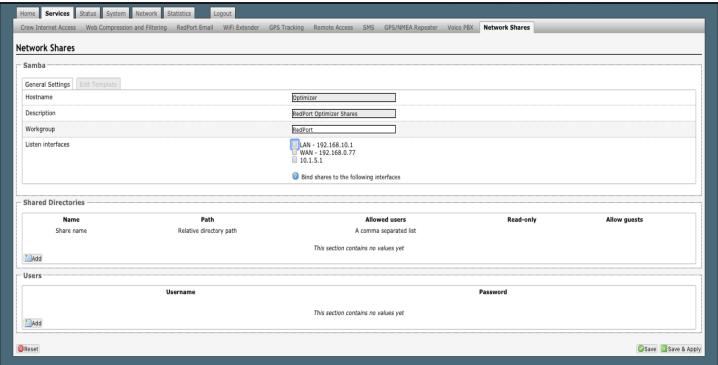
Network Shares allows the sharing of files without the requirement of a wired local network of computers. The Optimizer CrewComm router can be configured with one or more Shared Directories that are available, with or without password protection, to any Windows or Mac PC that has access to the Optimizer CrewComm Wi-Fi Hotspot.

Network Shares also allows the ability to automatically transfer files via inbound and outbound email (see Optimizer RedPort Email Guide > Appendix: File Transfer for details).

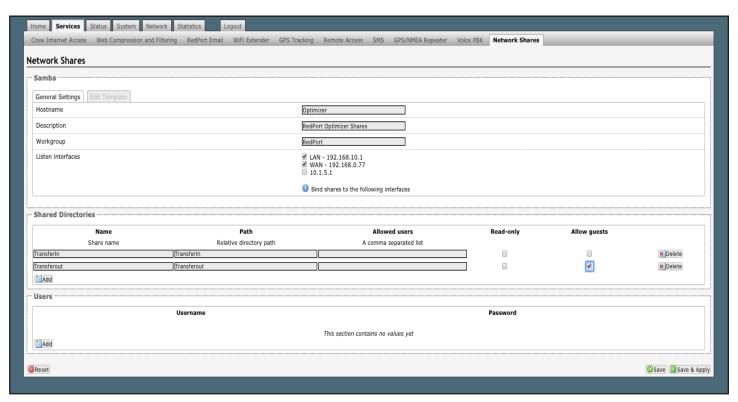
9.8.1. Create a Shared Directory







Click <Add> to create a new Shared Directory:



- Name: This is the Share Name that is visible on the network. It is the 'volume' name that you will use when connecting to the shared directory.
- Path: This is the name of the Folder that appears on the Optimizer CrewComm that will be used to store files.
- Allowed users: You can limit the users that have access to the files in the Path Folder by assigning usernames
 and passwords to selected individuals (see Add Users below). Enter the usernames here, separated by a





comma if more than one user will have access to the files.

- Read-only: Use this check box to protect the files in the Path Folder from being changed.
- Allow guests: Use this check box to make the files available to anyone with network access. With this box
 checked, users will not be prompted to enter a username and password when accessing the Path Folder.
- Delete: Use this to delete the Shared Directory.

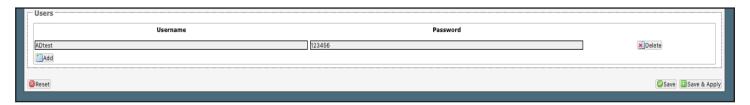
Click <Save & Apply>.

9.8.2. Add Users

If you want to password protect access to the Shared Directories, you can assign usernames and passwords to each directory.



Click <Add> to add a new username and password.



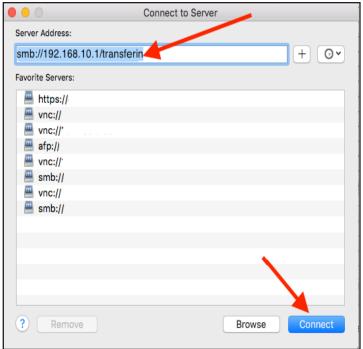
9.8.3. How to Access the Shared Directory and Path Folders:

9.8.3.1. From a Mac PC

Go to Finder > Go > Connect to Server.





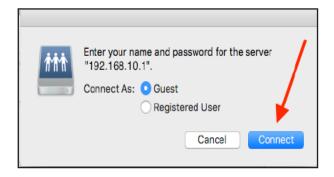


Enter the Server Address as the LAN address for the Optimizer CrewComm / plus the Path Folder.

Click < Connect>.



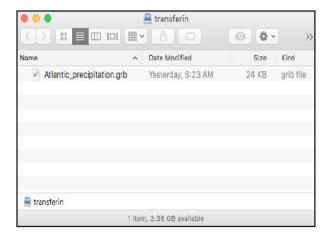
If the Shared Directory is restricted (i.e. does not Allow Guests) you must enter a username and password to access the files.







If the Shared Directory is not restricted (i.e. Allow Guests is checked in Network Shares) you can connect as a Guest without entering a username and password.



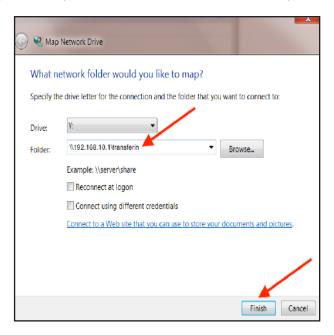
A Finder window opens to the selected Folder for access to the transferred file(s).

9.8.3.2. From a Windows PC

Map a Network drive to the appropriate location.

Go to Start Menu > Computer > Map Network Drive.

In the Folder box, following the Example, enter \the LAN address for the Optimizer CrewComm\the Path Folder.



Click <Finish>.



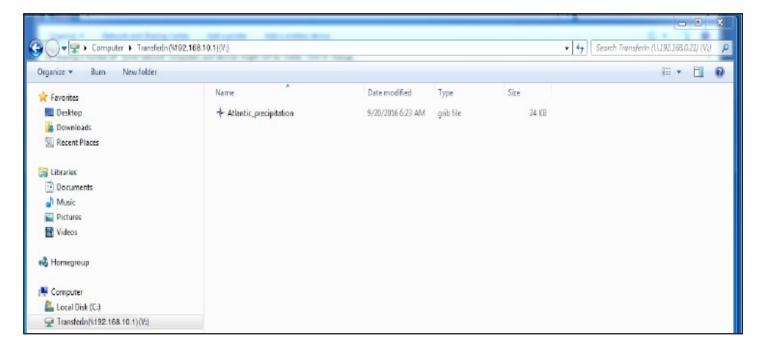




If the Shared Directory is restricted (i.e. does not Allow Guests) you must enter a username and password to access the files.

If the Shared Directory is not restricted (i.e. Allow Guests is checked in Network Shares) you can connect as a Guest without entering a username and password.

An Explorer window opens to the selected Folder for access to the transferred file(s).



10. Status

Available to both 'admin' and 'superadmin' login.

Use the Status tab to display current information of the router's performance.



Some of the information provided here includes:

How much memory the router is currently using.





- Who is currently connected via Wi-Fi.
- Error messages reported in the System Log and can be useful when troubleshooting connection issues.
- Realtime Graphs report how much data is being used by the different interfaces.

All Status information is READ ONLY.

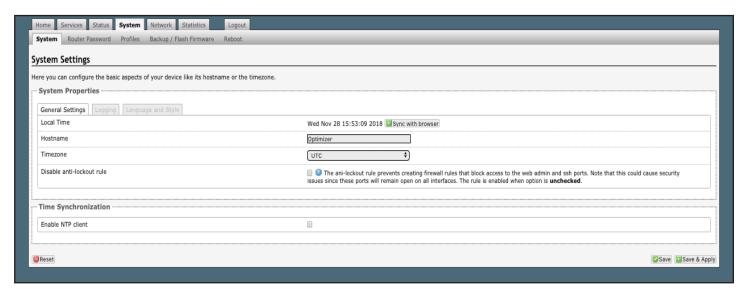
11. System

Requires 'superadmin' login.

This section contains some of the router's basic settings for you to configure plus a few maintenance functions.

11.1. System Settings

Use this section to configure the basic aspects of your device (i.e. hostname and/or time zone).



Disable anti-lockout rule: The anti-lock rule prevents you from creating a firewall rule that will lock you out of the router. The rule is Enabled when the box is Unchecked. Best Practice is to complete the router configuration, test it thoroughly to make sure everything works as intended, then disable the anti-lock role.

For example, if you want to be able to log in to the router from your office, once the router has been installed on a vessel; if you have WAN blocked and the Anti-Lock Rule is enabled, you will not be able to log in. First you want to create a firewall rule to allow the office IP into the router, then "Disable anti-lock rule" by checking the check box and now you can Block WAN in the Firewall Rules, if desired.

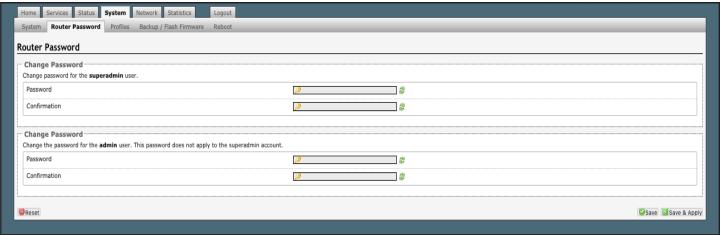
NOTE: If you lock yourself out of the router, you must perform a factory reset. This will eliminate your custom configuration requiring you to start a new configuration.

11.2. Router Password

The default password to access the Optimizer CrewComm User Interface for both the "superadmin" login and the "admin" login are set to: "webxaccess". The onsite administrator using the "admin" login can change the password for the "admin" login only, from the Home Page. Anyone using the 'superadmin" login can change the password for both "admin" and "superadmin" login.







Use the top section to change the password for the 'superadmin' user; the bottom section to change the password for the 'admin' user.

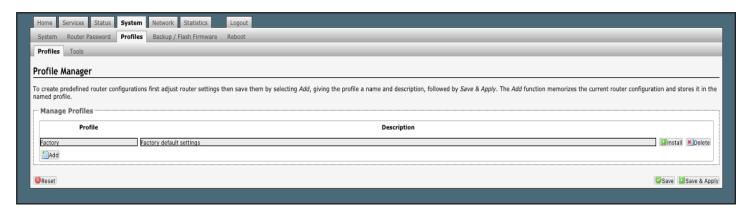
- Step 1. Enter the new password in the password text box.
- Step 2. Enter the same password again in the Confirmation text box.
- Step 3. Click <Save & Apply>.

This procedure changes the password for the Superadmin or the Admin login ONLY. When connecting a computer, iOS or Android device to the wireless network, do NOT use either of these login passwords. These passwords are used only to access the Optimizer CrewComm User Interface.

11.3. Profiles

Requires 'superadmin' login.

Profiles is designed for users of multiple satellite devices and integrators of custom installations.



You can configure the Optimizer CrewComm for a specific satellite device and save the profile. This is good for failover situations when using multiple devices. An extreme example would be that you might have the firewall wide open on a VSAT device but in an emergency must use an Iridium handheld device where you want the full protection of the Optimizer CrewComm firewall. Have a profile for each configuration and select the appropriate one for the satellite device being used.

Once a profile is saved it can be exported for use in another RedPort Optimizer CrewComm router.

11.3.1. Add a Profile



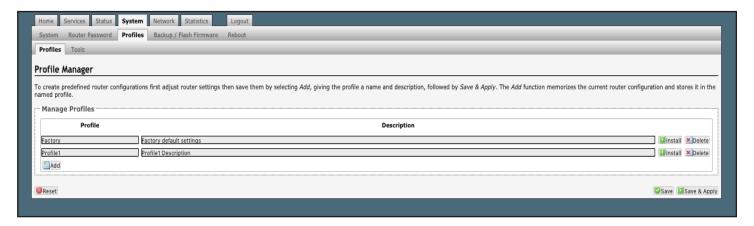


Before adding a Profile, complete the router configuration.

Then access the Profile Manager.

To create and use the new Profile:

1. Click <Add>.



- 2. Enter a Name of the new profile and a description.
- 3. Click <Save & Apply>.

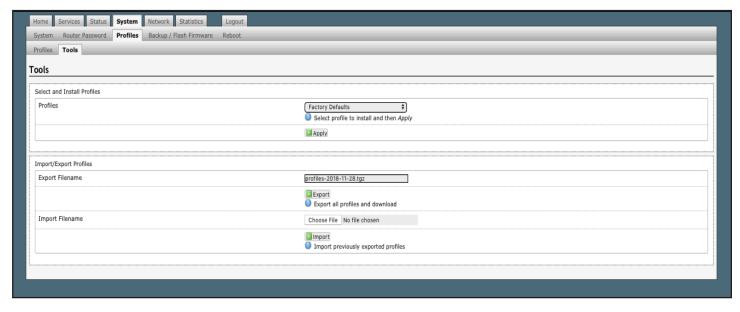
The Add function memorized the current router configuration and stores it in the named profile.

11.3.2. Change to Another Saved Profile

To change from using one profile to different profile, click <Install> for the desired profile, then click <Save & Apply>.

11.3.3. Export a Profile

You can export the profiles from the router and use the exported file to 'clone' another RedPort Optimizer CrewComm router in System > Profiles > Tools.



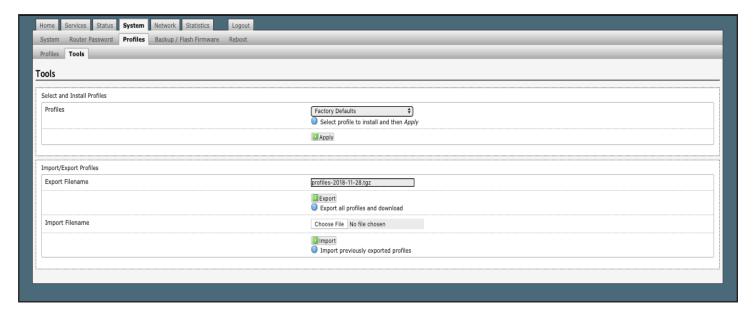




- 1. Enter a filename or use the default name.
- 2. Click <Export> and save the file.

11.3.4. Import a Profile

You can import profiles from another Optimizer CrewComm router in System > Profiles > Tools.



- 1. Click <Browse> to locate the saved profiles .tgz file.
- 2. Click <Import>.

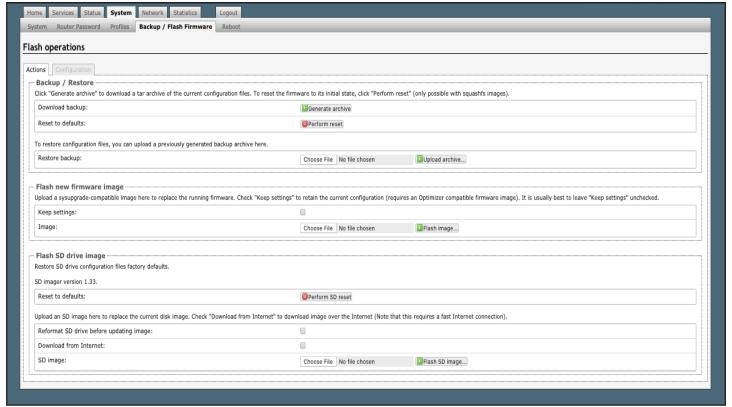
11.4. Backup/Flash Firmware

Requires 'superadmin' login.

Use this screen to generate backups of current configuration files, resets, restores, and firmware upgrades.







11.4.1. Backup/Restore



- Download backup: Create and save a Backup archive of the current configuration.
- Restore backup: Restore the router to a previously saved configuration.
- Reset to defaults: Reset the router to the default configuration.

To apply the same configuration among several Optimizer CrewComm routers (for example in a fleet situation) create and save a Profile of the configuration that can be applied to other Optimizer CrewComm routers. (See Chapter 11.3).

11.4.2. Flash New Firmware Image

Get the latest RedPort Optimizer CrewComm firmware version from:

redportglobal.com/support/technical-downloads/.

Save the .bin file to your computer (pc or mac).

BEST PRACTICE: If you have created any Profiles you may want to Export them before flashing new firmware and Import them when done.







- 1. Keep Settings: check this box to maintain current settings if you have made changes to the configuration. Failure to check this box will revert the Optimizer CrewComm back to the default settings.
- 2. <Browse> to where you saved the .bin file and click that file.

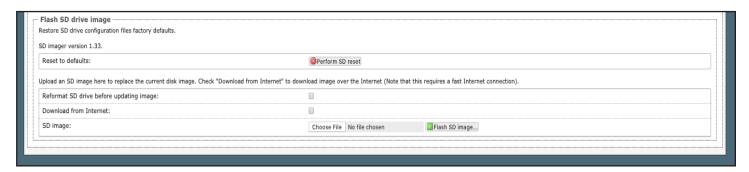
CAUTION: Loading incorrect firmware on your device could render it useless. Be sure to click the appropriate firmware for your device.

- 3. <Flash Image>.
- 4. Wait for the lights on the front of the Optimizer CrewComm to begin flashing. When the flashing lights stop, the firmware update is complete. This typically takes several minutes.

To confirm the firmware upgrade, log in to the Optimizer CrewComm Home Page again. The firmware version displays in the top banner of the User Interface.

Optimizer | wXa-153 v2.31 | Load: 1.66

11.4.3. Flash SD Drive Image



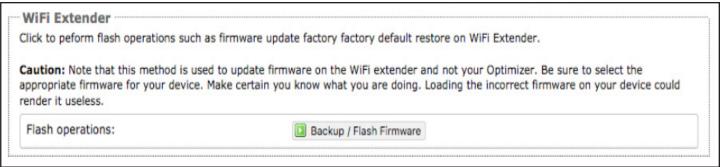
- Reset to defaults: Restores the SD drive configuration to its default state.
- Reformat SD drive before updating image: If the SD drive goes bad, use this to reformat the drive before
 updating the image.
- **Download from Internet:** Use this only if you have a fast Internet connection to obtain the file. Alternately, you can obtain the file from our website and save it for use: redportglobal.com/support/technical-downloads/.
- SD image: Click <Browse> if you have the file saved to your computer. Click <Flash SD Image> to start the flash process.

11.4.4. Wi-Fi Extender

Requires 'superadmin' login.







Use this to back up the configuration settings and/or update the firmware for the RedPort Wi-Fi Extender ONLY!

Click <Backup/Flash Firmware> to open the Flash operations screen.

11.4.4.1. Backup/Restore



- Download Backup: Click <Generate archive> to create a backup of the current configuration of the Wi-Fi
 Extender. A backup file (.tar) will be generated and saved to your computer.
- Reset to defaults: Click <Perform reset> to reset the Wi-Fi Extender to the factory defaults.
- Restore backup: Click <Choose File> to browse and click the .tar backup file. Click <Upload archive> to restore.

11.4.4.2. Flash New Firmware Image



- Keep Settings: Click this only if you want to retain the current configuration.
- **Image:** you must have the new firmware image saved to your computer. You can obtain the latest Wi-Fi Extender Firmware image from our website: <u>redportglobal.com/support/technical-downloads/</u>.

Click <Choose File> to browse and click the .bin firmware image file. Click <Flash Image> to start the flash operation.







Click < Proceed> to complete the process.

11.5. Reboot

You can reboot the Optimizer CrewComm from within the user interface in lieu of using the reset button on the router itself.



If you have made changes to the configuration without clicking <Save & Apply> you will receive a Warning message:

Warning: There are unsaved changes that will be lost while rebooting!

12. Network

Requires 'superadmin' login.

Use this section to configure network interfaces, run diagnostics, or modify the firewall.

CAUTION: This gives you complete control over the router behavior.

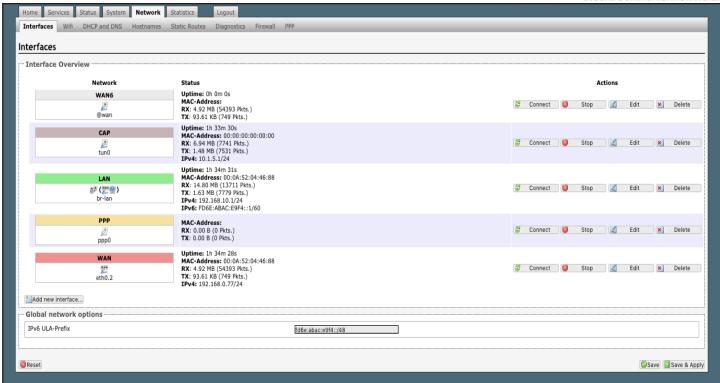
BEST PRACTICE: Modifications to the default configuration is best left to those with a full understanding of router/network behavior, firewall rules, etc. Creating conflicts in the configuration may render the router useless.

12.1. Interfaces Overview

This screen is an at-a-glance view of the current status of each network interface and provides easy access to edit the interface. Each interface can have its own firewall rules (see Chapter 8.8).







- CAP: This is reserved for the Captive Portal. If the Captive Portal is enabled, all traffic that comes through the Captive Portal will be subject to this interface configuration. This allows you to create rules that apply to the Captive Portal only.
- **BIZ:** This is the business port. By default, it is completely blocked.
- BEST PRACTICE: Restrict access to this port, protect the router under lock and key OR disable the BIZ interface.
- LAN: This is reserved for the local area network.
- PPP: This is reserved for USB connected satellite phones and GSM or LTE modems.
- **WAN:** This is typically used for the primary satellite system.
- WAN2: This is typically used for the secondary satellite system.
- WEXT: This is reserved for the RedPort Wi-Fi Extender.

If you have a different Wi-Fi extender you may be able to use it by plugging it into a wan port (Sat1 or Sat2) on the Optimizer CrewComm. It will not work if plugged into the Wi-Fi port on the Optimizer CrewComm. Best Practice would be to disable the Wi-Fi extender (unplug) when outside the Wi-Fi broadcast area.

12.1.1. Interface Actions



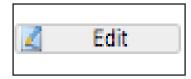
Enable an Interface.



Disable an Interface.







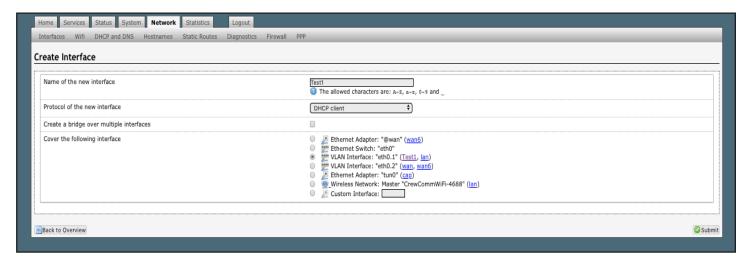
Edit an Interface.



Delete an Interface.

12.1.2. Add a New Interface

To add a new interface, click the <Add new interface> button on the Interface Overview page.

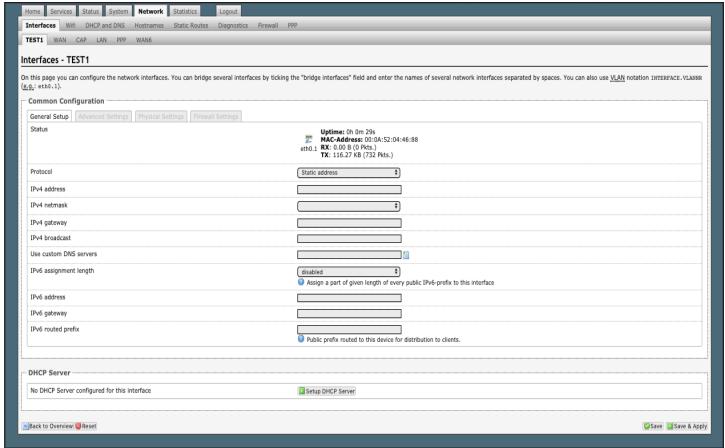


The name of the new interface must not match the name of a current interface, member, policy or rule.

Complete the Create Interface screen and click <Submit> to apply the change. Once configured, the new interface will show on the Interface Overview screen and it will have its own Tab at the top of the Interface Overview page.







If adding a new WAN Interface (or as desired), be sure to Edit the Interface to complete the configuration.

Click <Save & Apply>.

12.1.3. Select Interfaces Tabs

Use these tabs to select an interface for configuration and/or modification.



Use these pages to configure the network interfaces.



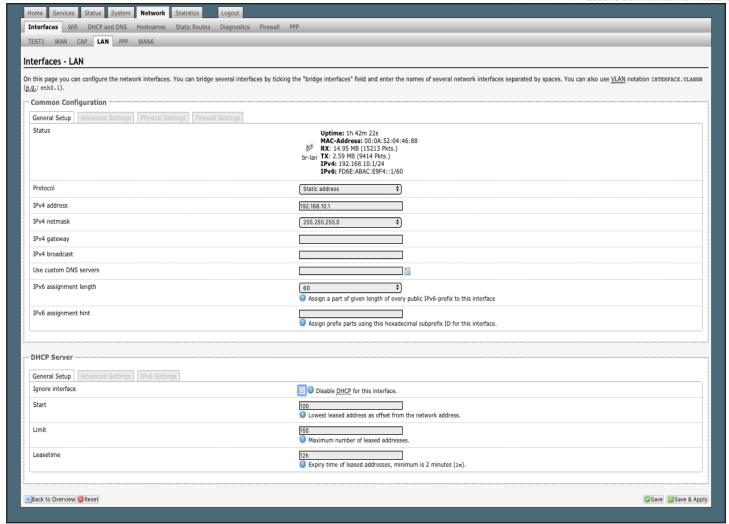
The information and selections available will depend upon the Protocol selection for that interface.

12.1.3.1. General Setup

Use General Setup to switch the protocol for the interface and configure the setup for that protocol including Static IP Addresses, DHCP Server Setup, etc.





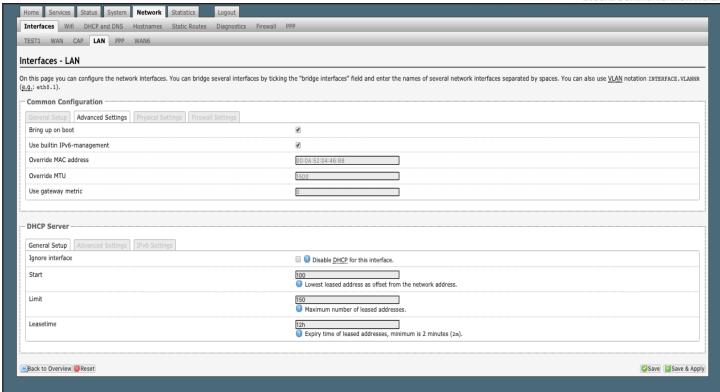


12.1.3.2. Advanced Settings

Use Advanced Settings if you want to bring up the interface automatically on boot up of the router and to configure the DHCP Server Settings.







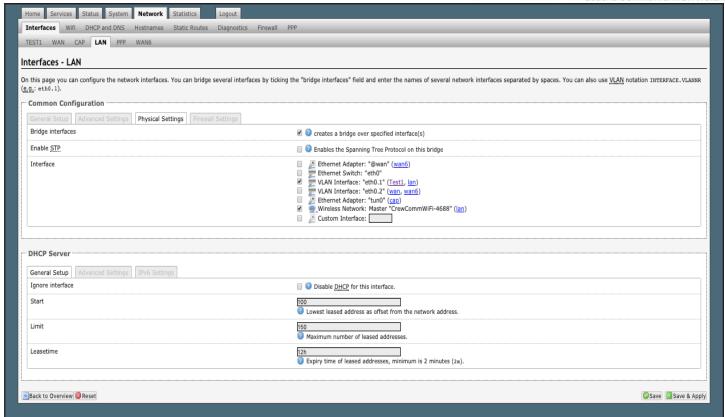
NOTE: Each WAN interface must be assigned a unique number in the "Use gateway metric" field. This number is required for configuring Failover/Load Balancing.

12.1.3.3. Physical Settings

Use this page to bridge interfaces and configure the DHCP Server Settings.





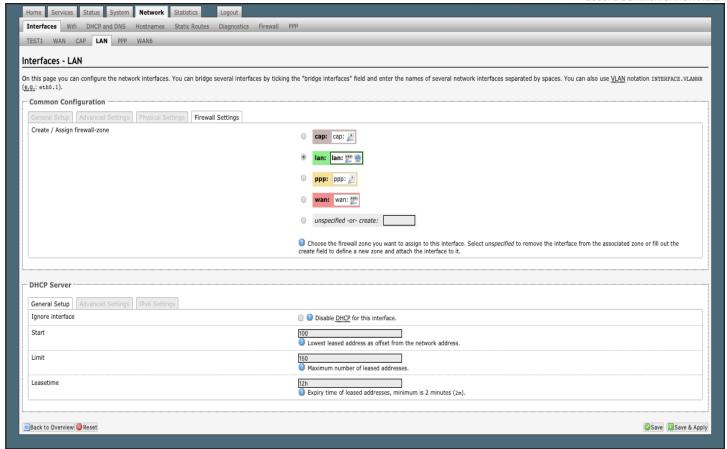


12.1.3.4. Firewall Settings

Use this to select the Firewall Zone you want to assign to the Interface. (See Chapter 12.6) for Firewall Zone details. You can also configure the DHCP Server Settings from this page.



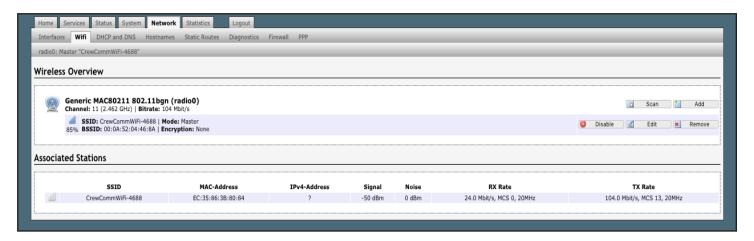




12.2. Wi-Fi

Requires "superadmin" login.

This screen shows the current status of the wireless hotspot created by the Optimizer CrewComm.



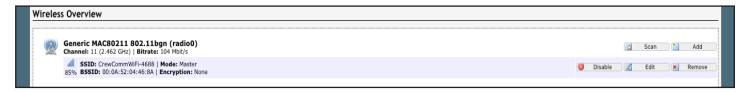
- · Scan: Scans for other wireless hotspot signals available in the area.
- Add: Adds a new Wi-Fi interface.
- Disable: Disables the selected Wi-Fi interface but it remains on the list.
- Edit: Edits the selected Wi-Fi interface.
- Remove: Removes the selected Wi-Fi interface.



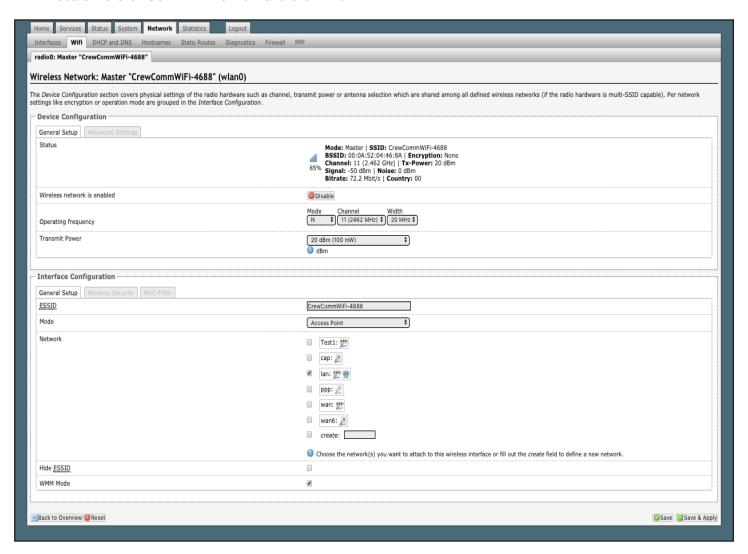


12.2.1. Rename the Wireless Network

The default name of the Optimizer CrewComm's wireless network is 'CrewCommWifi-XXX' where 'XXXX' is the last four digits of the CCP Mac address. This is the name of the wireless network that you connect to using your computer or iOS or Android device. It is possible to change the name of your wireless network.



Locate the CrewCommWifi network and click <Edit>.



- 1. Enter the new wireless network name in ESSID field.
- 2. Click <Save & Apply>.

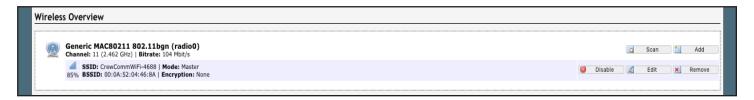
This procedure changes the name for the Wi-Fi hotspot only. When connecting your computer, iOS or Android device to the wireless network, this is the network name that will appear in the wireless network list. This name does not change the router superadmin or admin name when logging in to access the Optimizer CrewComm user interface.



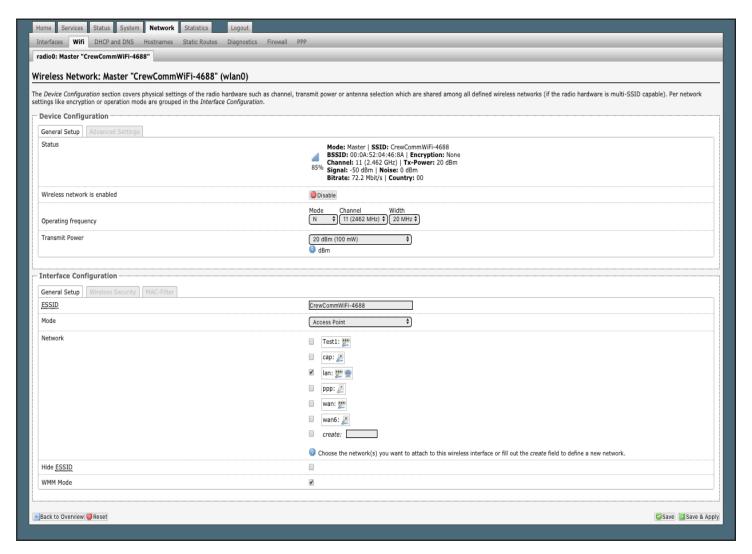


12.2.2. Restrict Wireless Network Access

When in public locations, for example, a busy port, you may want to restrict access to the Wi-Fi hotspot created by your satellite device and the Optimizer CrewComm. You can password protect the Wi-Fi hotspot, so others cannot use it.



Locate the CrewCommWifi network and click <Edit>.



- 1. Click the Encryption mode from the drop-down menu.
- 2. Enter your desired password in the Key field.
- 3. Click <Save & Apply>.

This procedure adds/changes the password for the Wi-Fi hotspot only. When connecting your computer, iOS, or Android device to the wireless network, this is the password you will use. This password does not change the router superadmin or admin password when logging in to access the Optimizer CrewComm user interface.

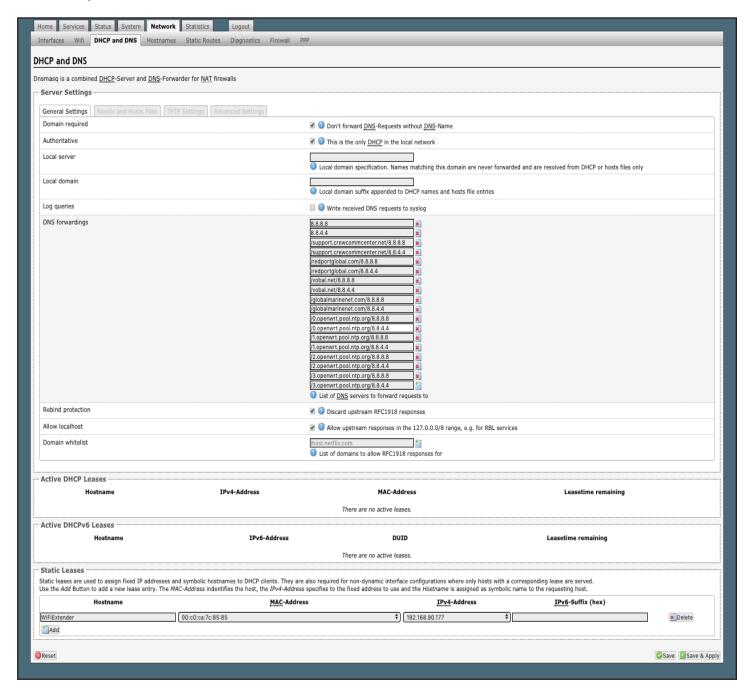




12.3. DHCP and DNS

Requires "superadmin" login.

The Optimizer CrewComm is a DNS server.



12.4. Hostnames

Requires "superadmin" login.

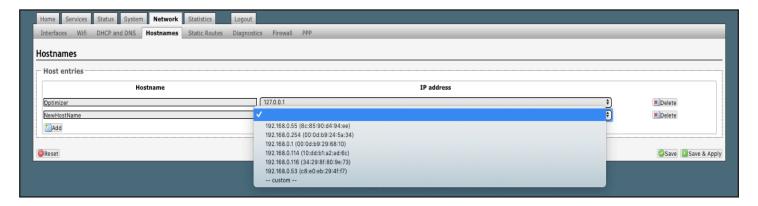
Use this page to associate a hostname with an IP address.







12.4.1. Add Hostname

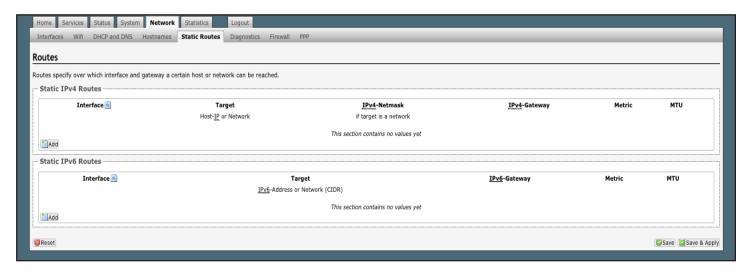


- 1. Click <Add>.
- 2. Enter the new Hostname.
- 3. Click the IP address from the drop-down list or click custom to enter the IP address.
- 4. Click Save & Apply.

12.5. Static Routes

Requires "superadmin" login.

This Static Routes table is available for those with a complex network that may include multiple routers. Use this page to specify how a certain host or network can be reached.



Static routes take precedent over MWAN Traffic Rules.





12.6. Firewall

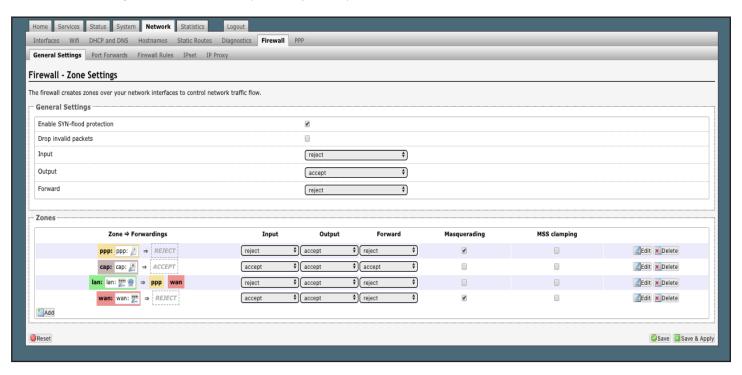
Requires "superadmin" login.

The Firewall allows you to control network traffic flow over each interface. Most installations do not require any firewall modifications due to the flexibility of the Failover/Load Balancing configuration (See Chapter 12.9).

CAUTION: It is important to have an in-depth understanding of network administration including management and maintenance of routers, firewalls, etc. before attempting to modify the firewall settings of the Optimizer CrewComm. USE WITH CAUTION AND AT YOUR OWN RISK!

12.6.1. General Settings

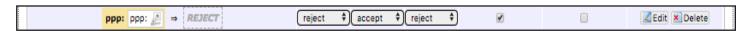
Use this screen to create and edit Firewall zones. Each Firewall Zone can have its own firewall rules. Each Interface must be assigned a Firewall Zone (see Chapter 8.6).



It is important to understand the following before considering modifications:

- Input: This is accessing the router itself.
- Output: This is the router accessing the "LAN". DO NOT MODIFY.
- **Forward:** This is traffic through the router via an interface and out of the router. If Forward is allowed, you must configure the Inter-Zone Forwarding. (See Chapter 12.6.1.1).
- Accept: This setting allows traffic unless there is a Rule to block it. (See Chapter 12.9.2).
- Reject: This setting blocks traffic unless there is a Rule to allow it. (See Chapter 12.9.2) An error is displayed
 to the end user.
- Drop: This setting drops the traffic with no indication to the end user.

The router is shipped to you with several Firewall Zones configured and interfaces assigned to them:

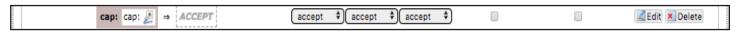


The "ppp" firewall zone has only the ppp interface assigned to it. This is the zone for dial-up connections. In this

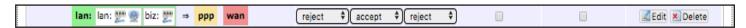




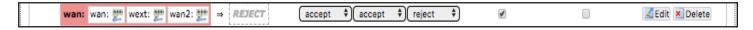
default configuration, only Output traffic is allowed. Input and Forwarded traffic is rejected.



The "cap" firewall zone has only the cap interface assigned to it. This is the zone for the Captive Portal. In this default configuration, all traffic is allowed but subject to the Captive Portal settings.



The "lan" firewall zone has the lan and biz interfaces assigned to it. This is the zone for the internal local network. In this default configuration, only Output traffic is allowed.



The "wan" firewall zone has the wan, wan2 and wext interfaces assigned to it. This is the zone for satellite connections and Wi-Fi extenders. In this default configuration, only Output traffic is allowed.

CAUTION: While it is possible to edit these zones and add new zones, Best Practice is to leave these zones alone and create MWAN Traffic Rules instead, assigning the new rules to a Zone. (See Chapter 12.9).

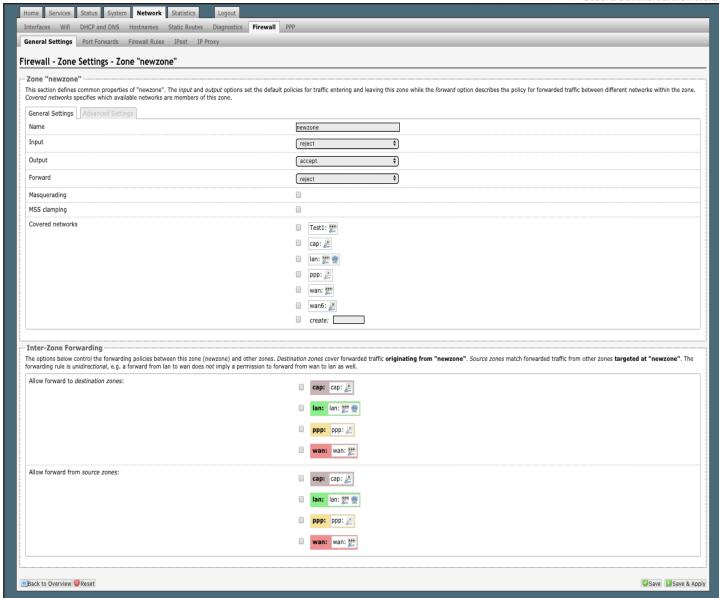
FOR EXAMPLE: If a system administrator wants to create firewall zones that are different for each device, such as firewall rules for Wi-Fi to allow all, rules for vsat to allow dns and http but nothing else, for fbb do not allow anything but email. You could create three new zones; one for each wan interface, then create firewall rules that pertain to each of the new zones. You then edit the LAN interface to add the three new zones. OR, do not create zones but use IP addresses added to the MWAN traffic rules (not the firewall rules). Leave the zones the same, use MWAN traffic rules, assigning the rule to a zone and use IP source address or a specific IP address. The destination can be any address and apply to any zone. (See Chapter 12.9).

12.6.1.1. Add a Firewall Zone

To create a new Firewall Zone, click the Add icon on the General Settings page.







Enter the desired General and Advanced Settings. Click <Save & Apply>.

12.6.1.2. Delete A Firewall Zone

To permanently remove a firewall zone, click the Delete icon.



CAUTION: This action CANNOT be undone.

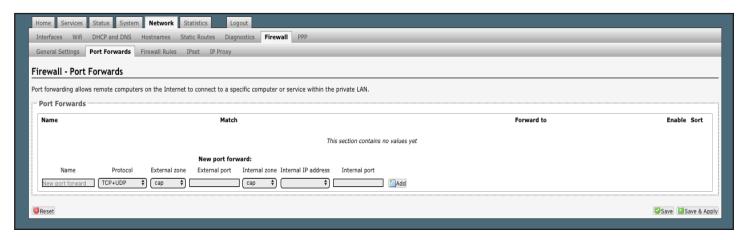
12.6.2. Port Forwards

To allow remote access to a specific computer or service within the private LAN requires Port forwarding.

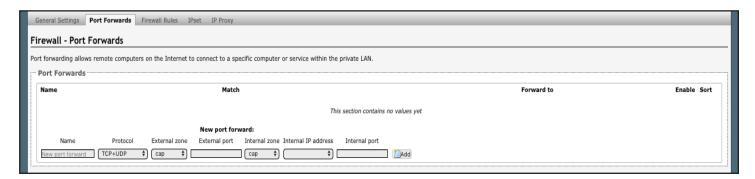




CAUTION: It is important to understand networking before making changes to Port Forwards.



This page shows a list of the enabled port forwards configured. To add a new port forward, enter the desired parameters and click <Add>. To save the configuration, click <Save & Apply>. The new port forward will appear in the list.



You can now enable/disable them, change the sort order, and edit the parameters.

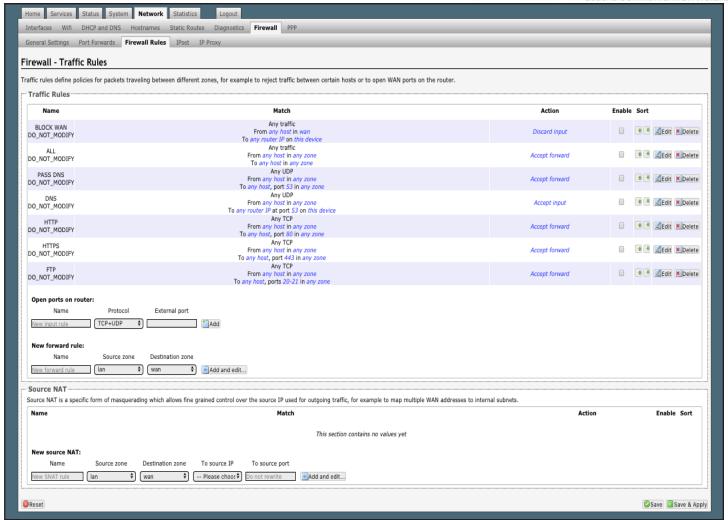
CAUTION: The Delete function cannot be undone.

12.6.3. Firewall - Traffic Rules

This page is the firewall traffic rules table. The table includes all the firewall rules on the router that will allow you to enable and disable ports and IP address, etc.







While you can add rules, delete rules and each interface can have its own set of rules, BEST PRACTICE is to manage router traffic via the Failover/Load Balancing MWAN Traffic Rules (See Chapter 12.9).

By default, the router is shipped to you with six rules that all say DO NOT MODIFY. They are: ALL, Pass DNS, DNS, HTTP, HTTPS and FTP. These are the rules that the Proxy Server automatically enable and disable so the components work without you having to make modifications to the Firewall Traffic Rules Table. When enabled, these rules Allow that particular traffic to pass through the firewall. This means that the Firewall is totally OPEN by default. When you configure the Failover/Load Balancing you can restrict the traffic allowed through an interface.

All the firewall rules can easily be enabled (checked) or disabled (unchecked).

The first rule name "ALL", when enabled, means the firewall is totally open and all traffic goes straight through the firewall. To disable the rule, uncheck it, scroll to the bottom of the page and hit <Save & Apply>. With the ALL rule disabled, the remaining rules spring into action.

Rules are evaluated from top to bottom. As soon as traffic hits a rule that matches, it will stop.

For example, if you want to allow all traffic except http traffic:

- Disable (uncheck) the first rule "ALL-DO NOT MODIFY". This forces the remaining rules to take precedent.
- Disable (uncheck) the rule "HTTP-DO NOT MODIFY". This blocks http traffic from passing through the firewall.

With the ALL rule disabled (unchecked) you can enable/disable the others very quickly. The next one is DNS. Do





you want DNS? Yes (checked), No (unchecked). Do you want http? Yes (checked), No (unchecked), etc.

You can also create a custom rule.

12.6.3.1. Create a Custom Rule

Scroll down to the bottom of the page to the section "New forward rule". Click <Add and edit>.

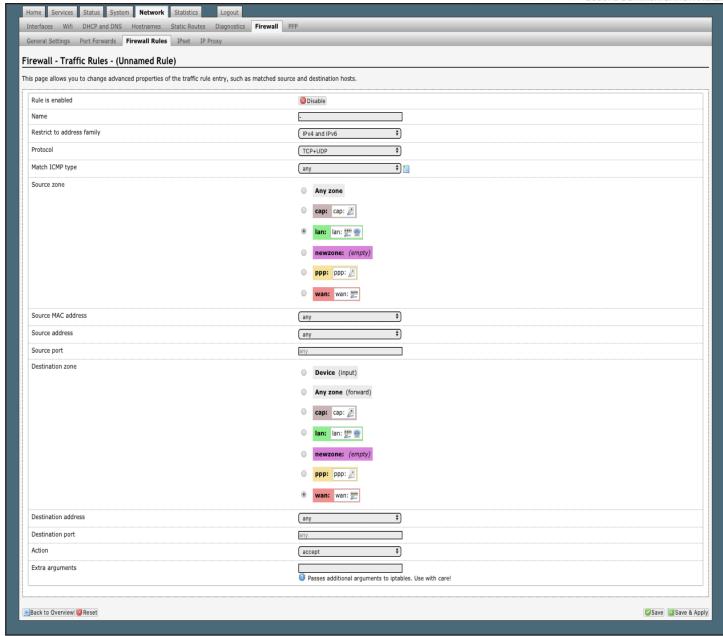


Here you can give the new rule a name, specify the protocol, restrict the rule to a certain zone, identify the source IP address, the destination IP address, port numbers, etc.

This is standard firewall convention. Once the rule is created, click <Save & Apply>. Place the rule where you want it on the traffic rule list using the Sort column arrows for up and down. This is a full-featured firewall that you can customize to meet your needs.







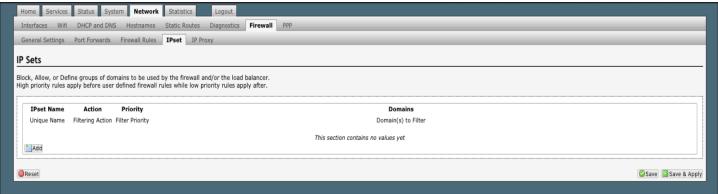
See IP Sets (Chapter 12.6.4) for creating block and allow rules by domain name instead of IP address.

12.6.4. IP Sets

Use IP sets for cloud-based services where standard firewall rules will not work. This allows block and allow rules by domain name instead of by IP address. IP sets rules take priority over anything in the firewall.







Click <Add> to create a new IP set rule.

Action Definitions:

- Block: Rejects the domain.
- Pass: Allows the domain.
- **Define:** Defines the domain only. It neither blocks nor allows. You can specify how routing occurs for that domain in the Failover/Load Balancing Rules. (See Chapter 12.9).

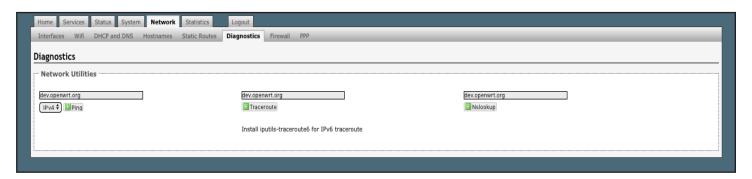
You can group multiple domain names into one IP set rule.

Each IP set rule must be assigned to a Policy (See Chapter 12.9).

12.7. Diagnostics

Requires "superadmin" login.

There are several Diagnostic tools available:



- Ping: Tells you if you have IP connectivity.
- Traceroute: Gives you all the IP addresses in a hop to the final destination.
- Nslookup: Gives you the IP address of whatever you enter into the text box.

12.8. PPP

Requires "superadmin" login.

It is possible to use a USB connected satellite phone or LTE/GSM modem that does PPP to connect for email and web browsing (for example: IsatPhone Pro or Iridium handheld).

NOTE: Web browsing is not recommended when using a low bandwidth device.





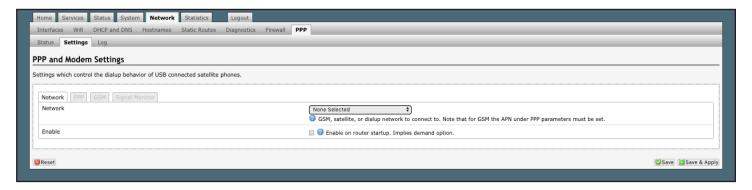


With PPP configured, you can bring up the connection manually; it will stay connected until you disconnect, or the idle timeout is reached. If not using the Demand feature, you must bring up the PPP connection manually.

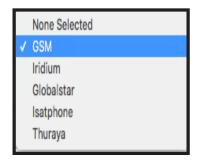
12.8.1. PPP Settings Configuration for USB Connected Satellite Device

Requires "superadmin" login.

Use the following to configure the PPP interface for use with a USB connected satellite phone.



1. Using the drop-down menu, click the appropriate satellite network.

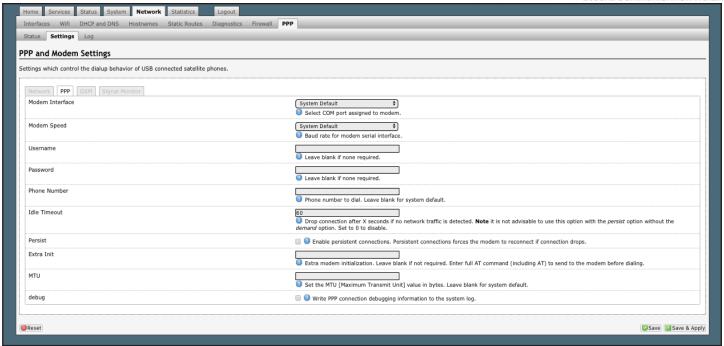


- 2. Click the Enable checkbox to maintain this setting during router startup. Otherwise, you must re-configure for PPP use with each router startup.
- 3. Click <Save & Apply> to apply the change.

Move to the Settings > PPP Tab:





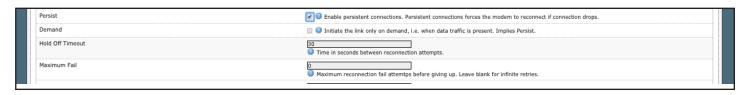


Configure the PPP Settings as necessary.

- **Modem Interface:** Do not modify from "System Default" unless you have trouble connecting. If required, use the drop-down list, select the COM port assigned to the USB connected satphone.
- **Modem Speed:** Do not modify from "System Default" unless you have trouble connecting. If required, use the drop-down list, select the baud rate for the USB connected satphone.
- **Username:** If the satellite network provider requires a username in order to connect to their network, enter it here. (If you use the APN Wizard, this will be completed automatically).
- **Password:** If the satellite network provider requires a password in order to connect to their network, enter it here. (If you use the APN Wizard, this will be completed automatically).
- Phone number: The Optimizer is pre-configured with the standard number to dial for the different satellite
 networks. Unless your satellite airtime provider requires an alternate phone number, this field can be left blank
 in order to use the default dialup number.
- **Idle Timeout:** The default is set to 60 seconds. If no network traffic is detected during this Idle Timeout period, the connection will drop. To disable the Idle Timeout feature, set to 0.

NOTE: If Persist is enabled with Demand disabled, the Idle Timeout is ignored.

 Persist: Check this box to enable persistent connections. If the connection drops the modem will attempt to reconnect. With Persist selected, three additional settings appear:



- **Demand:** Check this box to bring up the link only on demand, such as when data traffic is present. The satphone or LTE/GSM modem that does PPP, the link remains down until it detects network traffic. It will bring up the link automatically and stay up when there is traffic or until the Idle Timeout setting reached. With Demand selected, Persist is implied. See Persist above.
- Hold Off Timeout: The default is 30 seconds. If the link is dropped, this is the time it will wait to try connection
 again.





- Maximum Fail: The default is never. This is the number of times it will try to re-connect. If re-connection does
 not happen within this number, it will stop trying.
- Extra Init: If required, enter the full AT command to send to the modem before dialing.
- MTU (Maximum Transmit Unit): This should be blank to use the system default; or, you can set the limit here, in bytes. Only change this setting if required to do so by your satellite provider.
- **Debug:** If you are having trouble with the PPP connection this debug log may help you diagnose the problem.

Click <Save & Apply>.

12.8.2. PPP Settings Configuration for LTE/GSM Modems

Requires "superadmin" login.

The LTE/GSM feature is offered for your convenience, but we are not able to support it. The information provided here is general in nature but may not be sufficient to establish a connection. If you run into any difficulties, you must contact your cellular network provider for support.

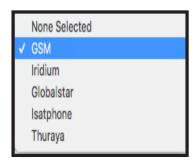
If you have an LTE/GSM-based cellular phone, it may be possible to use the LTE/GSM network, when available, for Email and Web Browsing data over the Optimizer. You will get the benefits of compression and a faster data transfer rate than over a satellite phone which typically equates to cost savings.

Only LTE/GSM-based service can be configured here. CDMA-based service will NOT work. If you are unsure of which service you have, contact your cellular provider before attempting to configure for connection.

Use the following to configure the PPP interface for use with an LTE/GSM modem.



1. Using the drop-down menu, click GSM.

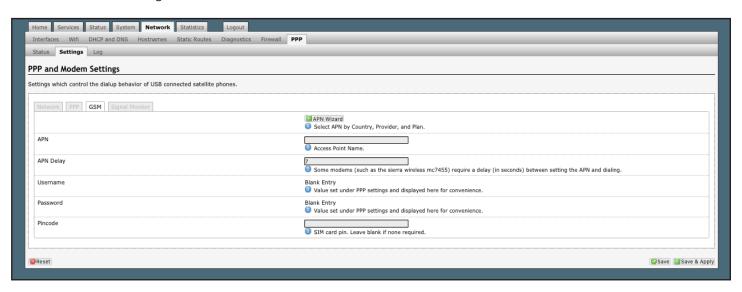


- 2. Click the Enable checkbox to maintain this setting during router startup. Otherwise, you must re-configure for PPP use with each router startup.
- 3. Click <Save & Apply> to apply the change.





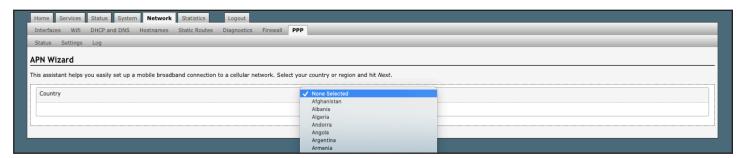
Move to the Settings > GSM Tab:



Before you can configure the Optimizer for LTE/GSM, you must:

- Obtain a USB data dongle from your cellular provider. Your provider may require you to purchase a data plan.
- Activate the USB data dongle with your cellular carrier and test it to make sure it works. Typically, testing
 requires only that you plug the USB Data Dongle into your computer and see if you can get on the Internet. If
 testing fails, contact your cellular carrier for support.

The APN Wizard contains many providers and plans. Using it will automatically set the configuration for you. Click <APN Wizard> to start the configuration:



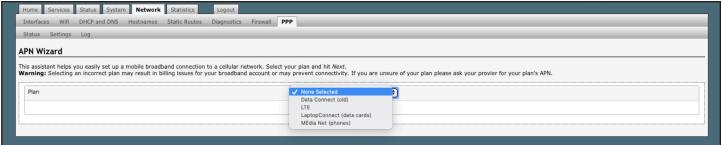
Select the appropriate country from the drop-down list and then, click <Next>.



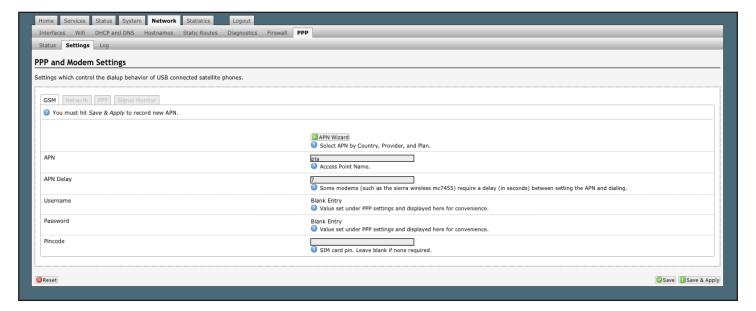
Select your Cell Provider from the drop-down list and then, click <Next>.







Select your Plan from the drop-down list and then, click <Next>.



If you have protected your cellular SIM card with a PIN-Code, enter the PIN-Code in the Pincode text box.

Click <Save & Apply> to complete the configuration.

NOTE: If the APN Wizard does not contain the information for your provider or plan, contact your cellular provider to obtain the information required to connect to their LTE/GSM network.

The information may include:

- Access Point Name (APN).
- Username required for access to the APN.
- Password required for access to the APN.

Enter the required information in the PPP Settings pages.

See Chapter 9.13 for additional PPP Settings.

12.8.2.1. Using LTE/GSM

When you want to use LTE/GSM service instead of satellite service we recommend that you disconnect the satellite terminal from the Optimizer before attempting an LTE/GSM connection.

Plug the USB data dongle you obtained from your cellular provider into the USB/LTE/GSM port of the Optimizer.

With the LTE/GSM interface properly configured, it becomes an important component of the Failover sequence.





12.8.2.2. Changing from LTE/GSM service to satellite service

When you travel beyond LTE/GSM range you must:

- Remove the LTE/GSM data dongle from the Optimizer's USB/LTE/GSM port.
- Reconnect your satellite phone/terminal to the Optimizer.

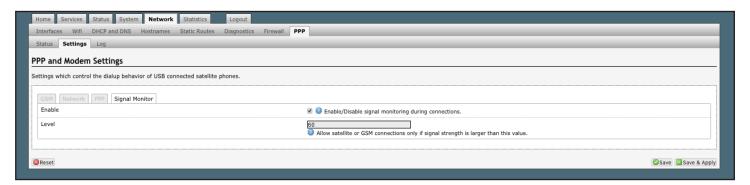
NOTE: We are not able to support the LTE/GSM feature. If you experience any connection difficulties when using this feature, you must contact your LTE/GSM network provider for support.

12.8.3. Signal Monitor

Requires "superadmin" login.

Signal monitor queries your satellite device or GSM modem to determine if the signal strength is sufficient to make a successful data connection. Typically, a minimum of 60% signal is required; however, 100% is ideal for the fastest possible data transfer rate.

NOTE: Some older satellite phones (for example, the Iridium 9505a) do not support the signal monitor feature. For these older satellite phones, the signal monitor MUST be DISABLED for a successful data connection.



From this screen you can enable or disable signal monitor using the "Enable/Disable signal monitoring during connections." checkbox.

You can change the level of the Signal Monitor. Keep in mind that 60% is typically the minimum required for a successful data connection. If you must change the Signal Monitor, we recommend lowering the Level vs. disabling it. Many IsatPhonePro users have had success by lowering the level to 40 or 30.

CAUTION: Reducing the signal strength to less than 60% or disabling it altogether may cause lengthy data connections due to poor signal.

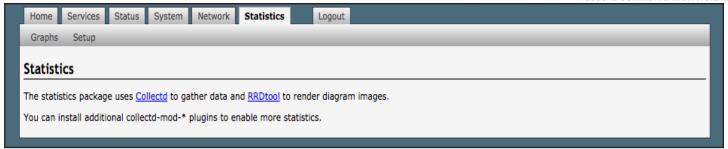
When you are done making changes, click <Save & Apply>.

Statistics

Requires "superadmin" login.







13.1. Graphs

Similar to the Realtime Graphs in the Status tab, Statistics Graphs shows usage over a specific timespan.



To modify the timespan, use the down arrow next to <Display timespan>, then click <Display timespan> to view the graph.

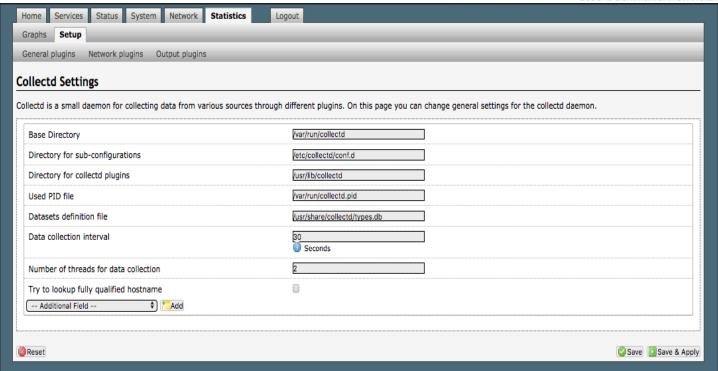
13.2. Setup

The Optimizer CrewComm uses several tools for collecting data statistics.

Use Setup to change general settings for the collectd daemon.







14. Remote Support

NOTE: Do not set your remote Access Port to the presented port in this document's screen shots. The router will present a port to you. Do not attempt to log in with the example remote login, it is just presented for your knowledge.

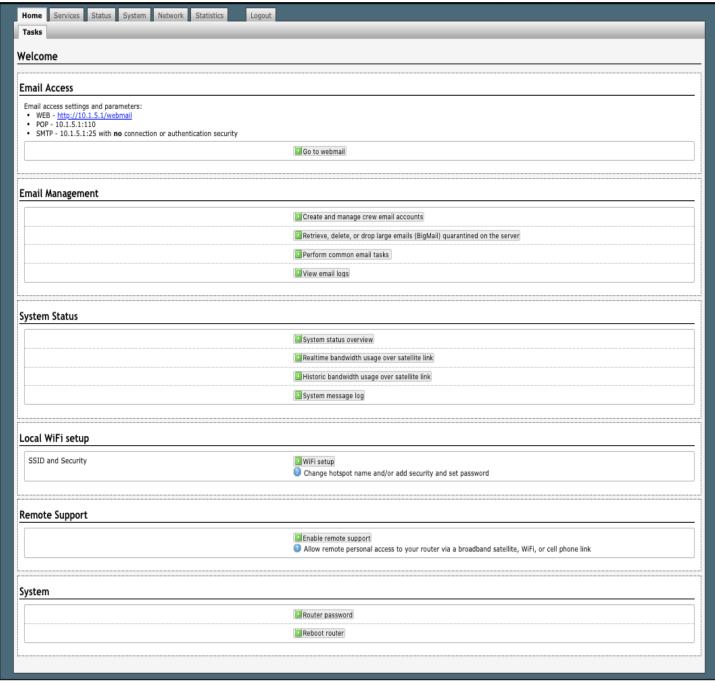
Remote Support Access can be granted from two locations, each with some differences.

• Temporary Remote Support Access - The first remote support login access is located from the homepage and permits a one-time temporary access. Once the router is rebooted, this access will no longer be available.

To enable Temporary Remote Support Access, click <Home> tab, scroll down to the "Remote Access" section.

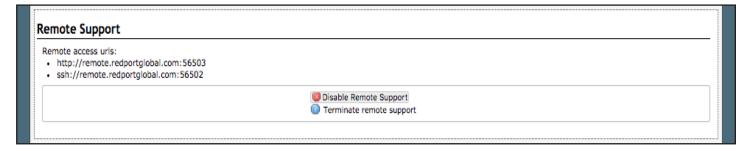






Click <Enable remote support> under "Remote Support" section of the <Home> tab.

When remote support is enabled Remote Access URLs are displayed.



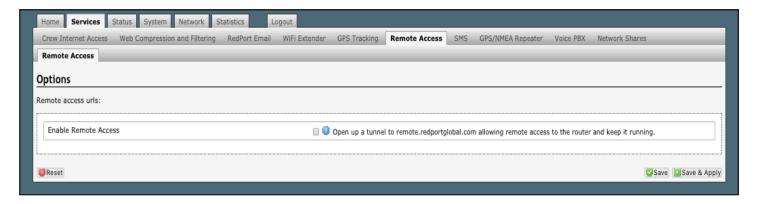




Disabling this Remote Support will not disable the persistent Remote Support. To disable this remote support access, either:

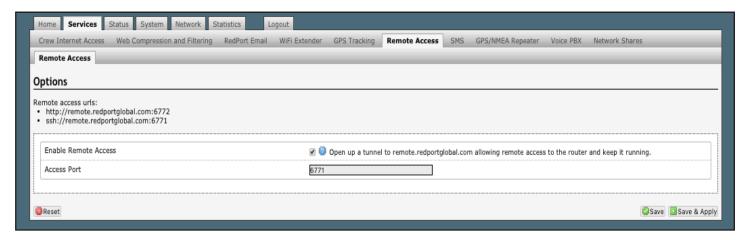
- Reboot the router.
- Click < Disable Remote Support>.
- Persistent Remote Support Access The second remote support login access is located from the Services tab
 and permits persistent access. Even if the router is rebooted, this access will remain.

To enable Persistent Remote Support Access - Navigate to <Services> tab, then to <Remote Access>.



Click "Enable Remote Support" and then click "Save & Apply".

When remote support is enabled Remote Access URLs are displayed.



Disabling this Remote Support will not disable the one-time Remote Support. To disable remote support access:

Click <Services> tab, then click "Enable Remote Access".





15. Corporate Contact Information

For any questions, concerns, or recommendations, please contact us:

RedPort Company Information

For product orders, support or returns, please contact:

Phone: International: +1 865.379.8723

USA: 877.379.8723
Email: info@redportglobal
Sales: sales@redportglobal.com

Web: redportglobal.com

RedPort Corporate Address

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