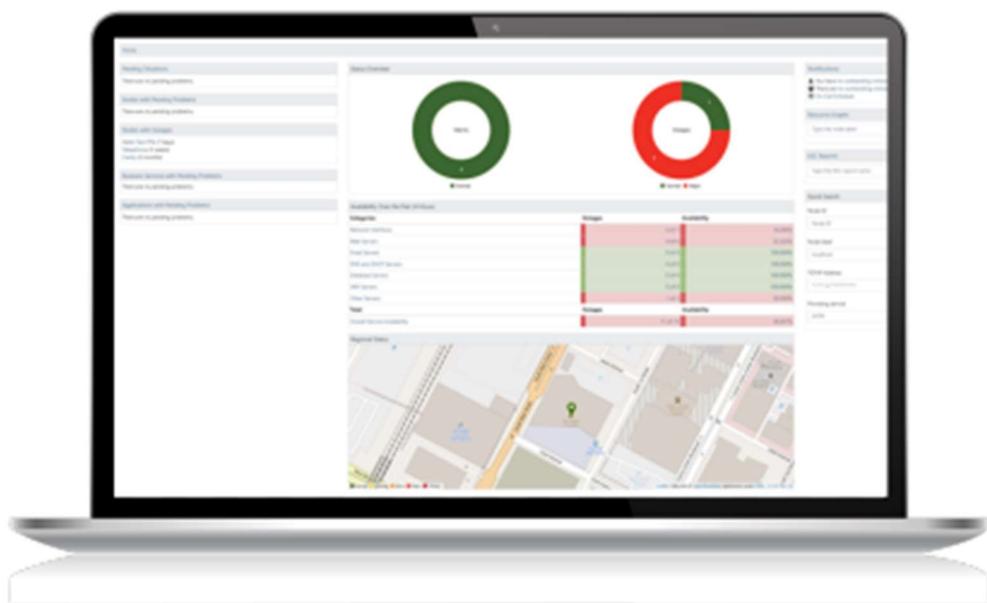




BLUE ALERT® MONITOR



Administrator Guide



Code Blue

800,205.7186 • www.codeblue.com



Table of Contents

- IP Network Resources 2**
 - Blue Alert Connect 3
 - Blue Alert Monitor 3
- Configuring Server Network Settings 3**
 - Set Static IP through Webmin GUI..... 4
 - Set Static IP through CLI 6
 - Configure 'From' Email Address..... 7
 - Logging into Blue Alert Monitor 8
 - Quick-Add a device..... 9
 - Building and Managing Requisitions 11
 - Building and Managing Nodes Within Requisitions..... 12
- Notifications Setup..... 14**
- Generating Reports 17**
- Geocode Service Setup..... 18**

IP Network Resources

Please note the below IP Network Ports are specified if you restrict Ports in your network and need to be allowed for the appropriate products listed

Blue Alert Connect

SSH Console Port 22/TCP, used to allow SSH to the PBX

HTTP/HTTPS Port 80/443/TCP, used to access the PBX Admin GUI

SMTP Port 25/TCP, Simple Mail Transfer Protocol

chan_SIP Port 5060/UDP, standard port for SIP signaling

chan_SIP Port 5061/UDP, alternate SIP port

chan_PJSIP Port 5160/UDP, standard port for SIP signaling

chan_PJSIP Port 5161/UDP, alternate port for SIP signaling

RTP for SIP Ports 10000-20000/UDP (customizable), used for voice portion of SIP call

Blue Alert Monitor

SSH Console Port 22/TCP, used to allow SSH access to the server

HTTP/HTTPS Port 80/443/TCP, used for service monitoring

SNMP Port 161/UDP, used for data collection

SNMP Trap Port 162/UDP, traps are unsolicited messages from an agent to a manager

SMTP Port 25/TCP, used for e-mail delivery of notifications, normally via a smart SMTP relay

HTTP Port 8980/TCP, The OpenNMS web UI is served on this port by default

Configuring Server Network Settings

Please note the applications of both Connect and Monitor have default static IP addresses of 192.168.0.11 and 192.168.0.12 respectively. To access the Webmin GUI and CLI for the first time a Workstation or laptop configured with the IP of 192.168.0.1 connected to the server via Network port 1 or on a local switch is required. If this is not an option, please contact Code Blue Technical Support.

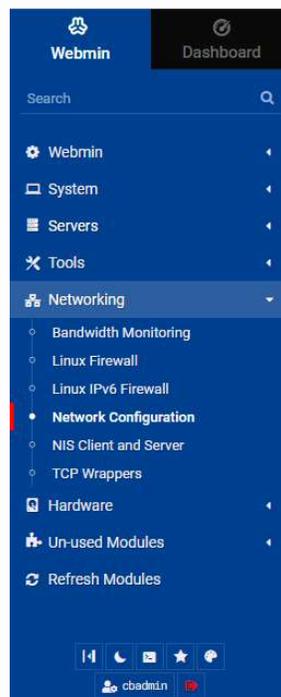
Set Static IP through Webmin GUI

Browse to the IP address of Blue Alert Monitor via port 10000 in any browser. The default IP address is <https://192.168.0.12:10000>. Log into Blue Alert Monitor Webmin interface, default credentials:

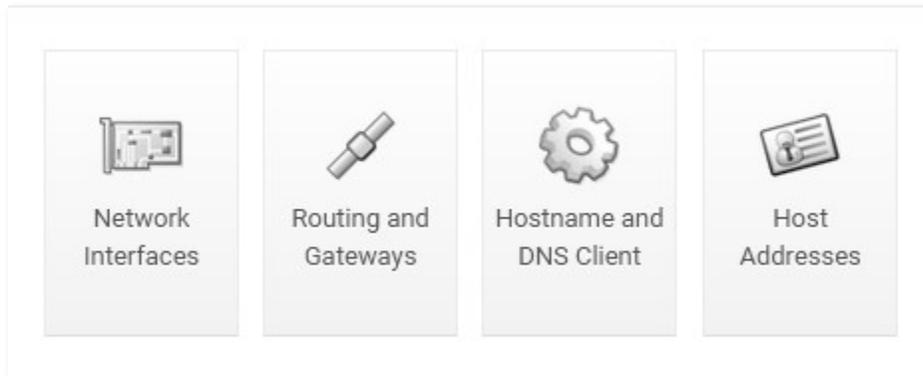
Username: cbadmin

Password: CodeBlue92

On the left-hand side browse to Networking>Network Configuration.



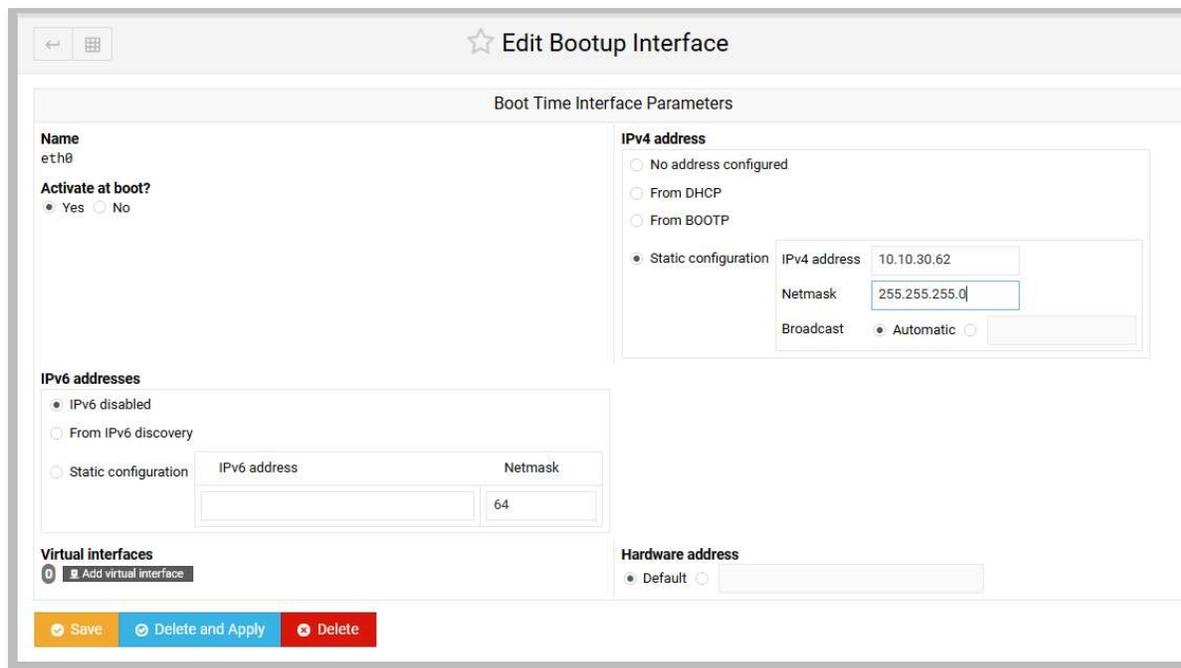
Select 'Network Interfaces' from the central menu.



Click the name of the network port (eth0). The box does NOT need to be checked.

<input checked="" type="checkbox"/> Select all	<input checked="" type="checkbox"/> Invert selection	<input type="checkbox"/> Add a new interface	<input type="checkbox"/> Add a new bridge						
Name	Type	IPv4 address	Netmask	IPv6 address	Active				
<input type="checkbox"/> eth0	Ethernet	From DHCP	From DHCP		Yes				

Here the static network information can be entered. Once complete click 'Save' to return to the previous screen.



Edit Bootup Interface

Boot Time Interface Parameters

Name
eth0

Activate at boot?
 Yes No

IPv4 address

- No address configured
- From DHCP
- From BOOTP
- Static configuration
 - IPv4 address: 10.10.30.62
 - Netmask: 255.255.255.0
 - Broadcast: Automatic

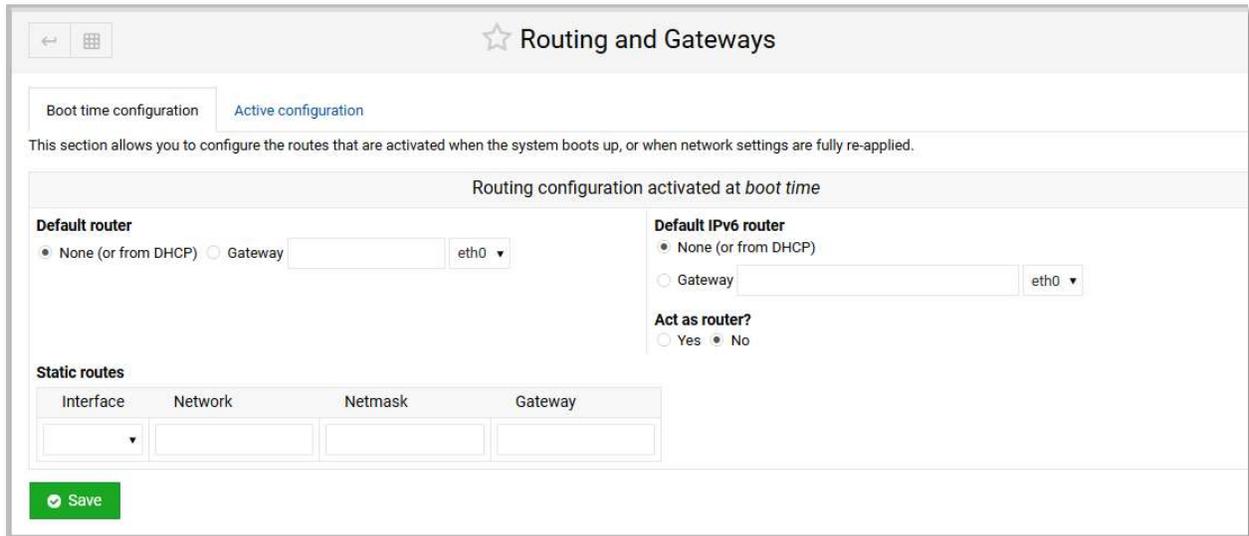
IPv6 addresses

- IPv6 disabled
- From IPv6 discovery
- Static configuration
 - IPv6 address:
 - Netmask: 64

Virtual interfaces

Hardware address
 Default

To set the Gateway return to the Network Configuration menu and select 'Routing and Gateways'.



Here the Gateway and static routing can be entered. Once complete click 'Save' to return to the previous screen.

Once all network information has been entered return to the Network Configuration page and click 'Apply Configuration'.

Warning - this may make your system inaccessible via the network and cut off access to Webmin as network information will be changed.

Set Static IP through CLI

From an SSH Client, or using the terminal feature in the Webmin GUI, you can establish a connection to the Blue Alert Monitor Server. The default IP is 192.168.0.12 and default credentials are:

Username: cbadmin

Password: CodeBlue92

Now connected to the Blue Alert Monitor instance run the command:

```
sudo nano /etc/netplan/50-cloud-init.yaml
```

Note: Pressing 'Tab' after '/etc/netplan' will auto-fill the file name.

Administrator Guide

Once in the file editor you can simply change the 'addresses', 'gateway4', and 'nameservers: addresses' fields.

```
# This is the network config written by 'subiquity'
network:
  renderer: networkd
  ethernets:
    ens33:
      dhcp4: no
      addresses: [192.168.1.171/24]
      gateway4: 192.168.1.1
      nameservers:
        addresses: [8.8.8.8,8.8.4.4]
  version: 2
```

Notes on editing a yaml file:

- Indentation is required. Please take care to not alter indentation or the name of the device (ens33 in this example but may be different in your server)
- If needed, indent the lines only use the 'spacebar'; as 'tab' will result in a spacing error.
- There is a space after each colon before entering the field such as dhcp4: no
- When adding numbers to the file use the top row number keys and not the numpad. The numpad is seen as function keys not numerical values on most systems.

Once the changes are made press 'ctrl+X' to save and exit. You will have to press 'y' to confirm the file name then 'enter' to fully save your changes.

Once back to the command line enter the following command to apply the changes:

```
sudo netplan apply
```

If any errors are found in the .yaml file this command will result in a failure. The details in the failure will point to which line in the file needs to be adjusted.

Once accepted you may lose connection to the server as its network address has changed.

Configure 'From' Email Address

From an SSH Client, or using the terminal feature in the Webmin GUI, you can establish a connection to the Blue Alert Monitor Server. The default IP is 192.168.0.12 and default credentials are:

Username: cbadmin

Password: CodeBlue92

Now connected to the Blue Alert Monitor open the javamail configuration file with the nano text editor with the command:

```
sudo nano /etc/opennms/javamail-configuration.properties
```

Arrow down to the line stating:

```
#org.opennms.core.utils.fromAddress=root@[127.0.0.1]
```

Delete the # symbol at the beginning and replace the 'root@[127.0.0.1]' with your desired from email address.

```
#####  
# This file is the configuration for the the JavaMailer class. It is used to  
# specify the details of the JavaMailer system properties  
#####  
#  
# Properties are defined but commented out indicating the default values.  
#  
#  
# This property defines system sender account.  
#  
# The default setting is root@[127.0.0.1]  
org.opennms.core.utils.fromAddress=technicalsupport@codeblue.com  
#  
# No default value for replyToAddress  
#org.opennms.core.utils.replyToAddress=
```

Once the changes are made press 'ctrl+X' to save and exit. You will have to press 'y' to confirm the file name then 'enter' to fully save your changes.

Logging into Blue Alert Monitor

To access Blue Alert Monitor web application, browse to **http://<ip of server or container>:8980**

The default login is:

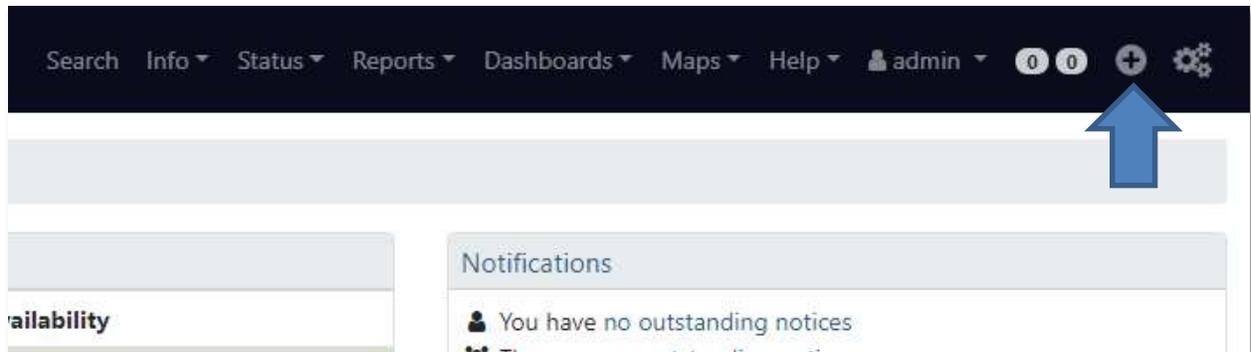
Username: admin

Password: admin

Quick-Add a device

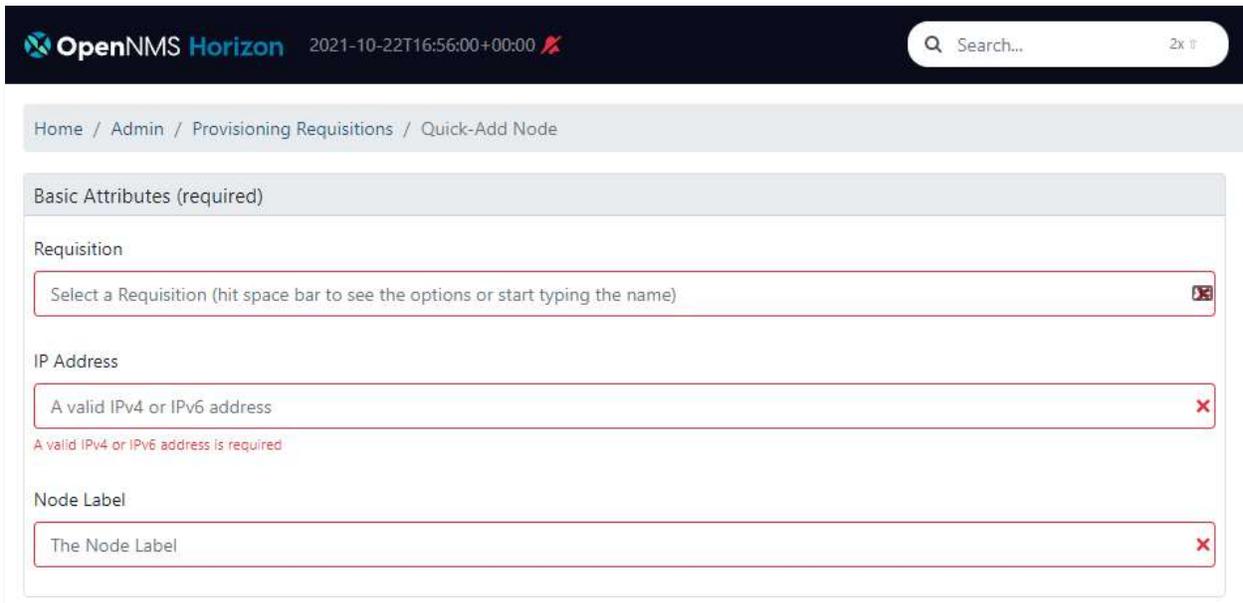
When using the quick-add feature optional fields, such as geocoding information, will be left blank. This information can be added later.

Logged into the Blue Alert Monitor web console, click on the plus sign found in the top right corner.



Under the Basic Attributes enter in the name of requisition that you would like to add the device to. A requisition named 'Code blue' has already been provided. If you would like to create new requisition enter the name here and a requisition with default settings will be created and can be adjusted later.

Next add the IP address of the device to be monitored and finally the Node Label or description. The node label will be used to identify the device within the console and notifications.



The screenshot shows the OpenNMS Horizon interface for adding a node. The breadcrumb trail is: Home / Admin / Provisioning Requisitions / Quick-Add Node. The form is titled "Basic Attributes (required)" and contains three input fields:

- Requisition:** A dropdown menu with the placeholder text "Select a Requisition (hit space bar to see the options or start typing the name)".
- IP Address:** A text input field with the placeholder "A valid IPv4 or IPv6 address". Below the field, a red error message states: "A valid IPv4 or IPv6 address is required".
- Node Label:** A text input field with the placeholder "The Node Label".

Within the SNMP Parameters section select the correct version of SNMP Version based on your device model. (Refer to table below). This is an optional section used for SNMP Polling only it will have no effect on receiving SNMP Traps. The default Community string for Code Blue Devices is public. If the community had been changed in the device reflect that change here.

MODEL	SNMP Version
IP1500	V1
IP2500	V1
IP5000	V1
Centry	V2c
LS1000	V2c
LS2000	V2c

SNMP Parameters (optional)

No SNMP

Version

v2c

Community String

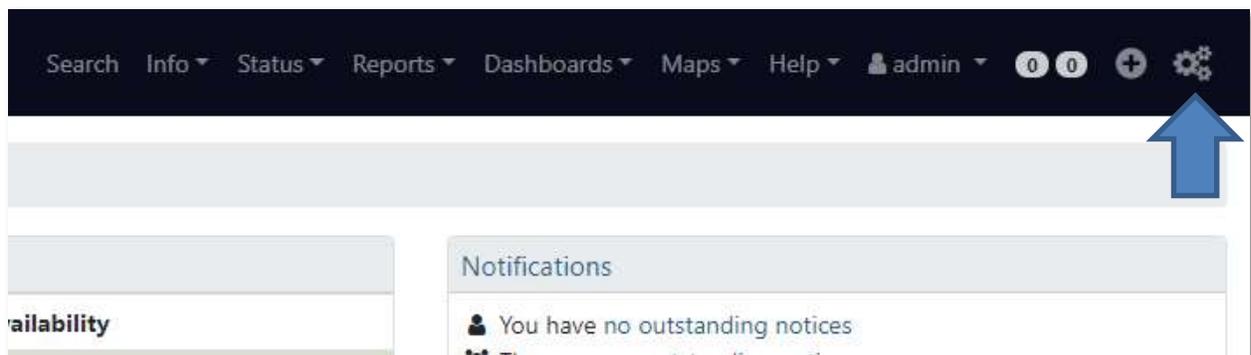
public

To confirm the creation of your device node. Browse to 'Info > Nodes' from the top bar to see a list of devices.

Building and Managing Requisitions

Requisitions are used in Blue Alert Monitor to group and organize devices.

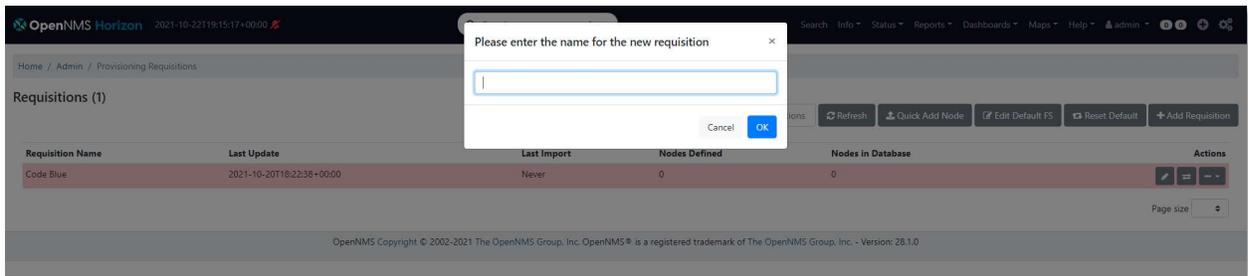
Logged into the Blue Alert Monitor web console, click on the cog wheel (configure) button in the top right corner.



In the "Provisioning" Section select "Manage Provisioning Requisitions"

You will notice that a requisition named "Code Blue" has already been added.

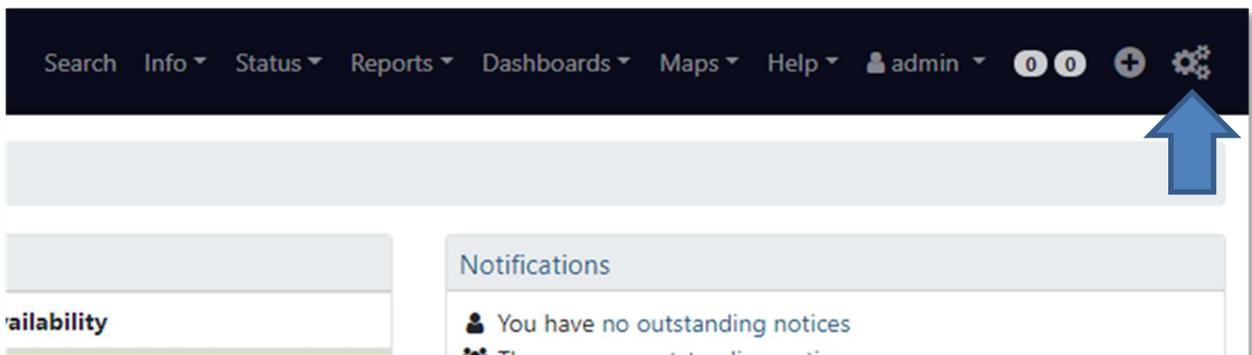
To add a new requisition, click on "+ Add Requisition" and add a new name.



With the new requisition created you can use the quick-add feature to begin adding devices to the requisition or begin to edit nodes within.

Building and Managing Nodes Within Requisitions

Logged into the Blue Alert Monitor web console, click on the cog wheel (configure) button in the top right corner.



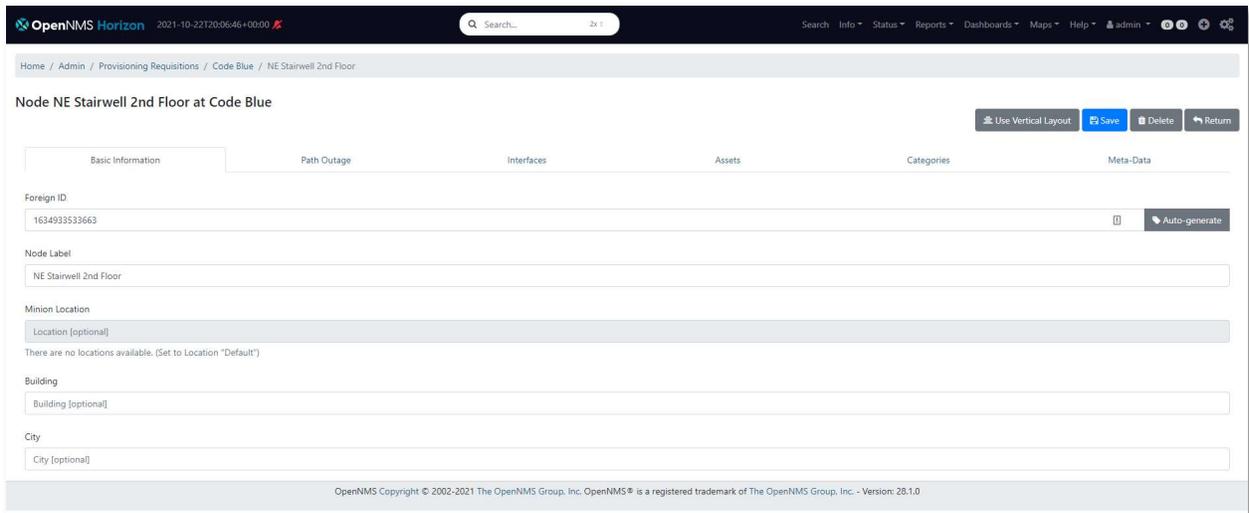
In the “Provisioning” Section select “Manage Provisioning Requisitions” and click on the edit button (pen icon) on the requisition you want to add the device to.

Any device that was added through the Quick-add feature will appear here.

Select “+ Add Node”

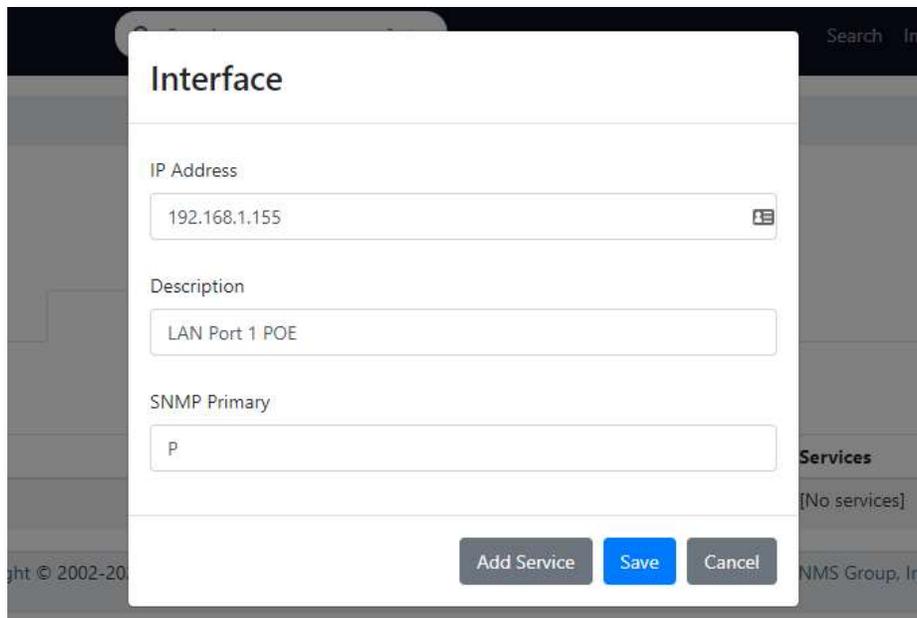
There are two optional layouts for this section; Vertical (all options are seen on one page) and horizontal (individual sections are separated through multiple tabs). This guide will cover the horizontal layout.

On the far-left tab labeled “Basic Information” enter a “Node Label” (Location Description, Extension Number, etc.) You can also add a building description and city name to help identify the unit but is not required.

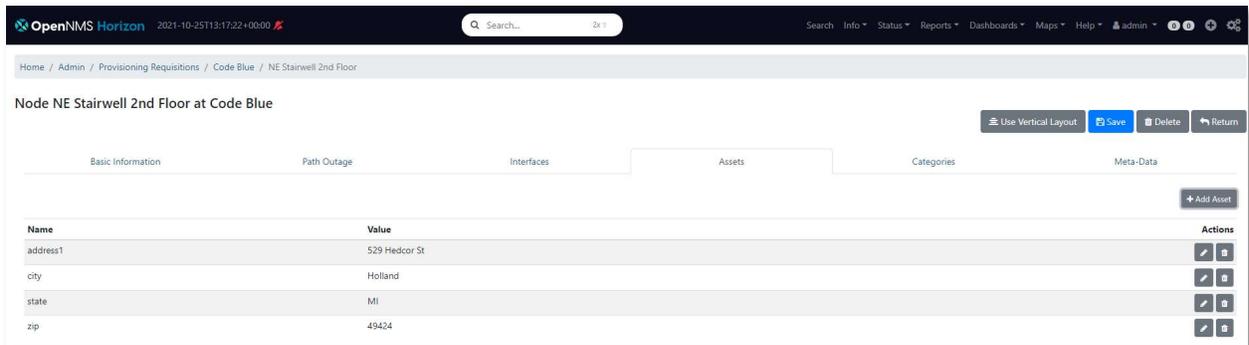


The second tab “Path Outage” is not used with Code Blue devices and can be left blank.

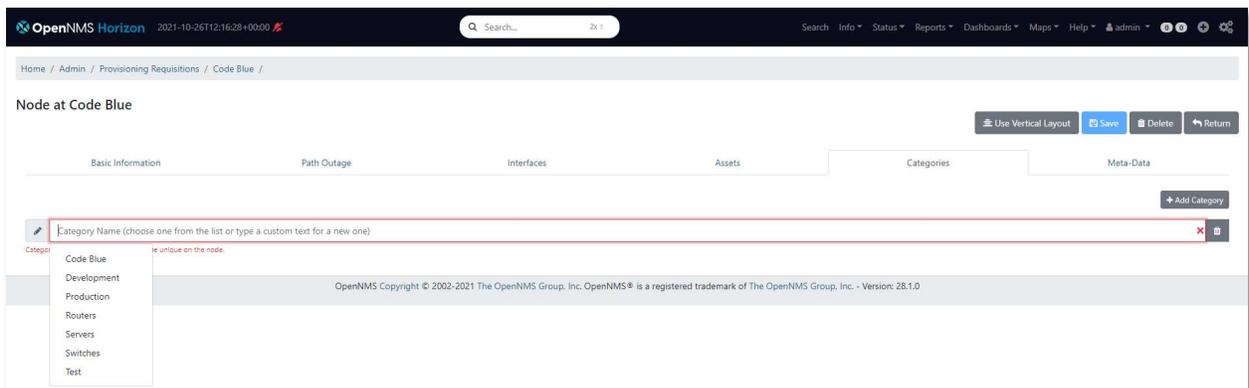
On the third tab labeled “Interfaces” click on ‘+ Add Interface’. Enter a valid IP Address in the first field. A description of the interface is optional, and the SNMP Primary should be left with the default setting “P”.



Within the “Assets” Tab click “+ Add Asset” to enter detailed information on the unit. Here you can add information such as Address1, city, state, and zip code to work with geocoding services. Enabling geocoding services is cover later in a later section of this guide.



The second to last tab, “Categories”, will be used to create custom reports. Click on “+ Add Category” on the right-hand side of the screen and select from the pre-determined list or enter in a custom name to create a new category such as Code Blue Devices.

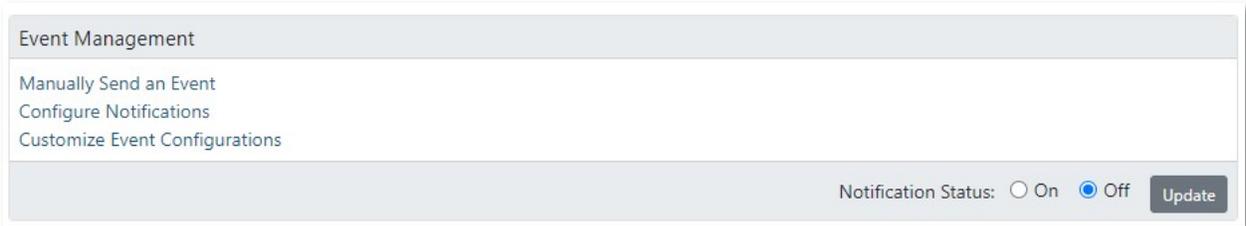


The final tab, “Meta-Data” can be left blank.

Notifications Setup

To configure, customize, enable, and disable notification begin by clicking the cog wheel in the top right corner.

In the “Event Management” Section you can enable and disable all notifications by selecting the corresponding radial. Once selected click “update” to confirm the change.



Event Management

- Manually Send an Event
- Configure Notifications
- Customize Event Configurations

Notification Status: On Off

By default, the notifications will be sent to the email addresses associated with the 'Admin' group. To add additional emails, click "Configure Notifications" then "Configure Destination Paths"



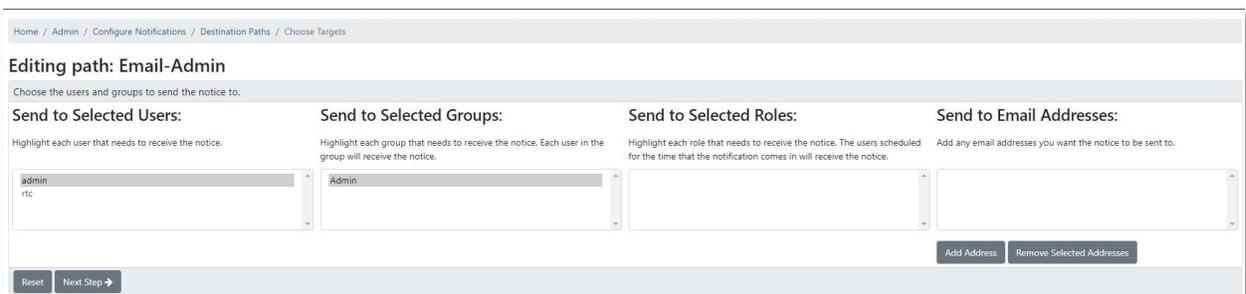
Configure Notifications

- Configure Event Notifications
- Configure Destination Paths
- Configure Path Outages

The 'Admin' group will be selected by default. Click edit on the left-hand side.

Here you can rename the Destination Path, add a delay, and add additional email addresses to receive the notification. To add additional email address, click on "Edit" next to "Initial Targets".

Any created groups can be added to this path and any individual emails can be added by selecting "Add Address" on the right side. Once added simply click "Next Step" leaving the remaining pages on their default settings until returning to the original editing page. Then click "Finish" to finalize the changes.



Home / Admin / Configure Notifications / Destination Paths / Choose Targets

Editing path: Email-Admin

Choose the users and groups to send the notice to.

Send to Selected Users:	Send to Selected Groups:	Send to Selected Roles:	Send to Email Addresses:
<small>Highlight each user that needs to receive the notice.</small> <input type="text" value="admin"/> <input type="text" value="rtc"/>	<small>Highlight each group that needs to receive the notice. Each user in the group will receive the notice.</small> <input type="text" value="Admin"/>	<small>Highlight each role that needs to receive the notice. The users scheduled for the time that the notification comes in will receive the notice.</small> <input type="text"/>	<small>Add any email addresses you want the notice to be sent to.</small> <input type="text"/>
<input type="button" value="Reset"/> <input type="button" value="Next Step →"/>			<input type="button" value="Add Address"/> <input type="button" value="Remove Selected Addresses"/>

To customize, enable, and disable individual notifications click "Configure Notifications" then "Configure Event Notifications".

Individual events can be turned on/off here by selecting the correct radial option. Please note the events labeled as "Code Blue Cold Start" and "Code Blue Node Down" work with all Code Blue Model Phones. All other event notifications are labeled with the model version the event works with (i.e., IP5000 2500 1500 versus LS1000 LS2000 Centry)



Event Notifications				
Actions			Notification	Event
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="radio"/> Off <input checked="" type="radio"/> On	Code Blue Cold Start	SNMPv2-MIB defined trap event: coldStart
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="radio"/> Off <input checked="" type="radio"/> On	Code Blue Node Down	OpenNMS-defined node event: nodeDown
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="radio"/> Off <input checked="" type="radio"/> On	IP5000 2500 1500 Account Registration Status	IP5000 Account Registration Status
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="radio"/> Off <input checked="" type="radio"/> On	IP5000 2500 1500 Audio Playback Failure	IP5000 Audio Playback Failure
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="radio"/> Off <input checked="" type="radio"/> On	IP5000 2500 1500 Aux Output Toggled	IP5000 AuxOut Toggled
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	<input type="radio"/> Off <input checked="" type="radio"/> On	IP5000 2500 1500 Button Failure	IP5000 Button Failure

To adjust the description, email subject line, email body, or path of the email select the edit button next to the individual event notification. On the first and second page after clicking “Edit” do not make any changes simply click “Next” and “Skip Results Validation” at the bottom. On the third page information can be edited.

Editing notice: IP5000 2500 1500 Audio Playback Failure

Choose the destination path and enter the information to send via the notification

Name:

Description:

Var-Bind: Name: Value:

Parameter:

Choose A Path:

Text Message:

Short Message:

Email Subject:

Special Values: Can be used in both the text message and email subject:

%noticeid% = Notification ID number	%time% = Time sent	%severity% = Event severity
%nodelabel% = May be IP address or empty	%nodeid% = Database ID of node or empty	%foreignid% = Foreign Source ID of node or empty
%eventid% = Event ID, may be empty	%interface% = IP address, may be empty	%service% = Service name, may be empty
%ifalias% = SNMP ifAlias of affected interface	%parm[a_parm_name]% = Value of a named event parameter	%parm[#N]% = Value of the event parameter at index N
%interfaceresolve% = Reverse DNS name of interface IP address	%operinstruct% = Operator instructions from event definition	\$(context:key ...) = node / interface / service meta-data

Generating Reports

From the main page browse to Reports>Database Reports.

To view the availability and activity of the devices built there are three main reports to view: Early Morning Report, Availability by Node, and Event Analysis Report.

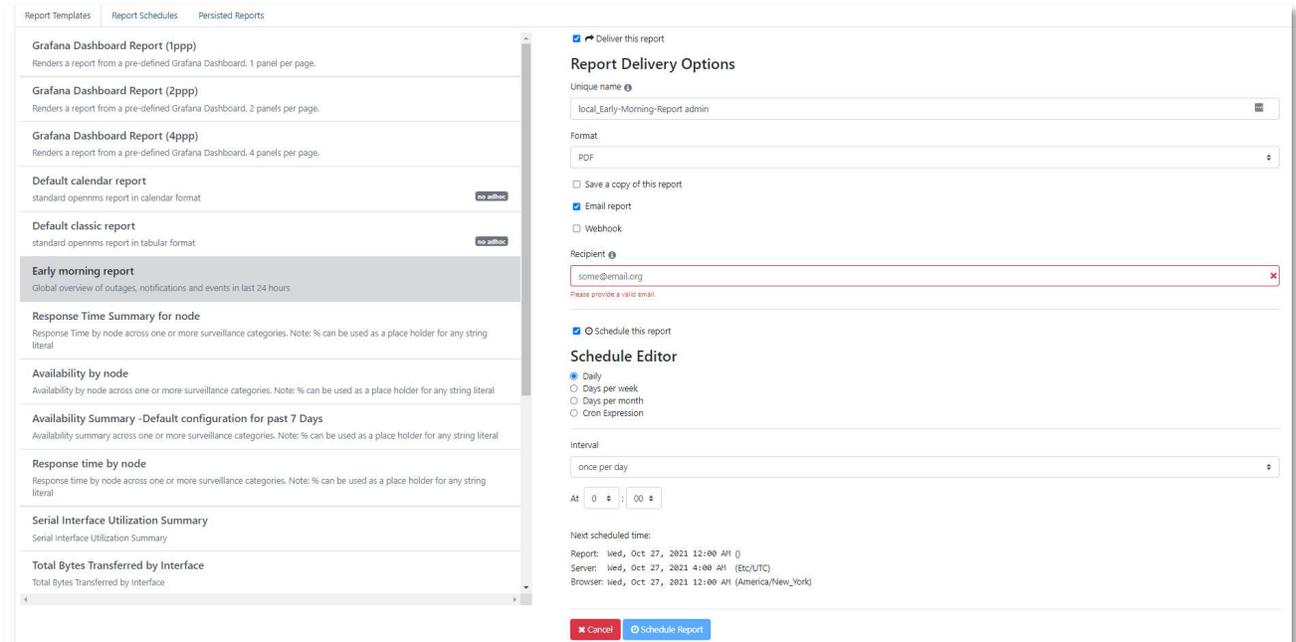
The Early Morning Report shows global overview of outages, notifications, and events in the last 24 hours. This is a typically used as a daily report to determine behavior of devices.

Availability by Node report will show the status of each device. To utilize this report devices must have a designated surveillance category assigned. Instructions to assign categories can be found in the Building and Managing Nodes Within Requisitions section of this guide.

Administrator Guide

The third report, Event Analysis Report, will present a detailed analysis of all events that have been recorded by Blue Alert Monitor.

All reports can be printed manually, emailed out, and scheduled. After selecting the report on the left side of the screen the options for delivery methods will appear on the right side of the screen.



The screenshot displays the 'Report Templates' and 'Report Schedules' sections. The 'Early morning report' is selected, showing a global overview of outages, notifications, and events in the last 24 hours. The 'Report Delivery Options' panel on the right is active, showing the following settings:

- Deliver this report
- Report Delivery Options**
- Unique name: local_Early-Morning-Report admin
- Format: PDF
- Save a copy of this report
- Email report
- Webhook
- Recipient: some@email.org
- Schedule this report
- Schedule Editor**
- Daily
- Days per week
- Days per month
- Cron Expression
- Interval: once per day
- At: 0 : 00
- Next scheduled time: wed, Oct 27, 2021 12:00 AM ()
- Report: wed, Oct 27, 2021 4:00 AM (EST/UTC)
- Server: wed, Oct 27, 2021 12:00 AM (America/New_York)
- Browser: wed, Oct 27, 2021 12:00 AM (America/New_York)

Buttons for 'Cancel' and 'Schedule Report' are visible at the bottom of the panel.

Geocode Service Setup

To enable Geocoding services, click on the cog wheels in the top right corner. Select “Configure Geocoder Service” in the Provisioning section.

Select the fourth tab labeled “Nominatim”. Enter a valid email address that can be verified and slide the “Accept Usage Terms” to Yes. Save your settings changes to apply the service.

Once saved select the first tab of “Settings” and slide the option for “Nominatim” to On.



Home / Admin / Geocoder Configuration

Settings Google Mapquest **Nominatim**

Nominatim is a search engine for OpenStreetMap data. It allows to look up the coordinates for a given address (forward search).
For more information visit the [Nominatim Wiki Page](#).
Please note, that all usage of the Nominatim Service must follow the [Nominatim Usage Policy](#).

Email

User Agent

Referer

Accept Usage Terms  Yes
Please accept the usage terms

Use System Proxy No

You have unsaved changes

For any device to appear on the home screen map location assets must be added to the device. Instructions for this can be found in the Building and Managing Nodes Within Requisitions section of this guide.