



CloudView NMS: Historical Data Logging and Graphing For Optical Zonu's 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

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1. Preface

Support for Optical Zonu's Devices Data Logging and Graphing was added to CloudView NMS starting with version 2.39o, released on February 10, 2026. While version 2.39o 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 Optical Zonu's SNMP-enabled devices utilizing SNMP v2/v3 management for centralized monitoring and control.

The new feature enhancement introduces comprehensive historical data logging and graphical visualization capabilities for Optical Zonu SNMP devices. It focuses on the continuous collection and analysis of critical fiber optic parameters essential for monitoring and maintaining optical network health.

The monitored parameters include industry-standard metrics such as:

- **Temperature (°C):** The operating temperature of the optical module.
- **Supply Voltage (Vcc, Vcc5) (V):** Primary and auxiliary power supply voltages.
- **Transmitter Optical Power (TxPower, TxPowerB) (mW):** Optical output power levels from the transmitter, including dual-channel measurements.
- **Receiver Optical Power (RxPower) (mW):** Optical input power received by the device.
- **Supply Current (SuppCurrent) (mA):** Current consumption of the optical module.
- **Bias Current (BiasTcurrent) (mA):** The current driving the laser diode transmitter.
- **RF Gain (RfGain):** Radio frequency gain parameter relevant to signal amplification.
- **RF Monitor Power (RFmonPower) (dBm):** Power level of the RF monitoring signal.

This feature enables network operators to track performance trends, detect anomalies, and optimize fiber optic link reliability through detailed historical insights and intuitive graphing tools.

Please note the following:

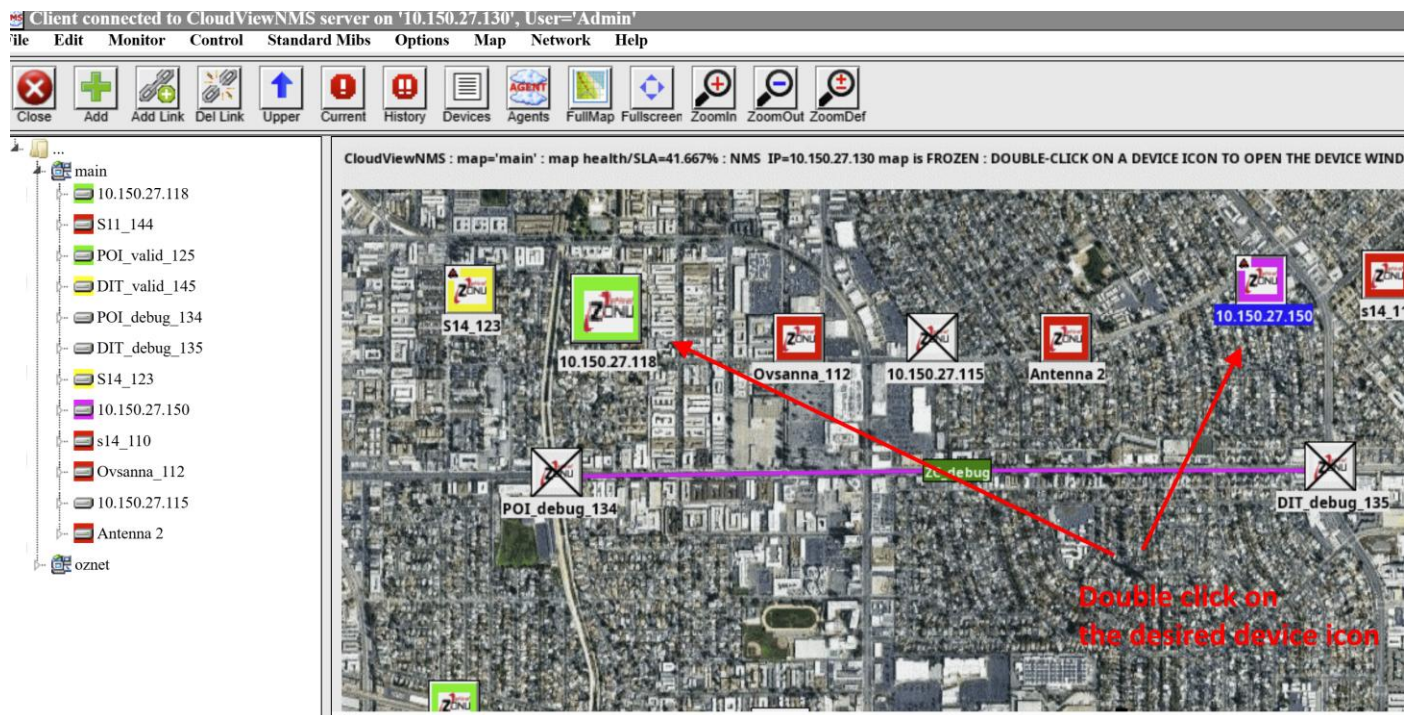
- **Example Interface:** We used the CloudView NMS HTML5 Web GUI (accessible via a web browser) as an example. The interface will look similar in other CloudView NMS GUIs, including the stand-alone server application GUI and the Independent Client GUI.

- **⚠ Important:** If you notice the interface seems “slow, 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.

2. Configuring Data Collection for Optical Zonu Devices

To configure data collection, double-click the desired device icon on the CloudView NMS map.



The main device window will open. Locate and click the “Data Logging” menu item, as shown in the screenshot below:

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

Control Monitor Help

Device Current Events Log...
 Device History Events Log...
 Health Statistics...
 Data Logging

In case of images 'cut-off': click 'Close' and use Ctrl+/- in 'Login' screen to Zoom In/Out

Current Events System View

SNMP is up
 SNMP Traps Config
 Rack View Link View

Device Name=> 10.150.27.150
 IP Address=> 10.150.27.150

IP/SNMP Reset
 SFP Details
 Mgmt Audit

js14_sw_v2.9.2[ch:1,sl:21]J14S-S J-Chass J-Chassis stack /USB/

To set '10.150.27.150' Rack#/Pos#: click on ??/## in the table below or use 'Rack View'

Click on chassis to see details	#	Rack#	Pos#	Comment	S/N	Part Number	Max T (C)	Firmware Version	Hardware Version
	1	??	??	Site 12 Rack, Antenna 2	210513839	730-J3U-00	46	4.1C-03	J and J3U-Chassis REV D H

The “Data Logging” window will appear. Initially, it may seem "empty" with several buttons available because the data collection process has not yet been configured. You can learn the functions of these buttons by hovering your cursor over them to see tooltips. Click the “Configure Collecting” button, as shown in the screenshot below.

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

Control Monitor Help

In case of images 'cut-off': click 'Close' and use Ctrl+/- in 'Login' screen to Zoom In/Out

10.150.27.150: Collected historical parameter values

Close Configure Collecting

Source File: File: not configured Samples: 0 Collecting: No Sample Rate: 1 min

Existing Subslots:

Chassis: 1 Slot: 1 Subslot: 1 Parameter: Temperature(degC) Clean Params

Show Table/Graph Add some parameters and click 'Show Table/Graph'

The “Collected Statistics Files” window will open. Initially, no files will be displayed. Select the desired sampling rate (available options are 1 min, 10 min, 1 hr, 2 hrs, 6 hrs, 12 hrs, and 24 hrs) and click the “Start New File” button. See the screenshot below.

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

Control Monitor Help

In case of images 'cut-off': click 'Close' and use Ctrl+/- in 'Login' screen to Zoom In/Out

Close Events Fullscr

10.150.27.150: Collected historical parameter values

Close Configure Collecting

Source File: File: not configured Samples: 0 Collecting: No Sample Rate: 1 min

Existing Subslots:

Chassis: 1 Slot: 1 Subslot: 1 Parameter: Temperature(degC) Clean Params

Show Table/Graph Add some parameters and click 'Show Table/Graph'

10.150.27.150: Collected statistics files

Start New File => Sampling Rate 1 min Close

Configuration File n_samples Collecting? Sampling Rate Download Del

Please confirm

This will assign a new file for collecting data with sampling rate [1 min]. Please confirm.

OK Cancel

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

Control Monitor Help

In case of images 'cut-off': click 'Close' and use Ctrl+/- in 'Login' screen to Zoom In/Out

Close Events Fullscr

Current Events System View

SNMP is up

SNMP Traps Config

Rack View Link View

js14_sw_v2.9.2[ch:1,sl:21]J14S-S-J-C

To set '10.150.27.150' Rack#/Pos#

Click on chassis to see details

10.150.27.150: Collected historical parameter values

Close Configure Collecting

Source File: File: feb_13_10-34-56_2026 Samples: 2 Collecting: Yes Sample Rate: 1 min

Existing Subslots: 1.11.1 1.11.3 1.12.1 1.12.3 1.17.1 1.19.1 1.19.2 1.19.3 1.19.4 1.20.1 1.21.1 1.21.2 1.21.3 1.21.4

Chassis: 1 Slot: 1 Subslot: 1 Parameter: Temperature(degC) Clean Params

Show Table/Graph Add some parameters and click 'Show Table/Graph'

Temperature(degC)
Vcc(V)
Vcc5(V)
TxPower(mW)
TxPowerB(mW)
RxPower(mW)
RxPowerB(mW)
SuppCurrent(mA)
SuppCurrentB(mA)
BiasTcurrent(mA)
BiasTcurrentB(mA)
RfActual(dB)
RfGainRelative(dB)
RfmonPower1(dBm)
RfmonPower2(dBm)
RfmonPower3(dBm)
RfmonPower4(dBm)
RfmonPower5(dBm)
RfmonPower6(dBm)
RfmonPowerCom(dBm)

2nd: Select (click on) one of the subslots

Wait until at least 3 samples are collected...

Click the button to show/update the data table/graph

1st: Select a parameter

In the window shown above, select a parameter to display using the combo box. Note that the list of available subslots will appear after the first sample has been collected. Click on a "subslot" to add the desired parameter.

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

Control Monitor Help

In case of images 'cut-off': click 'Close' and use Ctrl+/- in 'Login' screen to Zoom In/Out

Close Events Fullscr

Current Events System View

SNMP is up

SNMP Traps Config

Rack View Link View

js14_sw_v2.9.2[ch:1,sl:21]J14S-S J-C

To set '10.150.27.150' Rack#/Pos#

Click on chassis to see details # Rack#

10.150.27.150: Collected historical parameter values

Close Configure Collecting

Source File: File: feb_13_10-34-56_2026 Samples: 6 Collecting: Yes Sample Rate: 1 min

Existing Subslots: 1.11.1 1.11.3 1.12.1 1.12.3 1.17.1 1.19.1 1.19.2 1.19.3 1.19.4 1.20.1 2.21.1 1.21.2 1.21.3 1.21.4

Chassis: 1 Slot: 11 Subslot: 1 Parameter: Temperature(degC) Clean Params

Show Table/Graph Temperature(degC).1.11.1

[min] [max] [45.46] - [45.50] degC

Date/Time[sample id]	Temperature(degC).1.11.1
Feb 13 10:37:02 [3]	45.50
Feb 13 10:38:02 [4]	45.48
Feb 13 10:39:02 [5]	45.46
Feb 13 10:39:46 [6]	45.46
Feb 13 10:39:50 [7]	45.46
Feb 13 10:39:55 [8]	45.47

Real Time Data

Click this to show/update Table/Graph

Up to 9 parametes can be shown in one graph table

Use this to toggle Real Time Data dispaly

Use this to toggle graph 'grid'

wait until at least 3 samples are collected to see the graph/table

degC

10.150.27.150 : Historical values of Temperature(degC).1.11.1

The data table and graph will appear, although it may take up to one minute to load all data if the number of samples or parameters is large. Please refer to the screenshot above: if the "Collecting" field shows "Yes" for the current file, the "Real Time Data" will begin displaying immediately after the collected data in the table and graph. It updates at 5-second intervals, even if the requested sampling rate is longer than 5 seconds. It is important to note that real-time data is not saved to the final file; it is shown for convenience during analysis only. The file itself is always available for download in CSV format, as described later.

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

Control Monitor Help

10.150.27.150: Collected historical parameter values

Close Events Fullscr

Close Configure Collecting

Source File: File: feb_13_10-34-56_2026 Samples: 32 Collecting: Yes Sample Rate: 1 min

Existing Subslots: 1.11.1 1.11.3 1.12.1 1.12.3 1.17.1 1.19.1 1.19.2 1.19.3 1.19.4 1.20.1 1.21.1 1.21.2 1.21.3 1.21.4

Chassis: 1 Slot: 11 Subslot: 1 Parameter: Temperature(degC) Clean Params

Show Table/Graph SuppCurrent(mA).1.11.1 Temperature(degC).1.11.1

[min] [max] [290.44] - [304.36] mA [45.44] - [45.61] degC ← Min/Max values are shown here

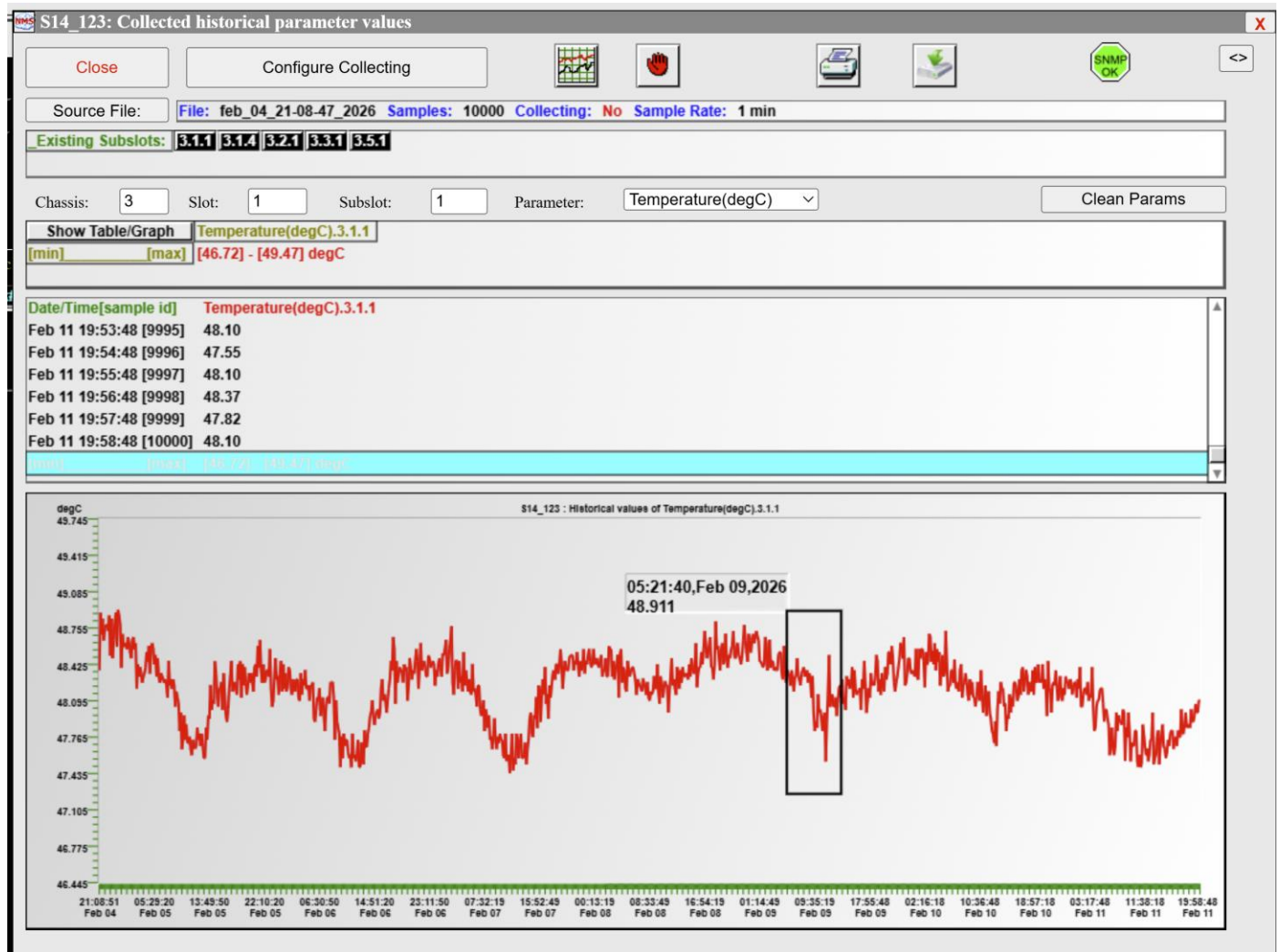
Date/Time[sample id]	SuppCurrent(mA).1.11.1	Temperature(degC).1.11.1
Real Time Data		
Feb 13 11:06:43 [33]	303.40	45.55
Feb 13 11:06:45 [34]	289.78	45.57
Feb 13 11:06:50 [35]	304.56	45.55
Feb 13 11:06:55 [36]	303.20	45.56
Feb 13 11:07:00 [37]	289.68	45.59

← The graph values are shown in '%' when the parameters are in different "units".

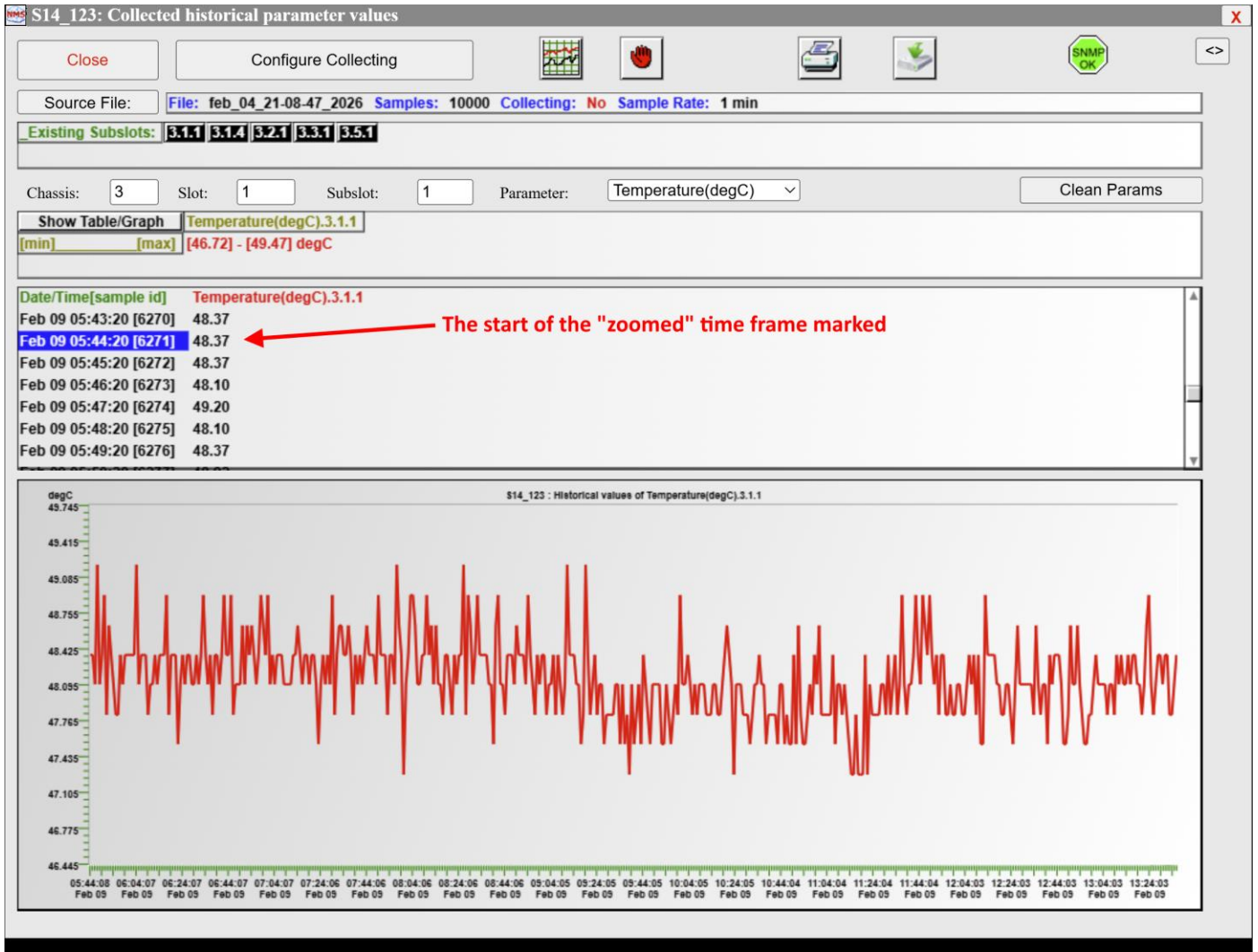
10.150.27.150 -%: Historical values of SuppCurrent(mA).1.11.1, Temperature(degC).1.11.1

4. Zooming

You can hold down the left mouse button and "drag" to select a specific time range on the graph, which will "jump" to the corresponding time frame in the data table. See the screenshot below.



After releasing the mouse button, the selected time range will be highlighted on the graph, and the corresponding time frames will be marked in the data table.



5. Downloading the CSV file

CloudView NMS can keep multiple files collected at different periods. The maximum number of samples per file is 10,000, but you can stop collecting at any time. To download the resulting CSV file (and/or manage the files), click on the "Configure Collecting" button at any time.

The screenshot shows the 'Configure Collecting' window for IP 10.150.27.118. The 'Source File' is 'Feb_11_17-58-34_2026' with 20 samples and a 1 min sampling rate. Below it, a table lists existing subslots. A red arrow points to the 'Configure Collecting' button. Another red arrow points to the 'Download' button in the 'Collected statistics files' window.

Collected statistics files window:

Configuration File	n_samples	Collecting?	Sampling Rate	Download	Del
Feb_11_17-58-34_2026	20	Yes	1 min	Download	Del
sim3	3	No	1 min	Download	Del
Feb_11_09-39-13_2026	11	No	1 min	Download	Del
sim52	52	No	1 min	Download	Del
sim1500	1500	No	1 min	Download	Del
sim40	40	No	1 min	Download	Del
sim30	30	No	1 min	Download	Del

Red text annotations: "Opens the window" points to the 'Configure Collecting' button. "Click to download" points to the 'Download' button in the table.

It will open a window with the list of files. You can select any file to download or delete. For currently "collecting" file you can stop collecting. Please notice also that the "collecting" stops automatically once the number of samples reaches 10,000.

The screenshot shows the 'Collected statistics files' window with a 'Please confirm' dialog box overlaid. The dialog box contains the following text:

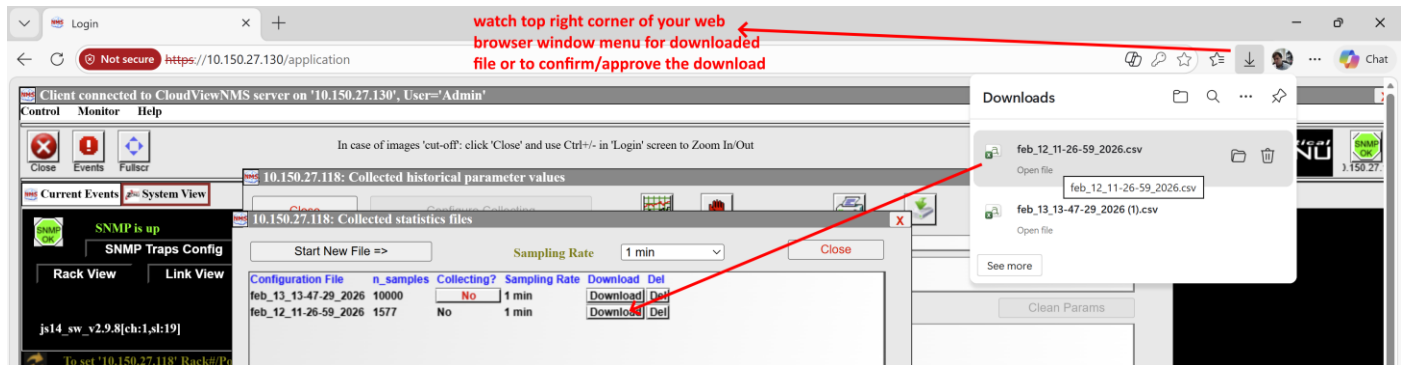
Please confirm

This will download file to your computer's 'Downloads' folder.
 The file name is [feb_11_17-58-34_2026.csv]
 You may have to allow this operation in your web browser:
 watch your web browser's upper right corner menu.
 Please confirm.

Buttons: OK, Cancel

A red arrow points from the 'Download' button in the table to the 'Please confirm' dialog box.

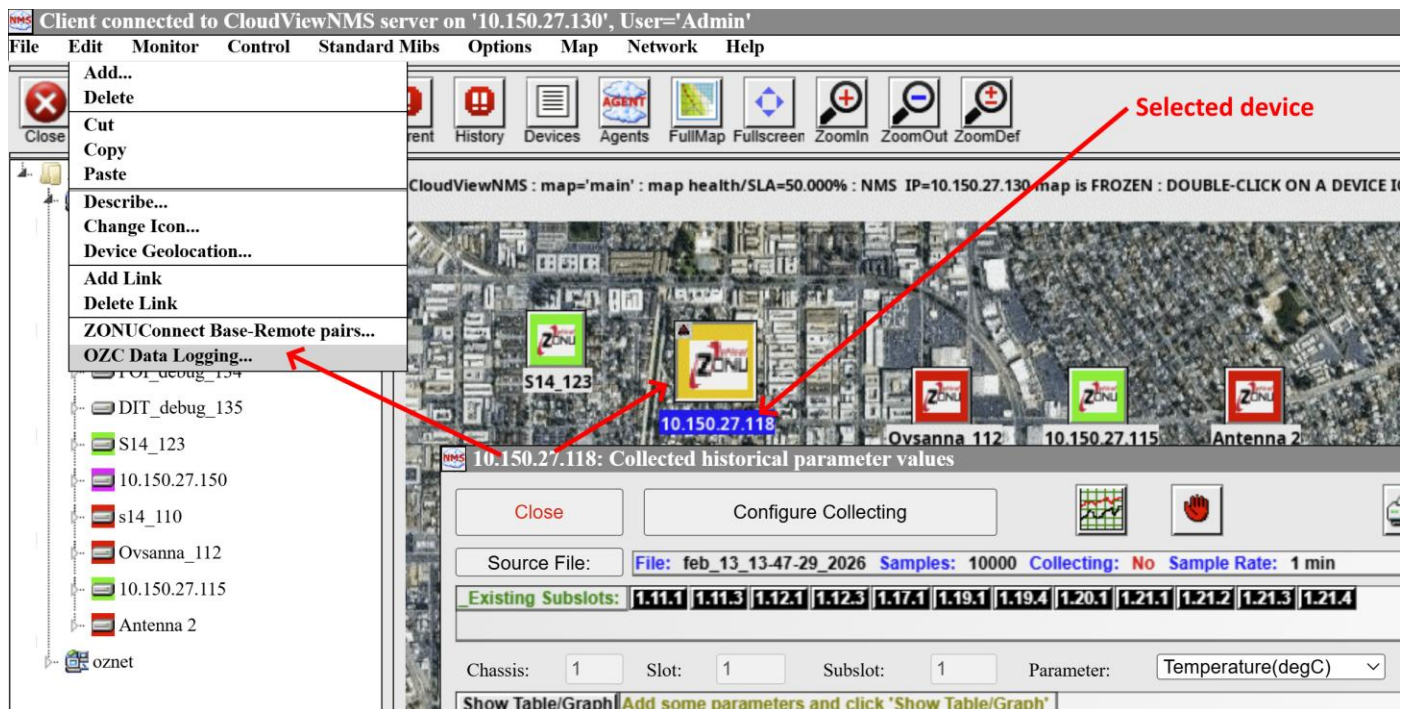
Please see the above and below screenshots. As the popup message says, you may need to allow the download operation in your web browser: watch for a red “blocking” mark in the upper right corner of the web browser.



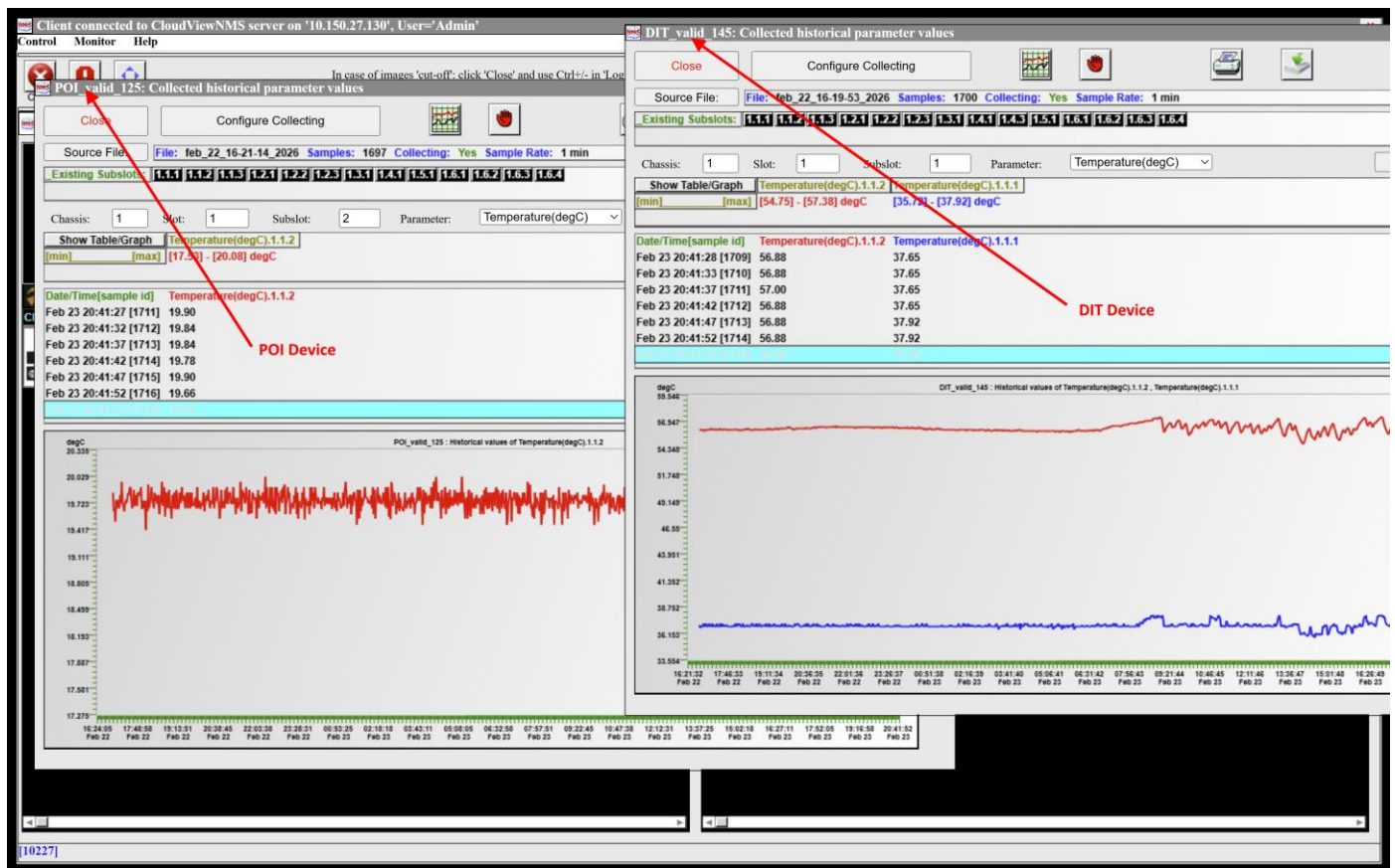
You will have to confirm the downloading only the first time you perform this operation, since the browser will remember your decision.

6. Working with more than one OZC device simultaneously

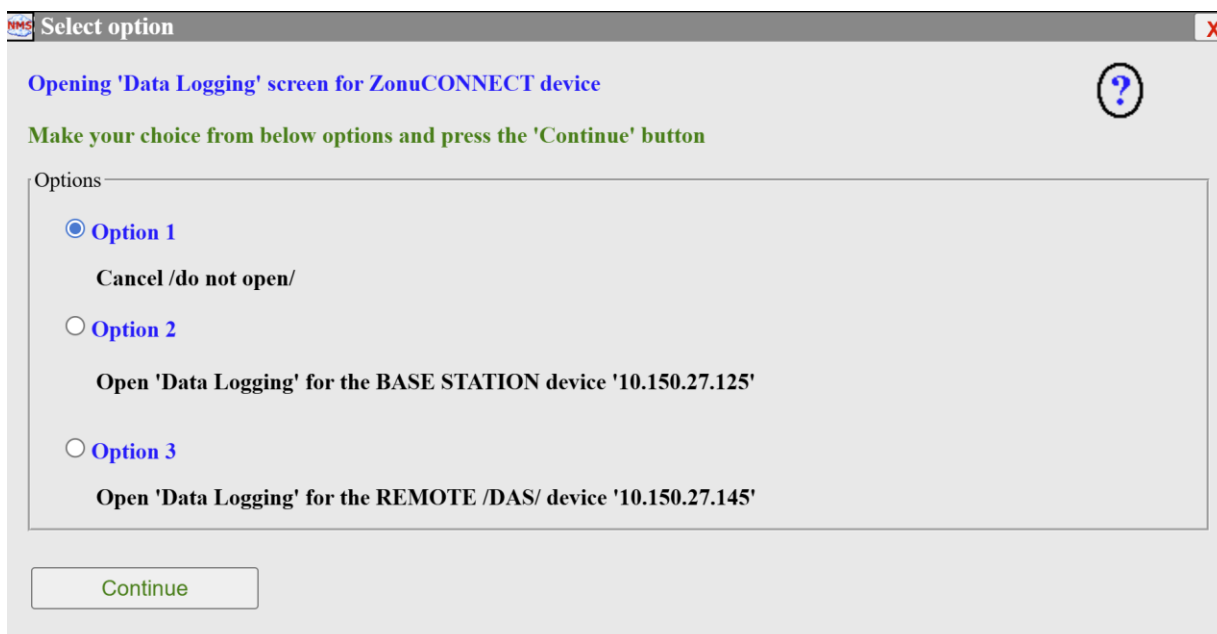
Sometimes you may need to view collected data graphs from more than one OZC device at the same time. In such cases, you can open multiple “OZC Data Logging” windows. Select the first desired device and use the main GUI Client window menu item “Edit/OZC Data Logging...” to open the first window. See the screenshot below.



Repeat the same steps for other device(s). You can now work with and observe multiple graphs simultaneously. See the screenshot below.



The typical case when such a "two devices" view may be required is Optical Zonu's ZONUConnect application, where you may want to see graphs from both BASE and DAS devices simultaneously. In such cases, CloudView NMS may also ask you to specify for which device you want to open the "Data Collecting" window. See the screenshot below.



7. Collecting/Graphing OZC ZONUConnect DAS/DIT 'Remote' Device RF Power by Band Names

The **Data Collecting/Graphing** screen is fairly generic and sometimes requires familiarity with the underlying OZC device data-scheme architecture to correctly choose which parameters and sub-slots to collect.

Users of the OZC ZONUConnect GUI may prefer to work with familiar **band names** instead of navigating raw parameter structures. The feature has been added to CloudView NMS starting with version v2.39o9. The procedure below explains how to use it.

1. Select the DAS/DIT "remote" device on the CloudView NMS map by single-clicking the corresponding device icon. The selected device will be highlighted with **white text on a blue background**.
2. Then open **Main Menu** → **Edit** → **OZC ZONUConnect Bands Table**.

Refer to the screenshots below for guidance.



The **Bands Table** screen for the selected DAS device will open.

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

File Edit Monitor Control Standard Mibs Options Map Network Help

Close

Add... Delete Cut Copy Paste Describe... Change Icon... Device Geolocation... Add Link Delete Link ZONUConnect Base-Remote pairs... OZC Data Logging... OZC Device Table View... OZC ZONUConnect Bands Table...

S14_123 10.150.27.150

DIT debug_135 34.218317,-118.426 5254m DIT valid_145 POI debug_134 ZC_Valid

Device is selected

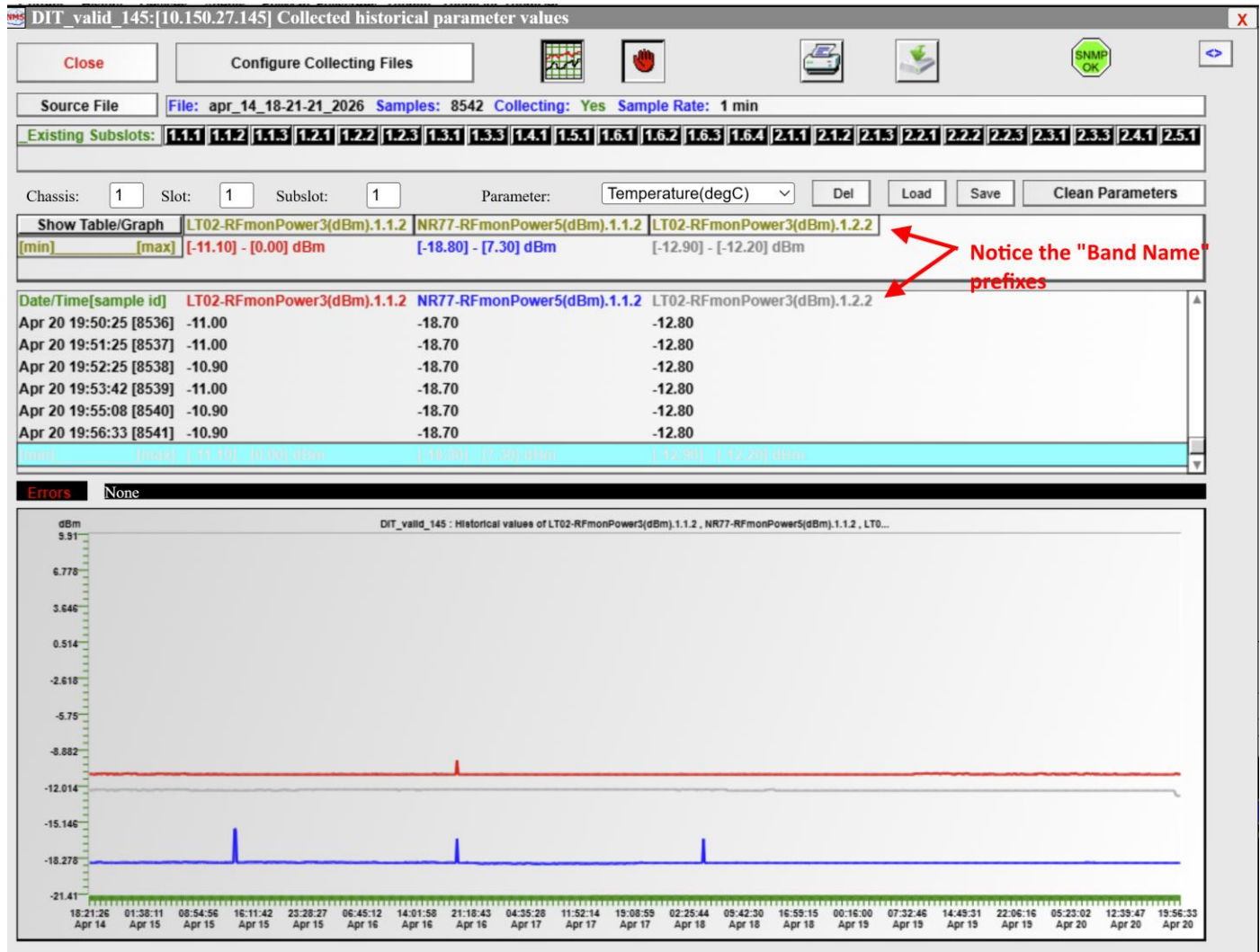
Notice the "Band Name" column

Use this button to open/update the "Data Logging/Graphing" window

Choose the bands you want to show graph for

BASE Chassis#/Channel#/Name	Band#	Band Name	POI Attn	POI Injection Loss	DIT RFmPower	Gain /Set/	DIT RFPowerObject
1/Channel#1/Bottom:A	1	LT13	24.80 dB	-16.30 dB	-4.10 dBm	? jIRFmPower1[1.1.2]	<input type="checkbox"/>
1/Channel#1/Bottom:A	2	LT05	25.60 dB	-15.50 dB	-8.80 dBm	? jIRFmPower2[1.1.2]	<input type="checkbox"/>
1/Channel#1/Bottom:A	3	LT02	19.50 dB	-21.60 dB	-11.00 dBm	? jIRFmPower3[1.1.2]	<input type="checkbox"/>
1/Channel#1/Bottom:A	4	LT66	18.90 dB	-22.20 dB	-9.30 dBm	? jIRFmPower4[1.1.2]	<input type="checkbox"/>
1/Channel#1/Bottom:A	5	NR77	18.90 dB	-22.20 dB	-18.70 dBm	? jIRFmPower5[1.1.2]	<input checked="" type="checkbox"/>
1/Channel#2/Bottom:B	1	LT13	24.20 dB	-16.90 dB	-8.40 dBm	? jIRFmPower1[1.2.2]	<input type="checkbox"/>
1/Channel#2/Bottom:B	2	LT05	24.50 dB	-16.60 dB	-10.60 dBm	? jIRFmPower2[1.2.2]	<input type="checkbox"/>
1/Channel#2/Bottom:B	3	LT02	20.00 dB	-21.10 dB	-12.90 dBm	? jIRFmPower3[1.2.2]	<input checked="" type="checkbox"/>
1/Channel#2/Bottom:B	4	LT66	20.40 dB	-20.70 dB	-12.10 dBm	? jIRFmPower4[1.2.2]	<input type="checkbox"/>
1/Channel#2/Bottom:B	5	NR77	19.20 dB	-21.90 dB	-19.50 dBm	? jIRFmPower5[1.2.2]	<input type="checkbox"/>
3/Channel#1/Bottom:A	1	LT02:DL	30.00 dB	0.00 dB	-10.90 dBm	? jIRFmPower3[2.1.2]	<input type="checkbox"/>
3/Channel#1/Bottom:A	2	LT02:UL	0.00 dB	0.00 dB	-10.90 dBm	N/A jIRFmPower3[2.1.2]	<input type="checkbox"/>
3/Channel#1/Bottom:A	3	LT66:DL	30.00 dB	-9.00 dB	-10.50 dBm	? jIRFmPower4[2.1.2]	<input type="checkbox"/>
3/Channel#1/Bottom:A	4	LT66:UL	0.00 dB	-9.00 dB	-10.50 dBm	N/A jIRFmPower4[2.1.2]	<input type="checkbox"/>
3/Channel#1/Bottom:A	5	NR41:DL	30.00 dB	-8.70 dB	-11.20 dBm	? jIRFmPower5[2.1.2]	<input type="checkbox"/>
3/Channel#2/Bottom:B	1	LT02:DL	30.00 dB	0.00 dB	-10.00 dBm	? jIRFmPower3[2.2.2]	<input type="checkbox"/>
3/Channel#2/Bottom:B	2	LT02:UL	29.00 dB	0.00 dB	-10.00 dBm	N/A jIRFmPower3[2.2.2]	<input type="checkbox"/>
3/Channel#2/Bottom:B	3	LT66:DL	30.00 dB	0.00 dB	-8.20 dBm	? jIRFmPower4[2.2.2]	<input type="checkbox"/>
3/Channel#2/Bottom:B	4	LT66:UL	29.00 dB	0.00 dB	-8.20 dBm	N/A jIRFmPower4[2.2.2]	<input type="checkbox"/>

In this window, use the checkboxes to select the desired bands. When finished, click the **Graph** button to open the pre-configured **Data Collecting/Graphing** screen. See the screenshot below.



8. Errors

Not all parameters are relevant to all subslots. For example, RxPower is not relevant to “Transmitter” subslots. In such cases, the corresponding fields in the CSV file will be empty, and you will get an error message when requesting the not-relevant parameter to be shown in the table and graph. Notice in the screenshot below that RxPower is not available starting from the 1st sample.

Client connected to CloudViewNMS server on '192.168.0.244', User='Admin'

Control Monitor Help

In case of images 'cut-off': click 'Close' and use Ctrl+/- in 'Login' screen to Zoom In/Out

Close Events Fullscr

Slot Info: chassis 1, slot: 11

Line Card

Refresh

Managed RFoF

Functionality: OZ200T_Transmitter

Transmitter	Transmitter
OZ200-1 details	OZ200T
Firmware Version	004C
Vendor Part Number	A13-Z206-D31-AL
Wavelength	1310.00 nm
Vendor Serial Number	251007511
Data Code	251023
Temperature	45.63 degC
Vcc	6.53 V
Vcc5	5.38 V
TxPower	3.54 mW Tx Enabled
DC Current Total	292.68 mA
Channel Gain(dB)	30.00 dB
RF Power(dBm)	-18.60 dBm
RF Attn Tx	0.00 dB
RF Power 2 (dBm)	-48.60 dBm
AGC Control	OFF
AGC Set Point(dBm)	-40.00 dBm
TxBiasChange	10758.00 uA
RFGainRelative	23.30 dB
RIATsetTx1	0.00 dB
RIActual /RF Link Gain/	

Source File: File: Feb_11_17-58-34_2026 Samples: 22 Collecting: Yes Sample Rate: 1 min

Existing Subslots: 1.11.1 1.11.3 1.12.1 1.12.3 1.17.1 1.19.1 1.19.4 1.20.1 1.21.1 1.21.2 1.21.3 1.21.4

Chassis: 1 Slot: 11 Subslot: 1 Parameter: RxPower(mW)

Show Table/Graph Add some parameters and click 'Show Table/Graph'

Error:

No data for [RxPower(mW).1.11.1] parameter, sample [1] of [Wed Feb 11 17:58:35 2026]!

OK

RxPower parameter requester from Transmitter, but it is not relevant!

No data starting from the 1st sample

However, there can be another situation: you may see such an error because the corresponding subslot was removed during polling.

10.150.27.118: Collected historical parameter values

Close Configure Collecting

Source File: File: feb_12_11-26-59_2026 Samples: 1577 Collecting: No Sample Rate: 1 min

Existing Subslots: 1.11.1 1.11.3 1.12.1 1.12.3 1.17.1 1.19.1 1.19.4 1.20.1 1.21.1 1.21.2 1.21.3 1.21.4

Chassis: 1 Slot: 12 Subslot: 1 Parameter: Temperature(degC)

Show Table/Graph Add some parameters and click 'Show Table/Graph'

Error:

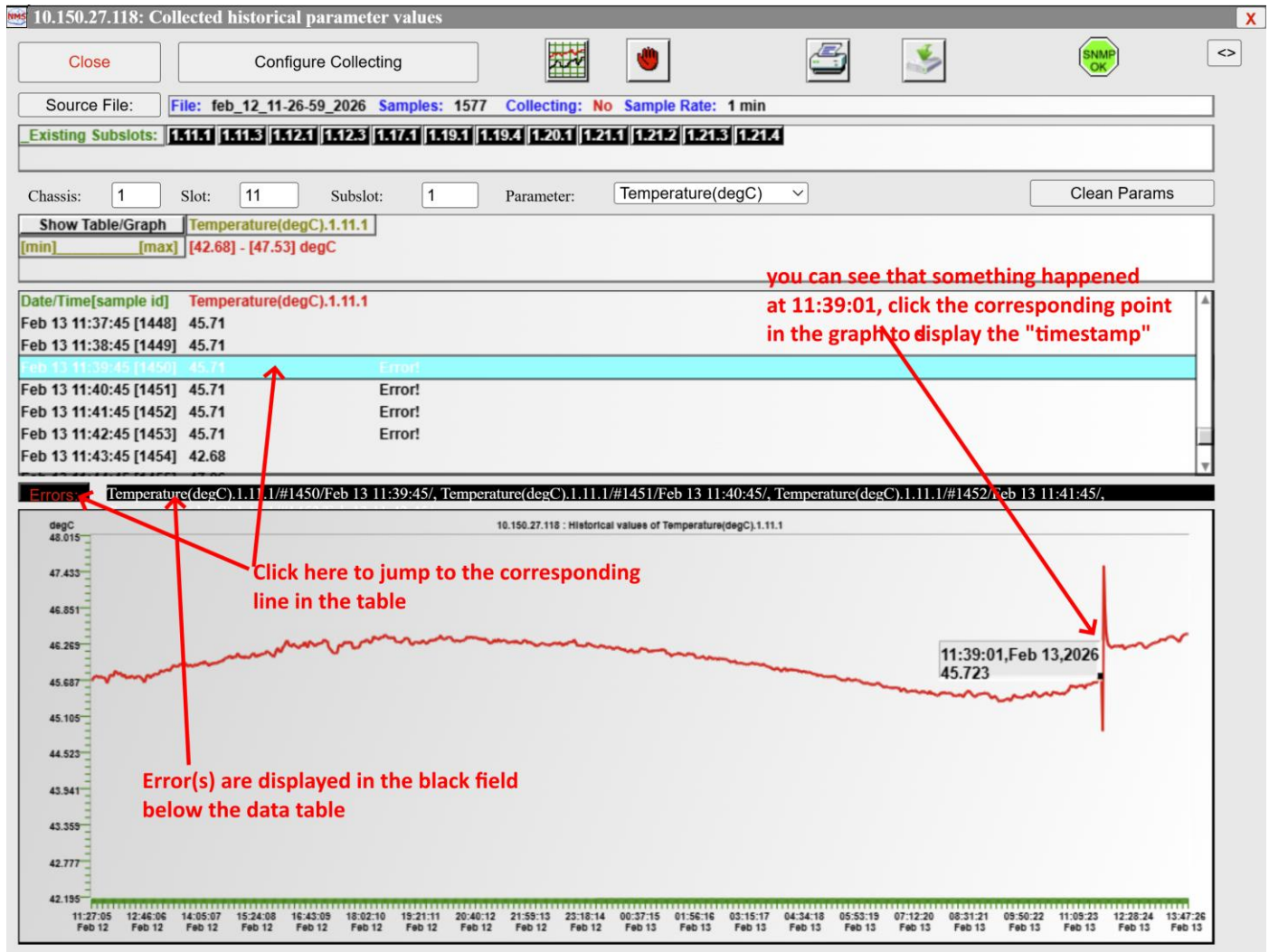
No data for [Temperature(degC).1.12.1] parameter, sample [1450] of [Fri Feb 13 11:39:45 2026]!

OK

When the sample number is not 1, it means that the corresponding subslot suddenly disappeared from the "inventory"

In such cases, the number of the "error" sample is never "1", meaning that the data was available initially, but something happened over time.

Starting from CloudView NMS v2.39o3, we have improved the "error processing" feature. The window now allows you to see the graph before and after the "error" time. Errors are displayed in the black field below the data table. Users can click the "Errors:" button to jump to the corresponding line in the data table. See the screenshot below.



9. Summary

CloudView NMS displays visual and graphical representations of Optical Zonu's devices' historical parameter values and allows you to keep and download the collected statistics for further processing. This feature enables network operators to track performance trends, detect anomalies, and optimize fiber optic link reliability through detailed historical insights and intuitive graphing tools.