



CloudView NMS: Monitoring Fiber Network Infrastructure with Optical Zonu's SFP OTDR Devices – Application Notes

www.cloudviewnms.com

We are currently developing user manuals to capture the full richness of the CloudView GUI. While there's a lot to cover, the current version includes just enough information to get you started with the topic above. To access the latest documentation, please install the most recent version of CloudView (or the 30-day CloudView Trial—both are the same package).

WARRANTY

The software described in this document is subject to change without notice. The information in this document is subject to change without notice and should not be construed as a commitment by the seller. The seller reserves the right to revise this publication without obligation to provide notification of such revisions. While reasonable precautions have been taken, the seller assumes no responsibility for errors that may appear in this document. No part of this publication may be copied or reproduced in any form or by any means without prior written consent from the seller.

Contents

1. Preface	3
2. Overview of a Fully Configured System.....	4
3. Quick Start: Configuration from Scratch.....	10
3.1 Logging In via Web Browser	10
3.2 Setting the Admin Password and Configuring the Web Server	11
3.3 Setting the Map Background Image	12
3.4 Adding Two Devices to the Map as Fiber Endpoints	12
3.5 Creating a Link Between Two Devices (Fiber Link Line)	15
3.6 Accurately Laying Out the Fiber Link Line on the Map	17
3.7 Using the OTDR Link Event Screen.....	18
4. Summary.....	20

1. Preface

Support for Optical Zonu's **SFP OTDR** Devices was added to CloudView NMS starting with version 2.39n5, released on June 14, 2025. While version 2.39n5 includes this functionality, we strongly recommend upgrading to the latest version, available at <https://cloudviewnms.com/download.html>, for optimal performance and the most up-to-date features. Please follow the instructions provided in the link above to install CloudView NMS on the computer platform running the operating system of your choice.

CloudView NMS supports all of Optical Zonu's SFP OTDR-enabled devices, including:

1. **ZonuConnect**, a BTS-to-DAS fiber link system that integrates Micro-OTDR functionality for real-time fault detection and distance localization.
2. **S11 Media Converter**, a specialized networking device that establishes an Ethernet data link over an optical fiber path while simultaneously monitoring for fiber faults. It supports media conversion between 10/100/1000Base-T copper and 1000Base-EX/ZX fiber ports.
3. **S14**, a compact, managed Ethernet switch designed for high-density deployments and remote fiber monitoring. It features four RJ-45 ports and one SFP port, supporting 100/1000 Mbps Ethernet.

What sets Optical Zonu's SFP OTDR devices apart is their integration with Micro-OTDR SFP (uOTDR) modules, which enable precise detection and reporting of fiber faults—pinpointing the distance to a break within a few feet. Unlike standalone OTDR devices, a uOTDR is **built directly into an SFP transceiver** (Optical Zonu's iSFC® series). When a fiber link is disrupted—say, due to a break or poor splice—the uOTDR mode kicks in automatically. It sends out high-powered optical pulses (typically > +13 dBm) and measures the reflected signals to pinpoint the fault location, even detecting reflections as faint as -42 dBm.

Key benefits include:

- **Fast fault detection and location**, reducing Mean-Time-To-Repair (MTTR)
- **No need for external test equipment**
- **Remote monitoring** from one or both ends of the fiber
- **Compact form factor**, ideal for embedded network diagnostics

Additionally, these devices support SNMP v2/v3 management for centralized monitoring and control.

CloudView NMS displays visual and graphical representations of SFP OTDR data and links, which can be overlaid on the management panel. To configure a link in CloudView NMS, users must add two device icons to the map as fiber endpoints and accurately lay out a fiber link line between them. Currently, to display fiber reflections and cuts (OTDR data) along the link line, at least one of the devices must be of the "OZONU" device type. Once the links are properly configured, users can clearly view fiber reflections or faults on the map overlay and receive corresponding alerts 24/7 when the fiber infrastructure is broken or damaged.

2. Overview of a Fully Configured System

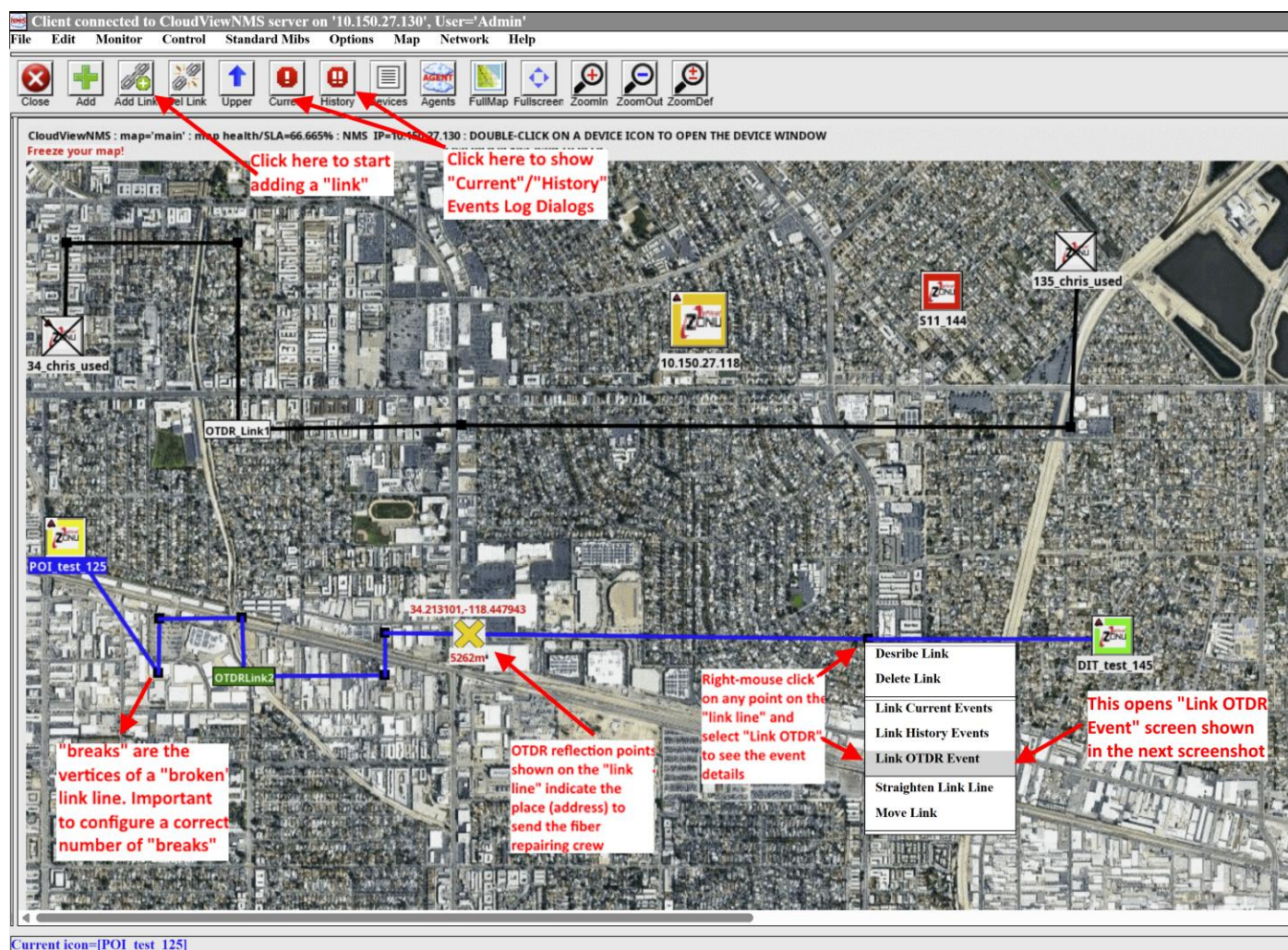
The screenshot below shows a configured “fiber link line” in the CloudView NMS GUI, along with several overlaid annotations. Please note the following:

- **Example Interface:** We used the CloudView NMS HTML5 Web GUI (accessible via a web browser) as an example. The interface will look similar in other CloudView NMS GUIs, including the stand-alone server application GUI and the Independent Client GUI.

- **⚠ Important:** If you notice that dragging “break points” or device icons feels sluggish or imprecise, it's likely due to insufficient computing power on the machine running the CloudView NMS server. Network monitoring is a critical task—it can save you significant time and money when diagnosing and resolving issues. For this reason, we strongly recommend running the server on a high-performance computer, particularly one with robust CPU and RAM resources, right from the start. It's difficult to specify exact CPU or memory requirements, as they vary depending on factors such as the polling intervals, number of devices and fiber links being monitored. However, a good rule of thumb is this: if the web interface feels slow, inadequate server performance is the most probable cause. **💡 Note:** The “local” stand-alone server application GUI may still remain responsive, but most of our customers primarily use the web interface, which is the recommended option for several reasons.

- **Configuring the Link:** When setting up a “link,” it is important to define the correct number of “breaks” in the link line to accurately reflect the actual fiber path. These “breaks” are draggable, allowing you to align the “link line” with the real-life fiber route.

- **Device Types:** In the example below, the link connects two devices of the “OZONU” type. However, there may be scenarios where one end of the link involves a third-party device or simply an “open fiber” configuration (i.e., a single-ended, unlinked dark fiber). In such cases, the other end of the link can be configured as a CloudView NMS device of type “Unknown.” This device type does not support polling or monitoring. That said, CloudView NMS supports a wide range of other device types that implement polling through standard protocols. Using these types can offer additional benefits, as network issues may stem not only from fiber faults but also from broader device functionality or availability problems.



The interactive GUI displayed above allows you to view your entire network infrastructure with color-coded events.

A summary of CloudView NMS events—including OTDR events for multiple links—is displayed in chronological order in the CloudView NMS Events Log dialogs (the "**Current Events Log**" and "**History Events Log**" screens). It is important to note that all history events are stored in an SQL database. Events can be forwarded via email, SMS, SNMP traps, syslog messages, and other interfaces. Right-clicking at a link-line break point displays a link-specific pop-up menu that includes a menu item to show the link's latest OTDR event details.

When a link is configured, Optical Zonu devices on both sides (or just one side) of the link are polled (via SNMP) every 10 seconds (configurable polling interval) to detect changes in reflection distances and trigger alarms (events). The measured reflections are compared against the **reference reflections**, which are set once during link configuration. Reference reflections can be configured either by pressing the "Save 'Current' as Reference" button or manually (see the screenshot below).

Client connected to CloudViewNMS server on '10.150.27.130': Users: Admin'

OTDR Link Event Data

OTDR/SFP details from 10.150.27.125 SNMP OK

SFP Link Status	Linked
Connector Type	1
Wavelength	1310 nm
Vendor OUI	00:08:EC
Vendor Name	OZC
Vendor PN	AF6-131G1-SU
Vendor Rev	C132
Vendor SN	240604101
Data Code	240604
Temperature	31.07 C Deg
Voltage	3262 millVolts
TX Bias	28.00 mA
TX Power	1.065 mW
RX Power	0.091 mW
uOTDR Control	0x71
uOTDR Status	0x62
Fault distance	10730 meters
OTDR Function?	Yes
Current Reflections /meters/	5252,10730

OTDR Function? Yes Enabled And Monitored

Calculated Reflection Values

Data from left side /meters from left side/	5252,10730
Data from right side, but reversed /meters from left side/	5272,10720
Current Medium Reflections /meters from left side/	5262,10725
Reference Reflections /meters/	10/25

Data From Both Sides of the OTDR Link

Total Fiber Length	10/25 meters
OTDR Alert!	54,213136,-118.447557

Save 'Current' as 'Reference' Clear 'Reference'

OTDR/SFP details from 10.150.27.145 SNMP OK

SFP Link Status	Linked
Connector Type	1
Wavelength	1310 nm
Vendor OUI	00:08:EC
Vendor Name	OZC
Vendor PN	AF6-131G1-SU
Vendor Rev	C132
Vendor SN	240604102
Data Code	240604
Temperature	32.64 C Deg
Voltage	3285 millVolts
TX Bias	30.00 mA
TX Power	0.966 mW
RX Power	0.125 mW
uOTDR Control	0x71
uOTDR Status	0x62
Fault distance	10720 meters
OTDR Function?	Yes
Current Reflections /meters/	5448,10720

OTDR Function? Yes Enabled And Monitored

Click here to open "Google Maps" at the exact geo-location

Fiber length is defined automatically when SFP is "linked" or it can be set manually

Current Events Log with OTDR events shown

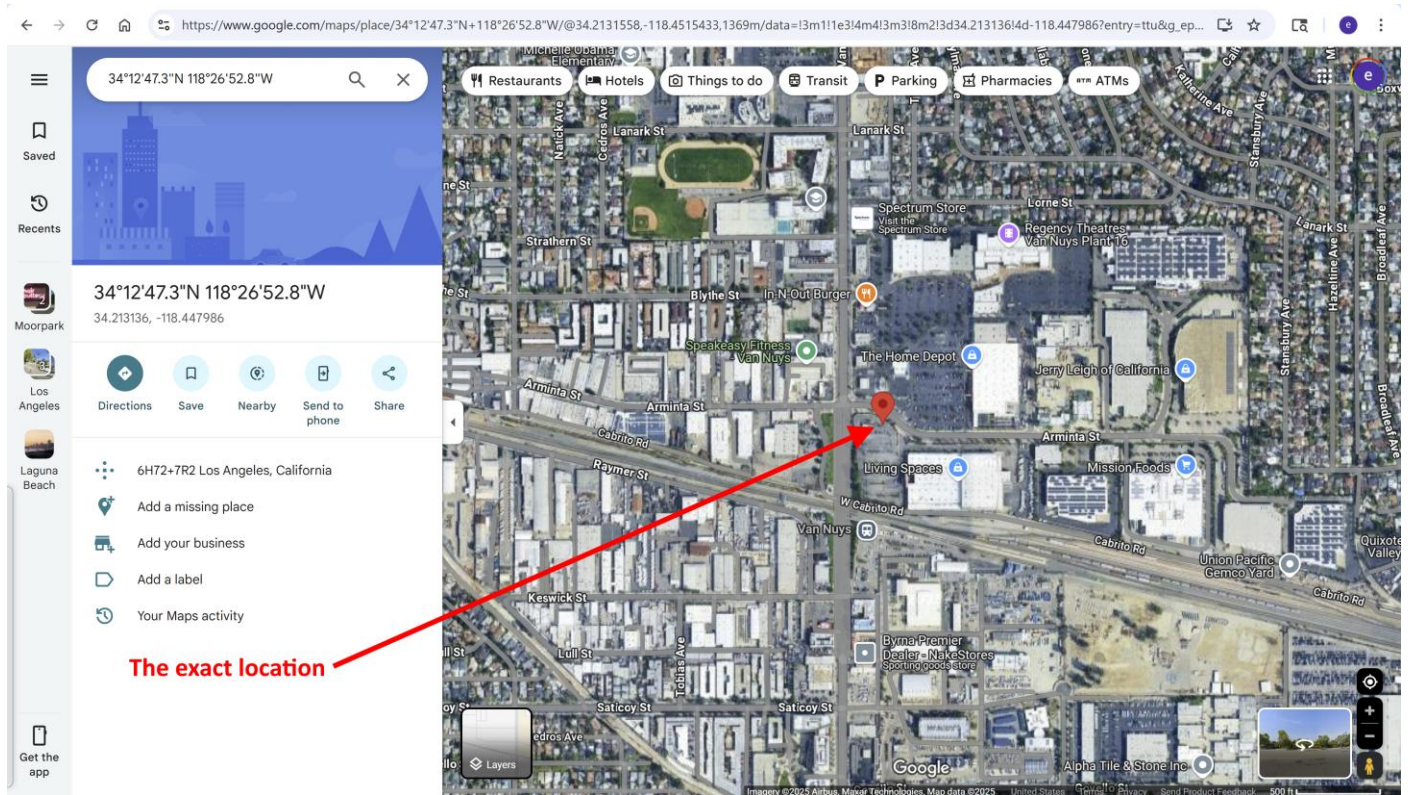
Current Device: OZC_website
IP Address: www.opticalzonu.com
Comm Status: Unknown
Type: WEBSITE
Notepad: https://www.opticalzo

Refresh Clear Events All Events Add Event Current Event Details Print Save

ACK	Date/Time	Map Name	Device/Service	Severity	Alarm Message/Problem/Cause Description
***	Tue Jul 08 18:28:16	Not Apply	Server	INFO	*** Web Client application session opened on 10.150.24.51 by Admin ***
***	Tue Jul 08 18:27:23	main	POI_test_125	WARNING	Chassis--1 slot-6 OTDR Alert with distances-[5262,10725,/LinkName=[OTDRLink2] [POI_test_125 , DIT_test_145]/]
***	Tue Jul 08 18:27:19	oznet	S11_115	WARNING	Chassis--1 slot-1 OTDR Alert with distances-[2236,7475,/LinkName=[anotherOTDR] [S11_115 , unknowDevice]/]
***	Tue Jul 08 18:27:18	main	10.150.27.118	MAJOR	Link [2] (Oz200Link_2) is Down [no subslot [2,7,3] on 10.150.27.118]
***	Tue Jul 08 18:27:18	main	10.150.27.118	MAJOR	Link [1] (Oz200Link_2) is Down [no subslot [2,7,3] on 10.150.27.118]
***	Tue Jul 08 18:27:10	Not Apply	Server	INFO	*** SNMP Traps initialized, listening on port-162 ***

Current icon=[S11_144]

Clicking on the yellow geo-coordinates in the above screen or anywhere on the background image—earlier retrieved from Google Maps— will open Google Maps at that exact location. This enables a thorough exploration of the area—leveraging the full feature set of Google Maps, see the below screenshot.



To forward an event, for example, as an email, the user must first configure the event. The “Events Config” menu appears when you right-click on any “OZONU” icon. Note that this is not the “link” menu (as shown in the screenshot above); we will discuss that later. Please see the screenshots below for an example of an OZONU device-specific menu and the corresponding **Events Config** window, which is invoked by this menu.

Client connected to CloudViewNMS server on '10.150.27.130', User='Admin'

File Edit Monitor Control Standard Mibs Options Map Network Help

Close Add Link Del Link Upper Current History Devices Agents FullMap Fullscreen ZoomIn ZoomOut ZoomDef

CloudViewNMS : maps/main : map health/SLA=55.556% : NMS IP=10.150.27.130 : DOUBLE-CLICK ON A DEVICE ICON TO OPEN THE DEVICE WINDOW

Right mouse-click on any "OZONU" icon to show specific device type menu

Events Config for all "OZONU" devices

Events Format for specific device

Current Device: S11_144
IP Address: 19.150.27.144
Comm Status: Down
Health: 0.00% of [1 days, 1 h]
Type: OZONU

Current Events
History Events
Acknowledge Current Events
Clear Current Events
Events Config
Events Format/Actions

Device/Map Alternative E-mail: lot-1 OTDR Alert with distances-[7475/LinkName=[anotherOTDR] [S11_115, unknowDevice]/]
at to delete events older than [5] days/ -@extdir/sqloldevents
lot-1 OTDR Alert with distances-[7475/LinkName=[anotherOTDR] [S11_115, unknowDevice]/]
type: none ap# 16,oid-1.3.6.1.4.1.683.6
WARNING InsertSQL request error
INFO MySQL Started/Restarted, number of events in History Events DB :1507
INFO Web Client session closed on 10.150.24.50 by Admin ***
INFO Web Client application session opened on 10.150.24.50 by Admin ***

Events Config for ALL 'OZONU' type devices

☐ Use Events Correlation Algorithm ☒ Remove 'Cleared' events

Events Config for ALL 'OZONU' type devices

Description	E-mail?	Log?	Severity
SerialNumber Read Failed Trap	no	yes	Major
Fiber Fault Trap	no	yes	Major
Sub-slot Alarm Trap	no	yes	Major
Sub-slot Warning Trap	no	yes	Warning
SFP OTDR Status Trap	no	yes	Warning
RxPower Beyond Base Trap	no	yes	Major
RxPower Back To Normal Trap	no	yes	Normal
Sub-slot Status Changed	no	yes	Warning
Sub-slot Status Control	no	yes	Warning
SfpLosAlarm	no	yes	Warning
sfpUotdrReady	no	yes	Warning
Link is Down Trap	no	yes	Major
Link is Up Trap	no	yes	Normal
RxPower beyond baseline	no	yes	Warning
RxPower is back to normal	no	yes	Normal
OTDR Alert	yes	yes	Warning
OTDR Back to normal	no	yes	Normal

Configuring OZONU OTDR Events to be forwarded as emails

☐ OZONU
☐ GENERIC Events for all devices
☒ SPECIFIC Events for 'OZONU' devices

☐ Forward as SNMP trap to IP Address:

☒ Send E-Mail (see:Internet Options/E-mail Config.)
☐ Add E-Mail Custom Message:

☐ Forward as syslog message to IP Address:

☐ Forward as TL1 autonomous message.
(See: Main Menu/Internet Options/TL1 Config)

Log Event: Yes
Severity level: Warning

Click on / select an event line to change the event parameters

Add Events corresponding to SNMP Traps from MIB file

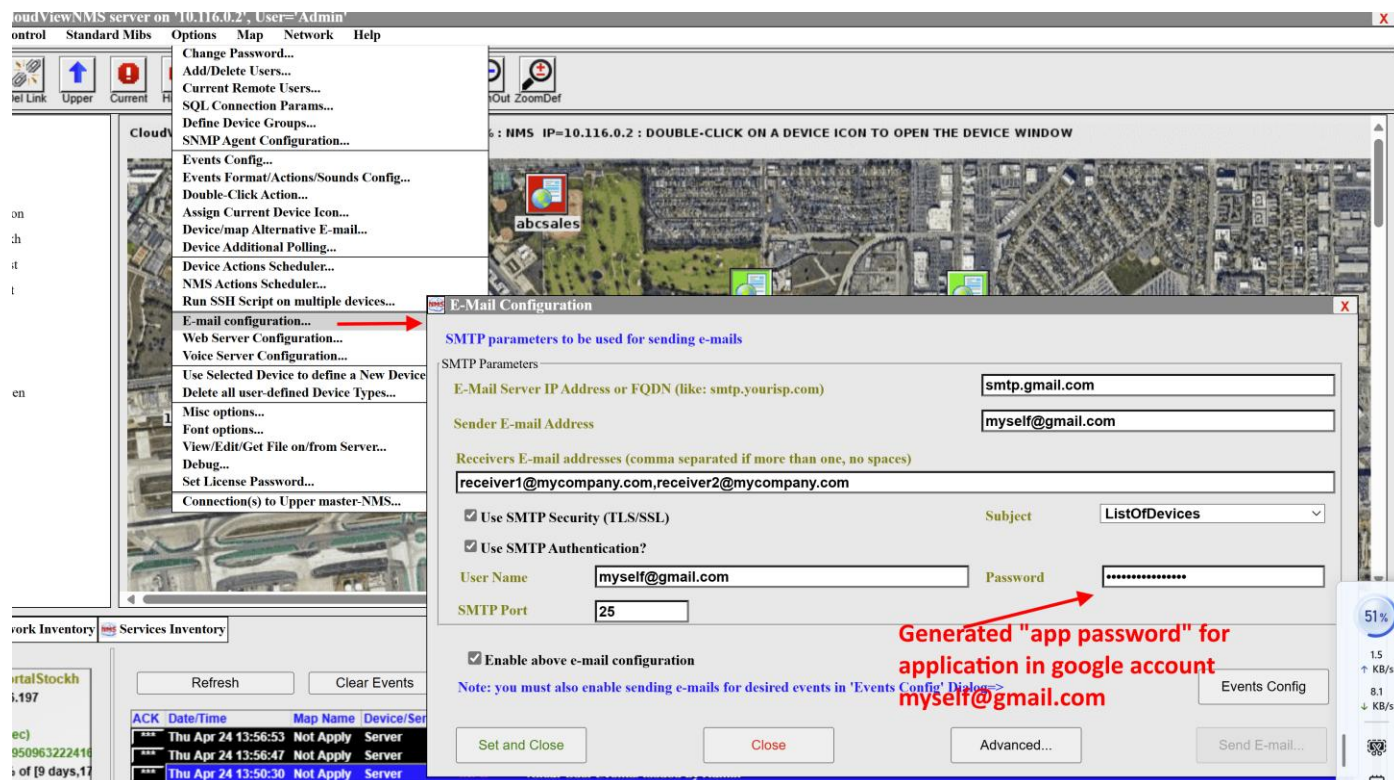
Advanced Configuration for Selected Event

Return to Default Settings

OK Cancel Help

Please note that in the above screenshot, some events correspond to SNMP traps from OZONU devices, while others do not. It is important to note that you do not need to enable—or rely on—device's SNMP traps to achieve the desired functionality. CloudView NMS polls the devices 24/7 using a predefined polling interval (the default is 10 seconds) and generates events and alarms automatically. In the screenshot, the events of interest are **"OTDR Alert"** with a severity of **Warning** and **"OTDR Back to Normal"** with a severity of **Normal**.

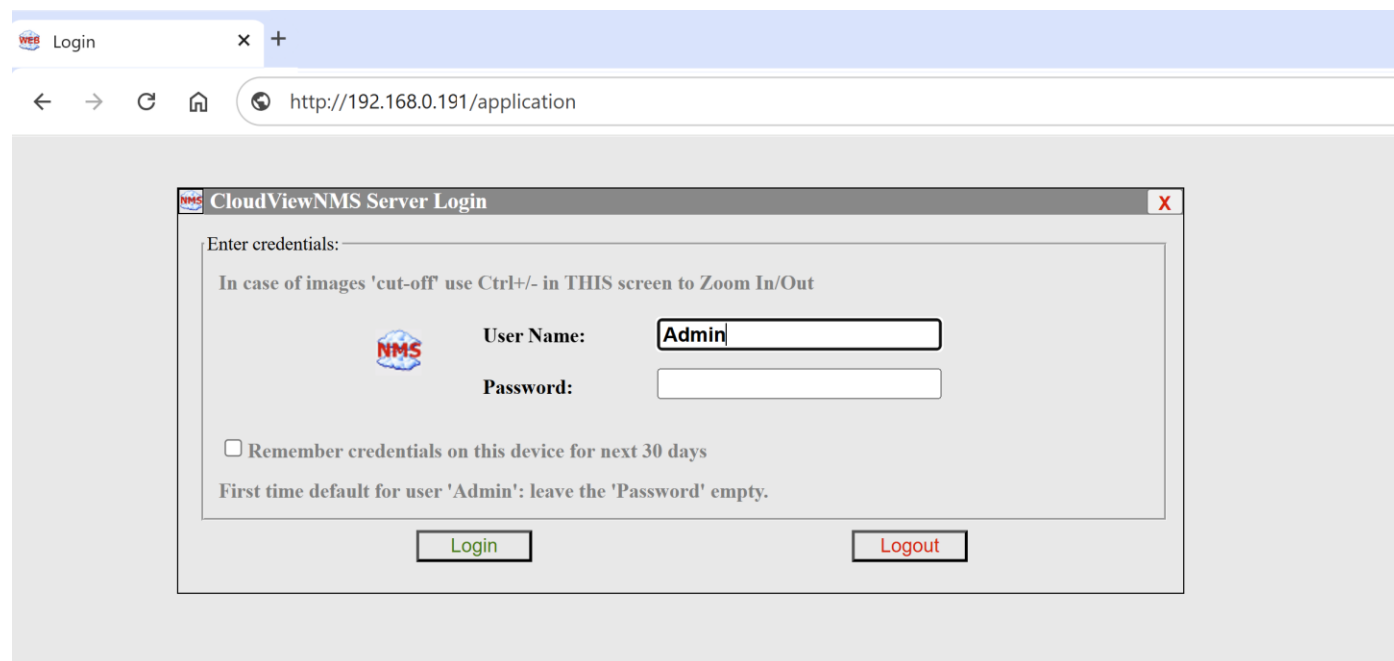
CloudView NMS **"forwarding events via e-mail"** feature can be used for sending events/alerts as emails and SMS messages. It must be configured via "Main Menu->Options->Email Configuration" or "Main Menu->Internet Options->Email Configuration" see the below screenshot.



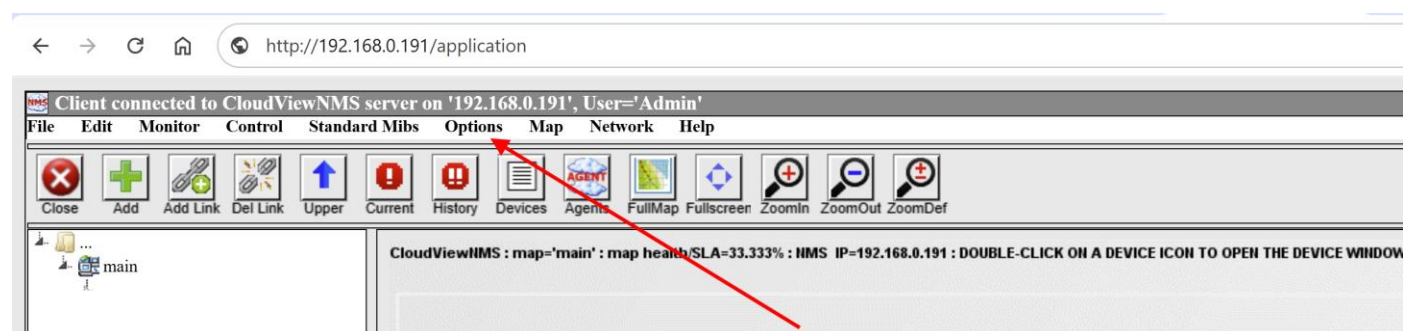
3. Quick Start: Configuration from Scratch

3.1 Logging In via Web Browser

Now, let us briefly describe how we achieved the configuration shown above. After installing the CloudView NMS trial, the web server runs on port 80, and users can connect using a web browser by navigating to `http://<ServerIpAddress>application` (see the screenshot below).

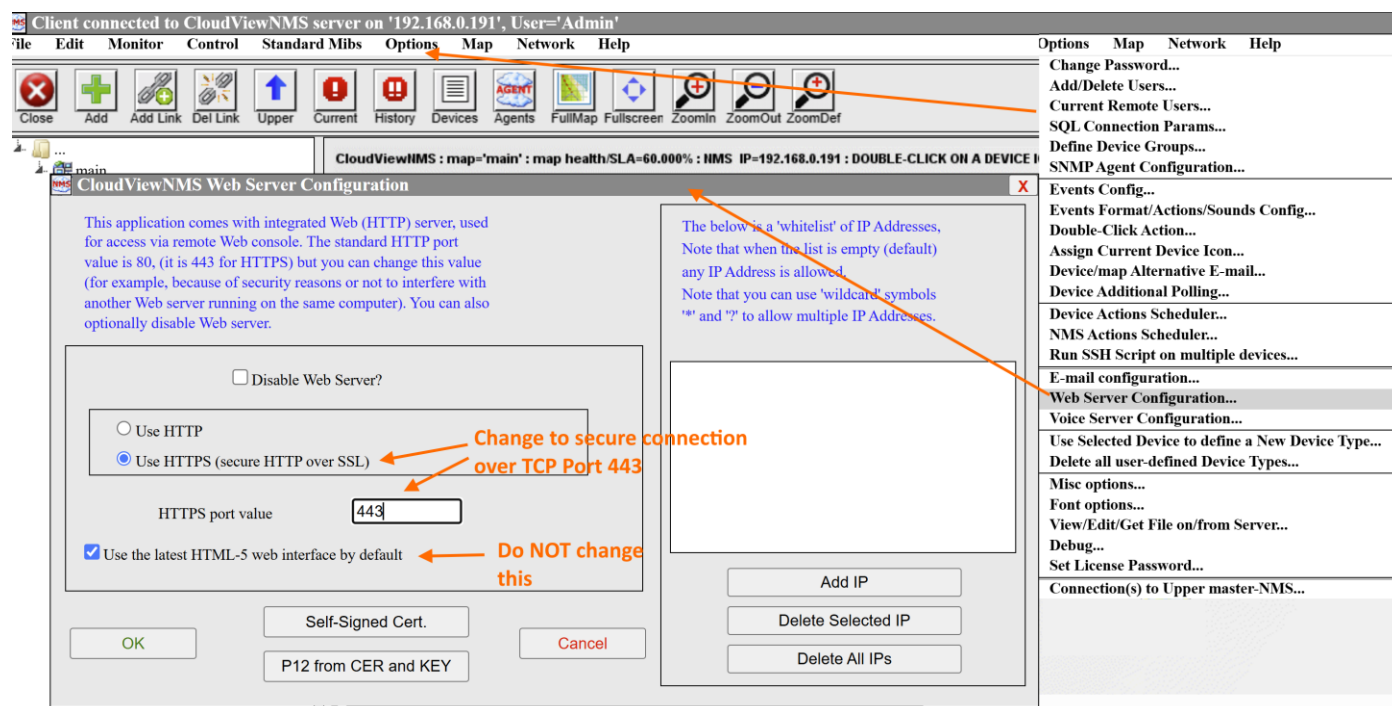


The default login credentials are: username “Admin” with an empty password. You will need to change these defaults later.



3.2 Setting the Admin Password and Configuring the Web Server

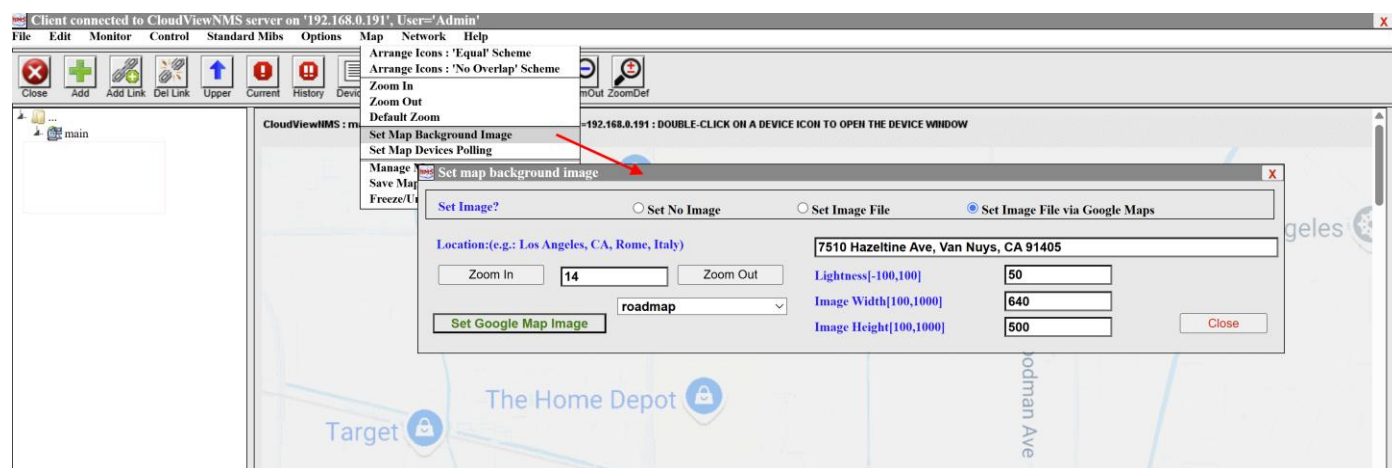
The first step is to change the Admin password via **Main Menu > Options > Change Password**. Next, update the connection to HTTPS over port 443 using **Main Menu > Options > Web Server Configuration** (see the screenshot below).



You may need to restart the CloudView NMS server a couple of times during or after completing the steps above.

3.3 Setting the Map Background Image

So, we start with an empty “main” map. Let’s add a background image using **Main Menu → Map → Set Map Background Image** screen (see the below screenshot). Users have several options for setting the background image: it can be a previously prepared image file, or a “Google Maps” image retrieved by address (e.g., “7510 Hazeltine Ave, Van Nuys, CA 91405”) or by geographic coordinates (e.g., “34.20695157310508, -118.44094686571454”). It’s important to ensure that the final map image includes the entire fiber path you intend to monitor. When using “Google Maps,” we recommend selecting the “roadmap” option because the resulting image has a pale, light appearance that helps draw attention to the colors of the links and icons, rather than the background itself. However, sometimes you may want to use the “satellite” or “hybrid” option.



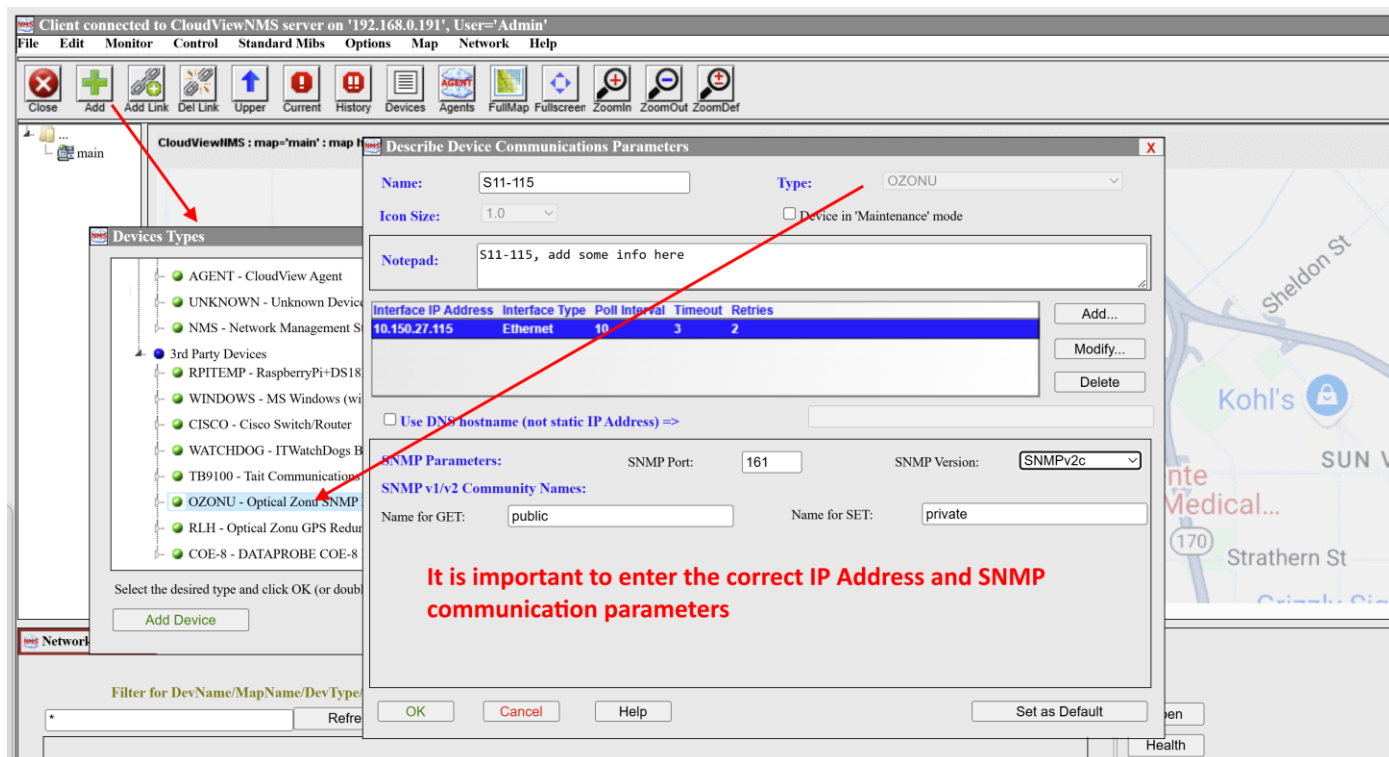
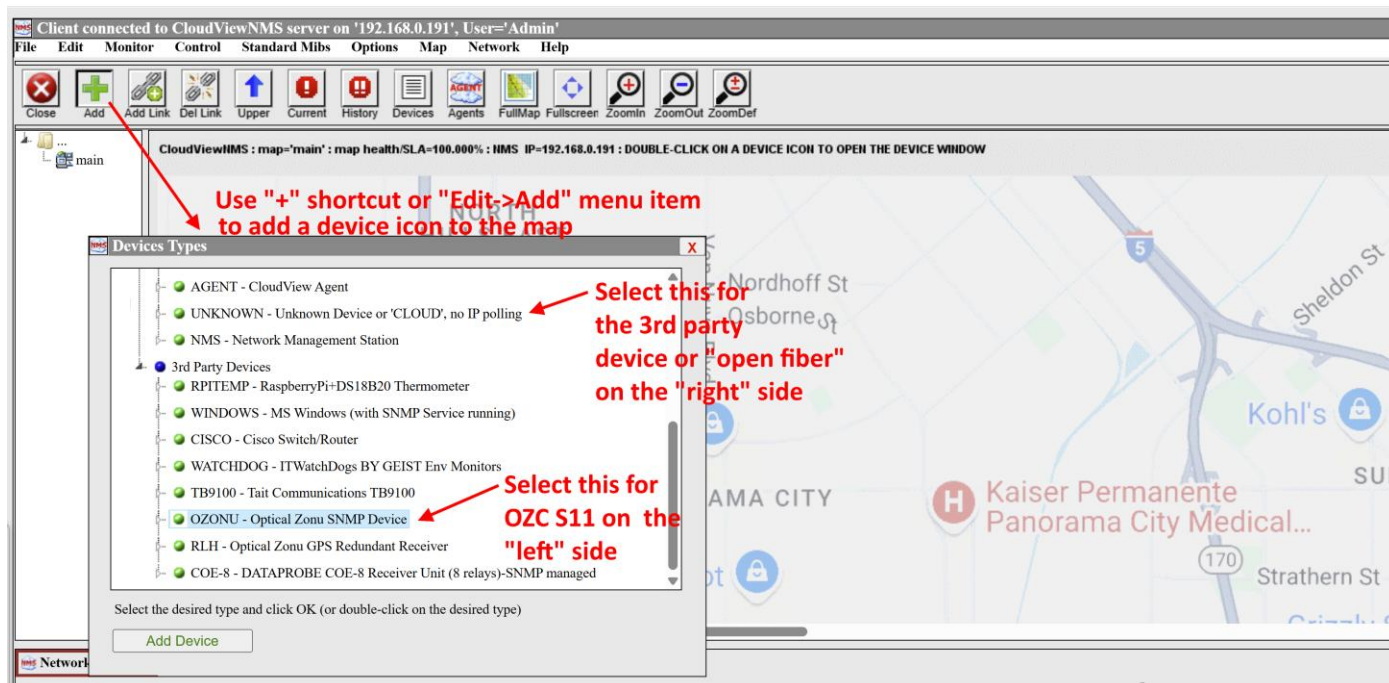
It's important to note that the retrieved background image is scaled using scale=2, meaning its actual dimensions are not 640×640 pixels, but 1280×1280 pixels. You can find this image at:

```
<cloudviewnms_root_dir>/data/bitmaps/b_<map_name>.png
```

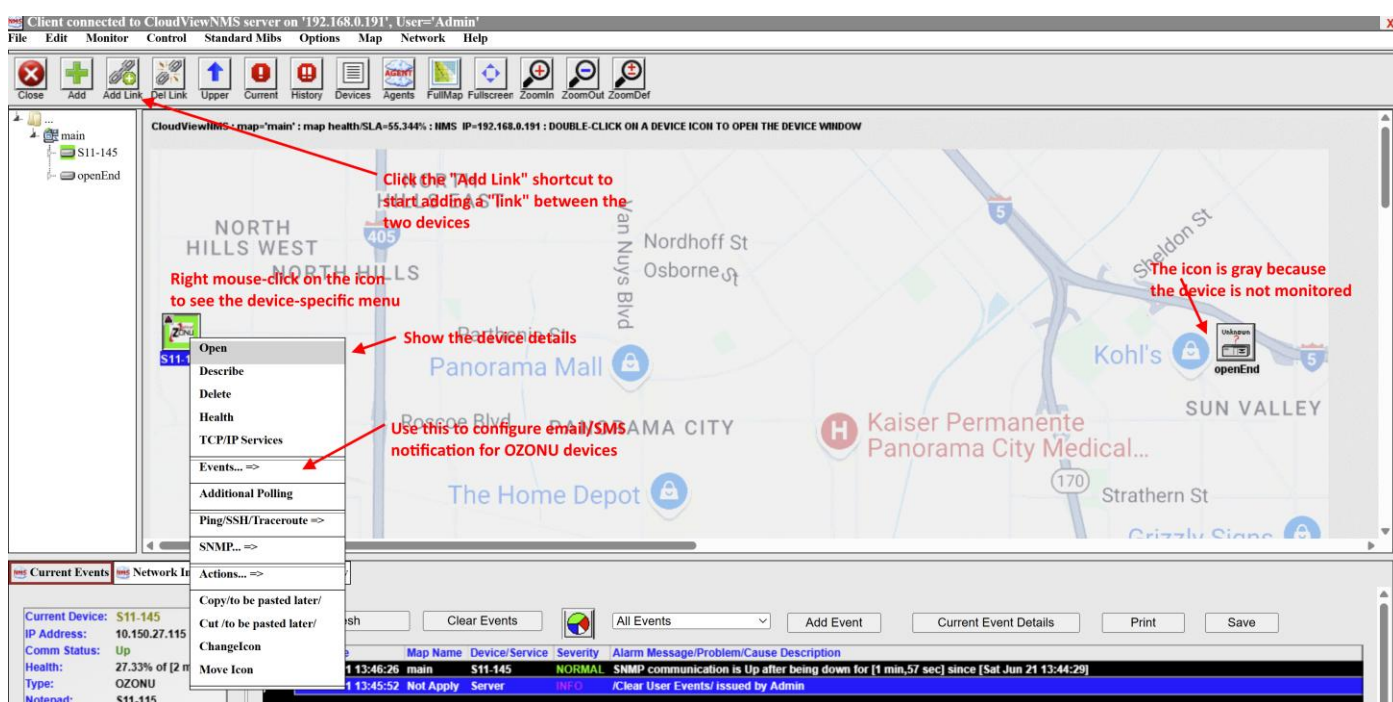
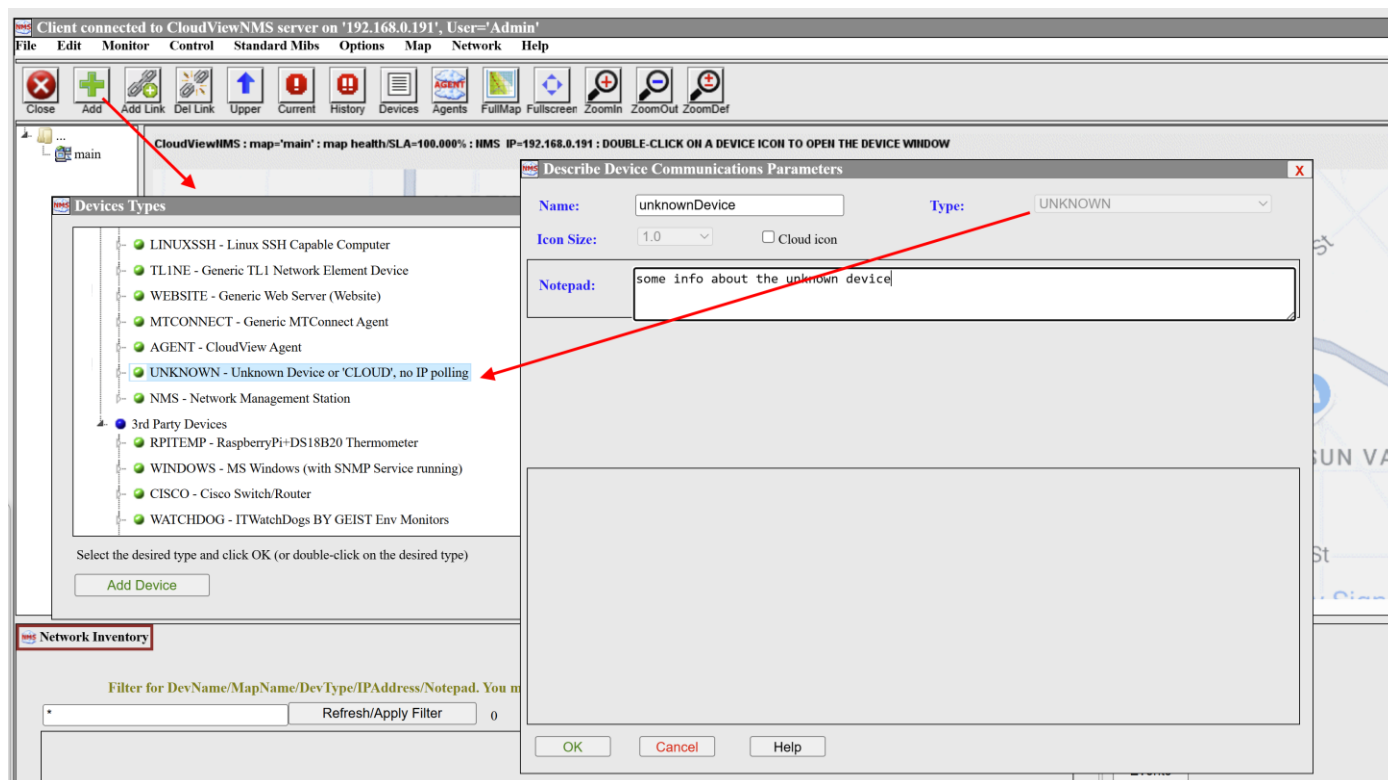
The image is static, so you can edit it graphically—for example, by adding important notes or marking specific points. However, be sure not to change the file name.

3.4 Adding Two Devices to the Map as Fiber Endpoints

Let’s now add two device icons to the map. These devices will represent the two ends of a fiber link. For simplicity, we’ll assume the “left” side is Optical Zonu’s S11 with an SFP OTDR installed, and the “right” side is an open, unlinked fiber representing a dark fiber scenario. Use the “+” shortcut or **Main Menu → Edit → Add** to add the icons. Be sure to enter the correct SNMP connection parameters for the S11 “OZONU” device—its icon will turn green on the map immediately (see the screenshots below).



For the “right” side—which is either a third-party device or simply the open end of the fiber (unlinked **dark fiber**)—we use the CloudView NMS “UNKNOWN” device type.

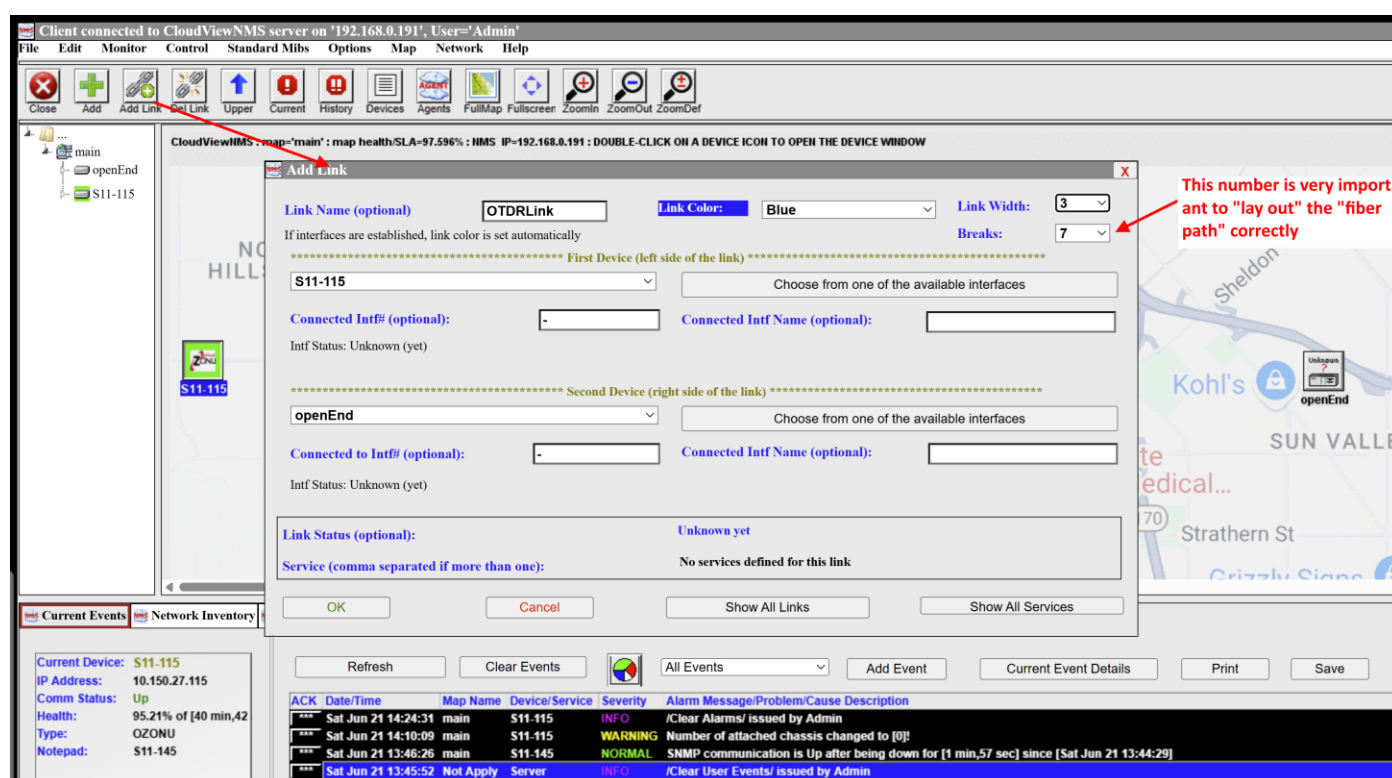


The screenshot above shows the result after both devices have been added to the map. Please note the following:

1. The **S11-115** OZONU device (on the left) appears green, indicating successful SNMP communication. The corresponding event is displayed in the “Events Log.” The **openEnd** UNKNOWN device (on the right) appears gray because it is not being polled, and its status is unknown.
2. Right-clicking on the S11-115 device brings up a device-specific pop-up menu. It includes the “Open” option, which provides access to the Optical Zonu device’s management GUI. This interface is feature-rich, but a detailed description is beyond the scope of this document.
3. The “Events” option in the pop-up menu can also be used to configure email/SMS notifications for OZONU-type devices, as discussed earlier in this document.

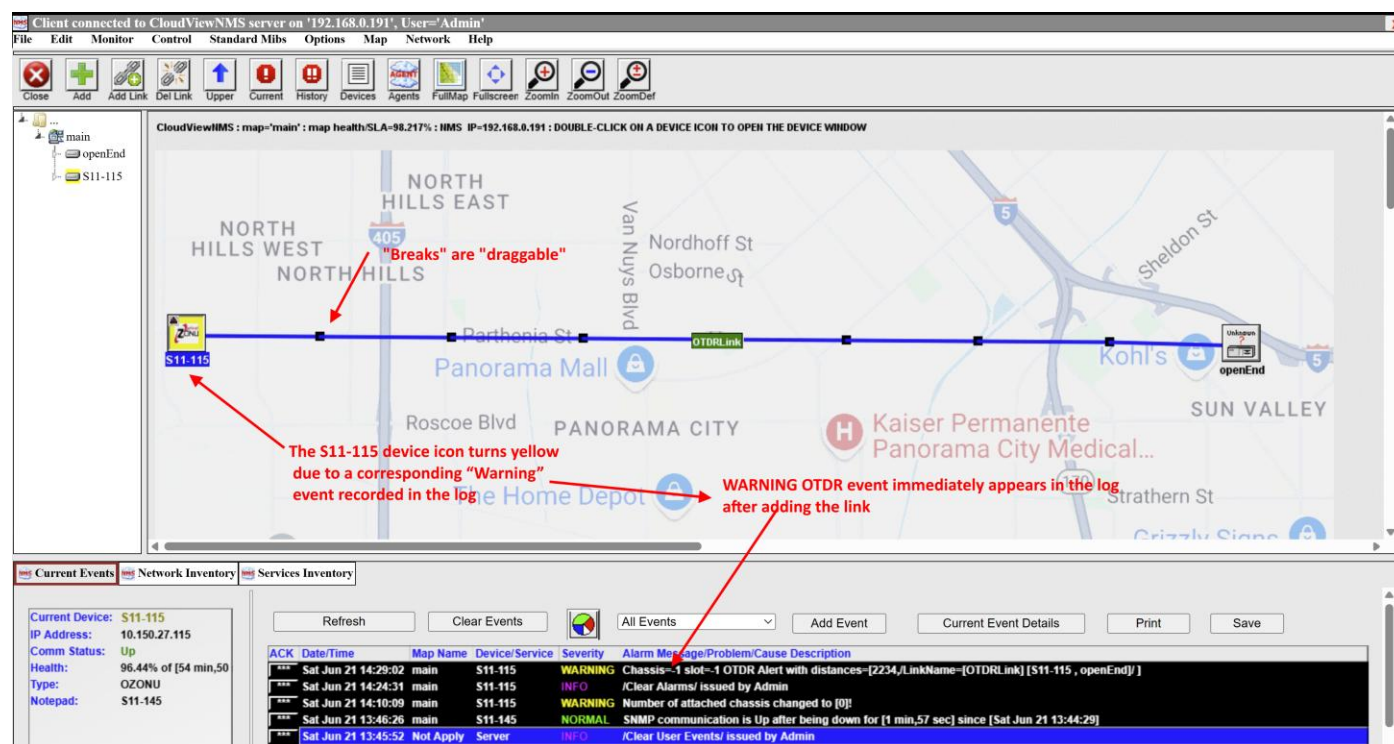
3.5 Creating a Link Between Two Devices (Fiber Link Line)

We are now ready to add a “link” line to connect the two devices. Use “Add Link” shortcut, see the screenshot below.



Set a clear and easily recognizable **Link Name** to help identify link-related events in the Events Log. Also, ensure that you set the appropriate number of link line “breaks” to accurately represent the real-world fiber path on the map. The maximum number of breaks is 13, though you may need fewer. Keep in mind that you might go through several iterations of adding and deleting the link before arriving at the optimal number.

The screenshot below shows the result after clicking the **OK** button in the **Add Link** screen. Note that a warning OTDR event immediately appears in the log—this occurs because the “right” end is open and there is no link. Since this is considered the expected behavior in our scenario, we will adjust it later by setting the reference reflections parameter. S11-115 device icon becomes yellow because of the “yellow” warning event in the log. Additionally, note that the break points on the map are **draggable**; we will use this feature to lay out the fiber path according to the real-life layout.



⚠ Important:

If you notice that dragging “break points” or device icons feels sluggish or imprecise, it's likely due to insufficient computing power on the machine running the CloudView NMS server.

Network monitoring is a critical task—it can save you significant time and money when diagnosing and resolving issues. For this reason, we strongly recommend running the server on a high-performance computer, particularly one with robust CPU and RAM resources, right from the start. It's difficult to specify exact CPU or memory requirements, as they vary depending on factors such as polling intervals, the number of devices and fiber links being monitored. However, a good rule of thumb is this: if the web interface feels slow, inadequate server performance is the most probable cause.

3.6 Accurately Laying Out the Fiber Link Line on the Map

We've added a link to the CloudView NMS map between two device icons, representing fiber endpoints. The link line currently appears as a straight line with several break points. To accurately reflect the real-world fiber path, these break points need to be dragged into their proper positions. While this task may feel tedious, remember—it only needs to be done once during the initial link configuration. Please refer to the screenshot below.

Client connected to CloudViewNMS server on '192.168.0.191', User='Admin'

File Edit Monitor Control Standard Mibs Options Map Network Help

Close Add Add Link Del Link Upper Current History Devices Agents FullMap Fullscreen ZoomIn ZoomOut ZoomDef

CloudViewNMS : map='main' : map health/SLA=98.831% : NMS IP=192.168.0.191 : DOUBLE-CLICK ON A DEVICE ICON TO OPEN THE DEVICE WINDOW

Right mouse-click on any break to see the pop-up menu, select the "Link OTDR Event"

Describe Link
Delete Link
Link Current Events
Link History Events
Link OTDR Event
Straighten Link Line
Move Link

Current Device: openEnd
Comm Status: Unknown
Type: UNKNOWN

ACK	Date/Time	Map Name	Device/Service	Severity	Alarm Message/Problem/Cause Description
***	Sat Jun 21 14:29:02	main	S11-115	WARNING	Chassis--1 slot--1 OTDR Alert with distances--[2234/LinkName=[OTDRLink] [S11-115 , openEnd]]
***	Sat Jun 21 14:24:31	main	S11-115	INFO	/Clear Alarms/ issued by Admin
***	Sat Jun 21 14:10:09	main	S11-115	WARNING	Number of attached chassis changed to [0]
***	Sat Jun 21 13:46:26	main	S11-145	NORMAL	SNMP communication is Up after being down for [1 min,57 sec] since [Sat Jun 21 13:44:29]
***	Sat Jun 21 13:45:52	Not Apply	Server	INFO	/Clear User Events/ issued by Admin

3.7 Using the OTDR Link Event Screen

Right-click on any “break” point to open the link-specific pop-up menu, then select the “Link OTDR Event” menu item. Refer to the screenshot below, and let’s break down what it shows:

OTDR Link Event Data

OTDR/SFP details		from 10.150.27.115	SNMP OK	OTDR/SFP details	from 0.0.0.0	SNMP Down	Ping 0.0.0.0
SFP Link Status	Not Linked						
Connector Type	7						
Wavelength	1550 nm						
Vendor OUI	00:08:EC						
Vendor Name	OZC 01_02234						
Vendor PN	AF6-155G1-LU						
Vendor Rev	A123						
Vendor SN	18						
Data Code	02010100						
Temperature	38.91 C Deg						
Voltage	3318 milVolts						
TX Bias	55.00 mA						
TX Power	0.673 mW						
RX Power	0.000 mW						
uOTDR Control	0x70						
uOTDR Status	0x1						
Fault distance	2234 meters						
OTDR Function?	Yes		Enabled But Not Monitored				
Current Reflections /meters/	2234						

Calculated Reflection Values		From Both Sides of the OTDR Link	Total Fiber Length
From left side /meters/	2234		unknown
From right side, but reversed /meters/	None		unknown
Current Medium Reflections/meters/	2234		
Reference Reflections /meters/	None		

OTDR Alert! Save 'Current' as 'Reference' Clear 'Reference'

Current Events

ACK	Date/Time	Map Name	Device/Service	Severity	Alarm Message/Problem/Cause Description
***	Sat Jun 21 16:12:25	main	S11-115	WARNING	Chassis--1 slot--1 OTDR Alert with distances=[2234,LinkName=[OTDRLink] [S11-115 , openEnd]]
***	Sat Jun 21 16:10:48	Not Apply	Server	INFO	/Clear User Events/ issued by Admin

1. The “right” side appears empty because it represents an “UNKNOWN” device—an open, unlinked (dark fiber) endpoint.
2. The “Fiber Length” field is unknown because the SFP link status is “Not Linked.” You can set this value manually by clicking on the field. Alternatively, if you temporarily connect a compatible device to the right side, the SFP link status will change to “Linked,” and the fiber length will be detected automatically (see the next screenshot).
3. The “Reference Reflections” field currently shows “None,” which triggers the OTDR Alert. Once this field is populated—either manually or by clicking the “**Save Current As Reference**” button—the OTDR Alert will disappear (as shown in the next screenshot).

Now, click the “**Save Current As Reference**” button and set the “**Fiber Length**” field. This defines the baseline “normal” state for the link. As a result, a “NORMAL” event is issued, and the previous alert is cleared. You can now close the **OTDR Link Event** screen—24/7 monitoring continues in the background, and you will be notified automatically if the reflection data changes. Refer to the screenshot below.

Client connected to CloudViewNMS server on '192.168.0.191', User='Admin'

File Edit Monitor Control Standard Mibs Options Map Network Help

Close Add Add Link Del Link Upper Current History Devices Agents FullMap Fullscreen ZoomIn ZoomOut ZoomDef

CloudViewNMS: map='main': map health=88.764%: NMS IP=192.168.0.191: DOUBLE-CLICK ON A DEVICE ICON TO OPEN THE DEVICE WINDOW

OTDR Link Event Data

OTDR/SFP details	from 10.150.27.115	SNMP OK	OTDR/SFP details	from 0.0.0.0	SNMP Down [Ping 0.0.0.0]
SFP Link Status	Not Linked				
Connector Type	7				
Wavelength	1550 nm				
Vendor OUI	00:08:EC				
Vendor Name	OZC 01 02234				
Vendor PN	AF6-155G1-LU				
Vendor Rev	A123				
Vendor SN	18				
Data Code	02010100				
Temperature	38.89 C Deg				
Voltage	3319 milVolts				
TX Bias	55.00 mA				
TX Power	0.636 mW				
RX Power	0.000 mW				
uOTDR Control	0x70				
uOTDR Status	0xe1				
Fault distance	2234 meters				
OTDR Function?	Yes Enabled But Not Monitored				
Current Reflections /meters/	2234				

Since the "current" corresponds to the "reference", there is no alert

No alert any longer

Calculated Reflection Values	From Both Sides of the OTDR Link	Total Fiber Length
From left side /meters/	2234	2234 meters
From right side, but reversed /meters/	None	2234 meters
Current Medium Reflections/meters/	2234	No OTDR Alert
Reference Reflections /meters/	2234	Save "Current" as "Reference" Clear "Reference"

Current icon=[S11-115]

Current Events Network Inventory Services Inventory

Current Device: S11-115
IP Address: 10.150.27.115
Comm Status: Up
Health: 77.55% of [2 hours, 44]
Type: OZONU
Notepad: S11-145

Refresh Clear Events All Events Add Event Current Event Details Print Save

ACK	Date/Time	Map Name	Device/Service	Severity	Alarm Message/Problem/Cause Description
***	Sat Jun 21 16:27:33	main	S11-115	NORMAL	Chassis--1 slot--1 OTDR back to normal with distances=[2234,/LinkName=[OTDRLink] [S11-115, openEnd/]
***	Sat Jun 21 16:12:25	main	S11-115	WARNING	Chassis--1 slot--1 OTDR Alert with distances=[2234,/LinkName=[OTDRLink] [S11-115, openEnd/]
***	Sat Jun 21 16:10:48	Not Apply	Server	INFO	/Clear User Events/ issued by Admin

And now let us see what happens when something “bad” happens with the fiber. For this let us assume that the known fiber length and “reference” are 7,475 meters, but the first fault/reflection distance is less than the “reference” distance. **Important:** If you're closely analyzing the numbers, you'll notice that the fiber length shown here differs from the one discussed earlier. . See the next screenshot.

Note the following:

1. The fiber issue location is indicated on the map.
2. The fiber issue is located 2,234 meters from the "left" side, while the total fiber length is 7,475 meters.
3. As a result, the system has entered an **OTDR Alert** state.

The screenshot displays the CloudView NMS interface. On the left, a map shows the fiber link between S11-115 and S11-145. A red 'X' marks the fault location at 2234m. The main panel shows the OTDR Link Event Data for the link from 10.150.27.115 to 0.0.0.0. The data includes SFP Link Status (Not Linked), Wavelength (1550 nm), Vendor OUI (00:08:EC), Vendor Name (OZC 01 02234), Vendor PN (AF6-155G1-LU), Vendor Rev (A123), Vendor SN (18), Data Code (02010100), Temperature (39.04 C Deg), Moirage (3318 milliVolts), TX Bias (55.00 mA), TX Power (0.653 mW), RX Power (0.000 mW), uOTDR Control (0x70), uOTDR Status (0xe1), Fault distance (2234 meters), OTDR Function? (Yes), and Current Reflections /meters/ (2234). The OTDR status is 'Enabled But Not Monitored'. The bottom panel shows the Current Events section with a warning message: 'Chassis--1 slot--1 OTDR Alert with distances--[2234,7475,/LinkName--[OTDRLink] [S11-115 , openEnd/]]'.

OTDR/SFP details		from 10.150.27.115	SNMP OK
SFP Link Status	Not Linked		
Connector Type	7		
Wavelength	1550 nm		
Vendor OUI	00:08:EC		
Vendor Name	OZC 01 02234		
Vendor PN	AF6-155G1-LU		
Vendor Rev	A123		
Vendor SN	18		
Data Code	02010100		
Temperature	39.04 C Deg		
Moirage	3318 milliVolts		
TX Bias	55.00 mA		
TX Power	0.653 mW		
RX Power	0.000 mW		
uOTDR Control	0x70		
uOTDR Status	0xe1		
Fault distance	2234 meters		
OTDR Function?	Yes		
Current Reflections /meters/	2234		

Calculated Reflection Values		From both Sides of the OTDR Link	Total Fiber Length
From left side /meters/	2234 / 7475		7475 meters
From right side, but reversed /meters/	None		7475 meters
Current Medium Reflections/meters/	2234, 7475		OTDR Alert!
Reference Reflections /meters/	7475		Save 'Current' as 'Reference' Clear 'Reference'

4. Summary

CloudView NMS displays visual and graphical representations of Optical Zonu's SFP OTDR data and links, which can be overlaid on the management panel. Users can clearly view fiber reflections or faults on the map overlay and receive corresponding alerts 24/7 when the fiber infrastructure is broken or damaged.