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).

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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:

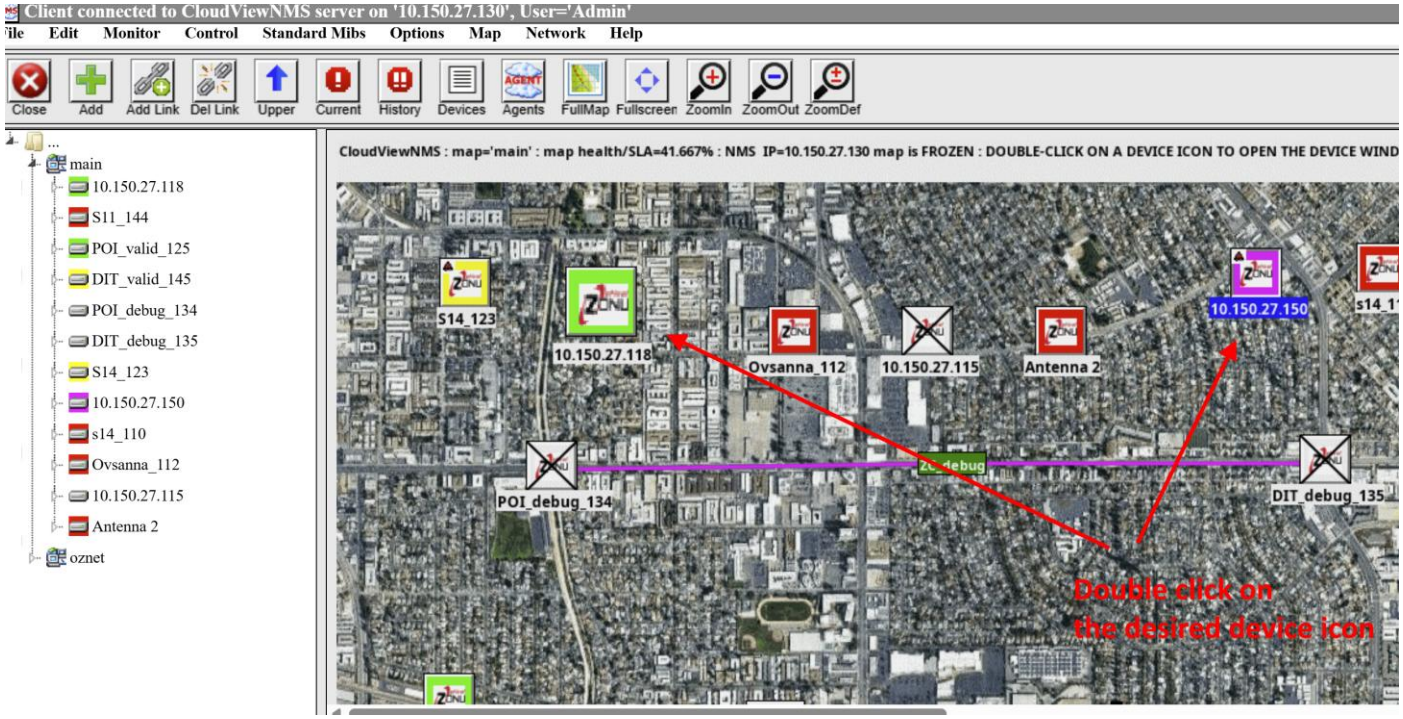
- **Example Interface**: We used the CloudView NMS HTML5 Web GUI (accessible via a web browser) as an example. The interface will look similar in other CloudView NMS GUIs, including the stand-alone server application GUI and the Independent Client GUI.

- ⚠ **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-

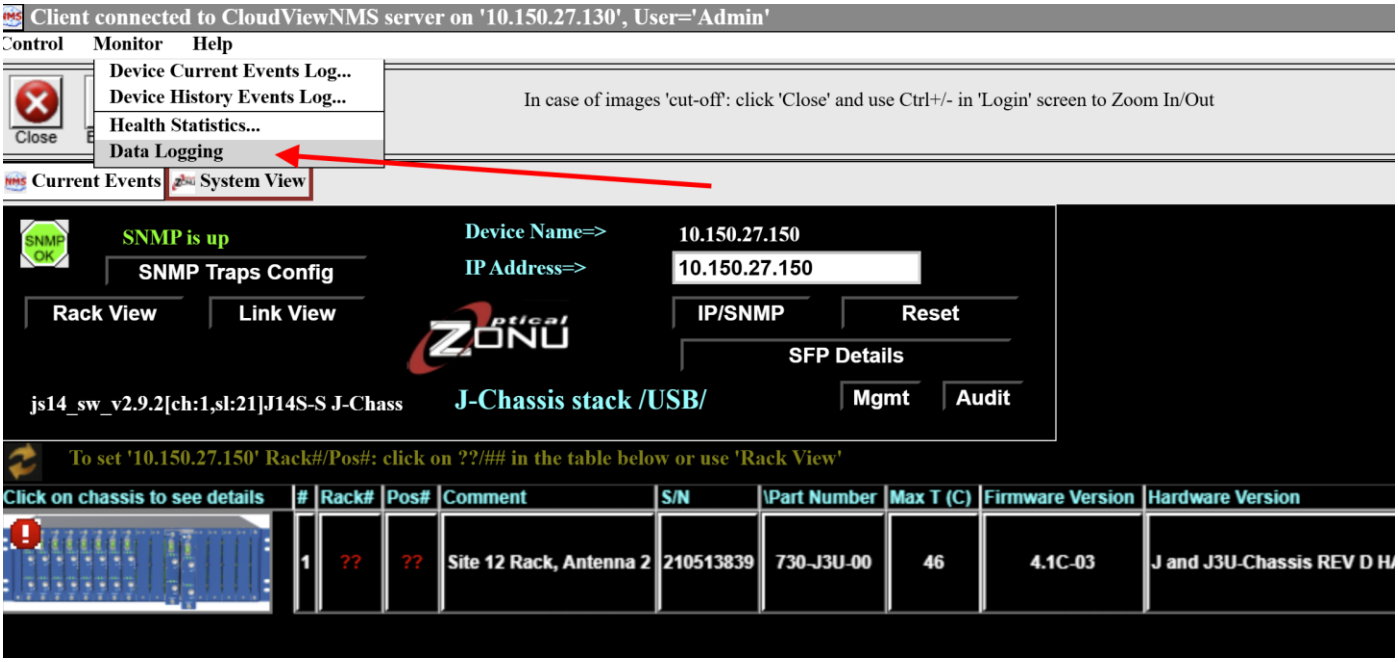
alone server application GUI may still remain responsive, but most of our customers primarily use the web interface, which is the recommended option for several reasons.

2. Configuring Data Collection for Optical Zonu Devices

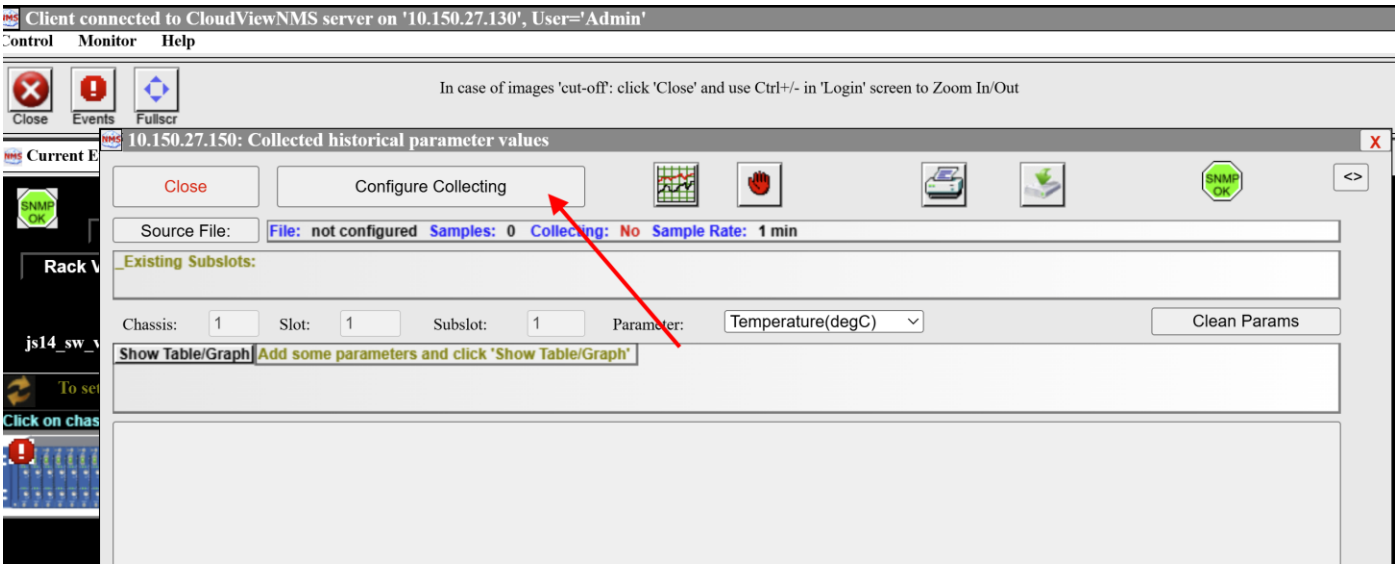
To configure data collection, double-click the desired device icon on the CloudView NMS map.



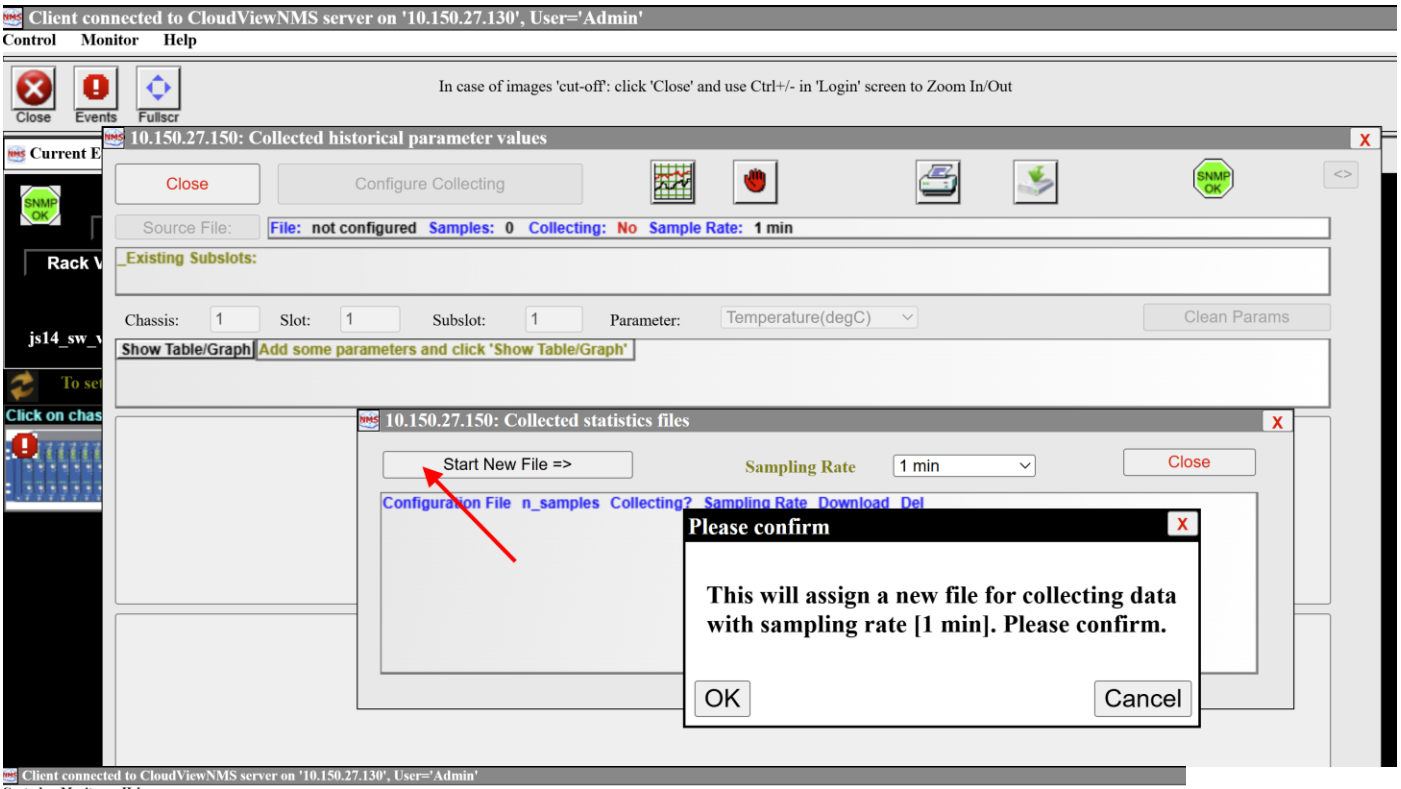
The main device window will open. Locate and click the “Data Logging” menu item, as shown in the screenshot below:

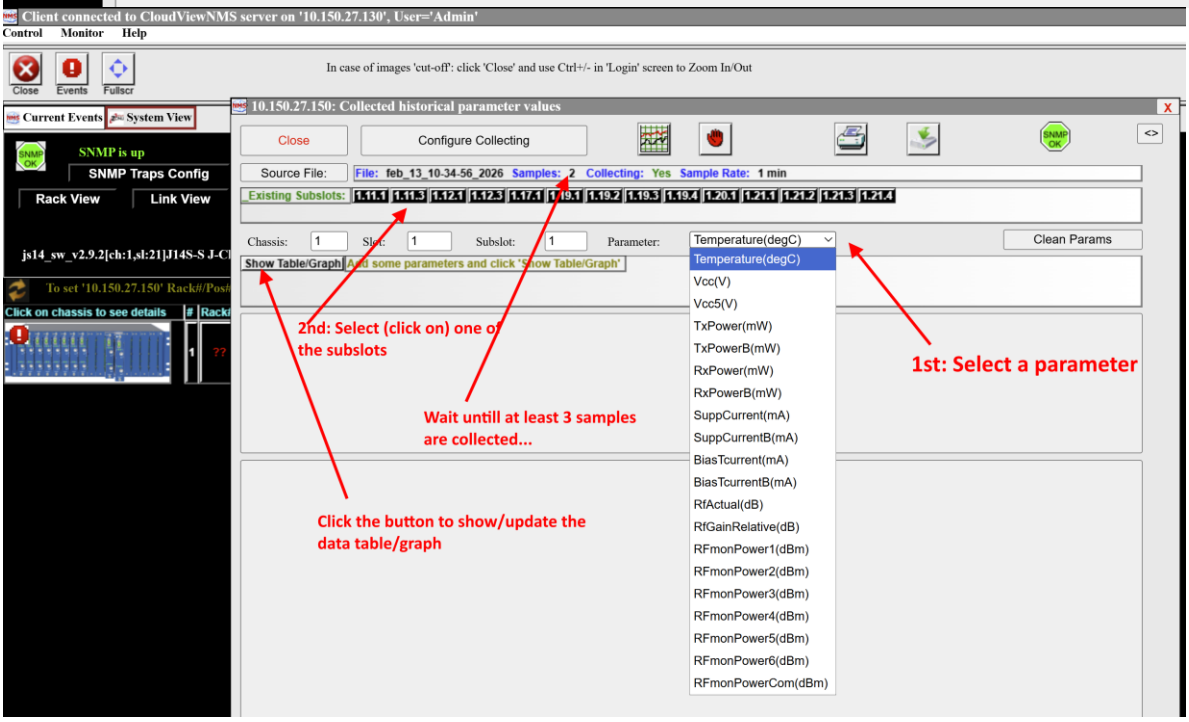


The “Data Logging” window will appear. Initially, it may seem "empty" with several buttons available because the data collection process has not yet been configured. You can learn the functions of these buttons by hovering your cursor over them to see tooltips. Click the “Configure Collecting” button,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

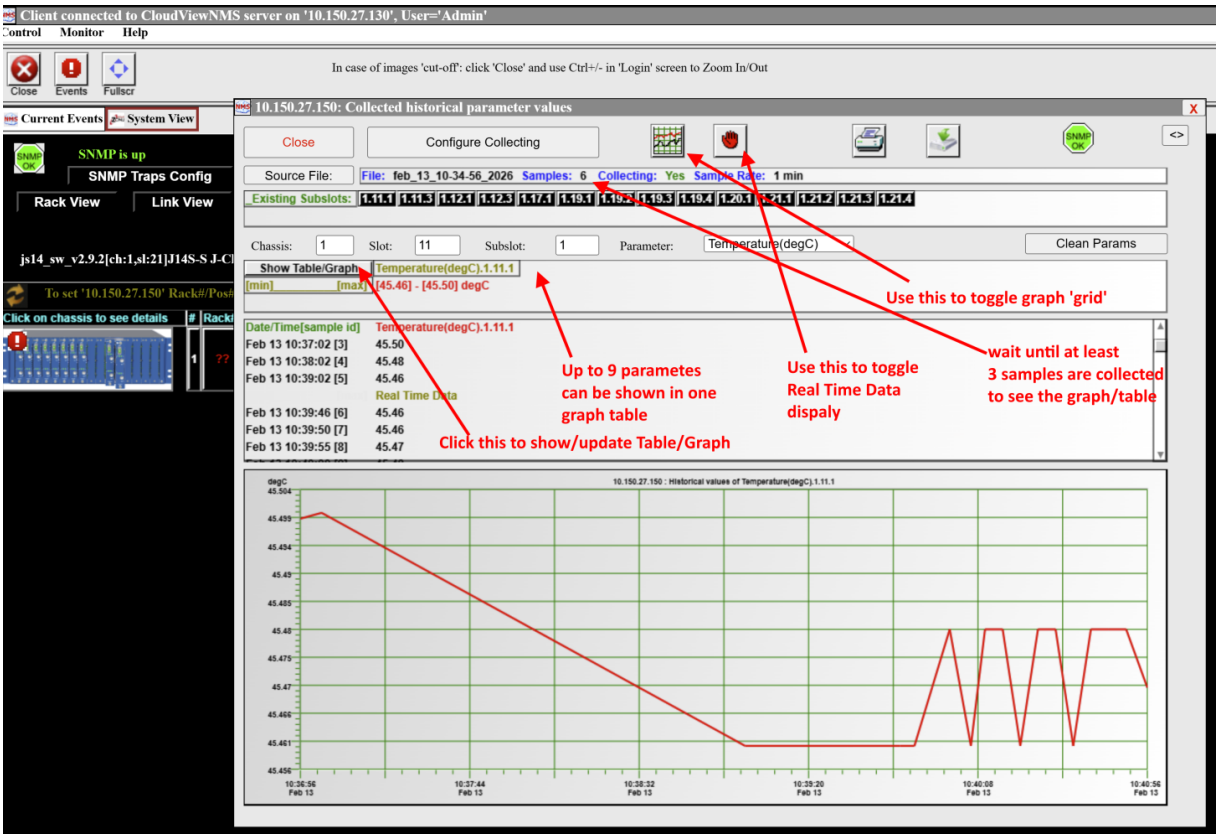


The “Collected Statistics Files” window will open. Initially, no files will be displayed. Select the desired sampling rate (available options are 1 min, 10 min, 1 hr, 2 hrs, 6 hrs, 12 hrs, and 24 hrs) and click the “Start New File” button. See the screenshot below.



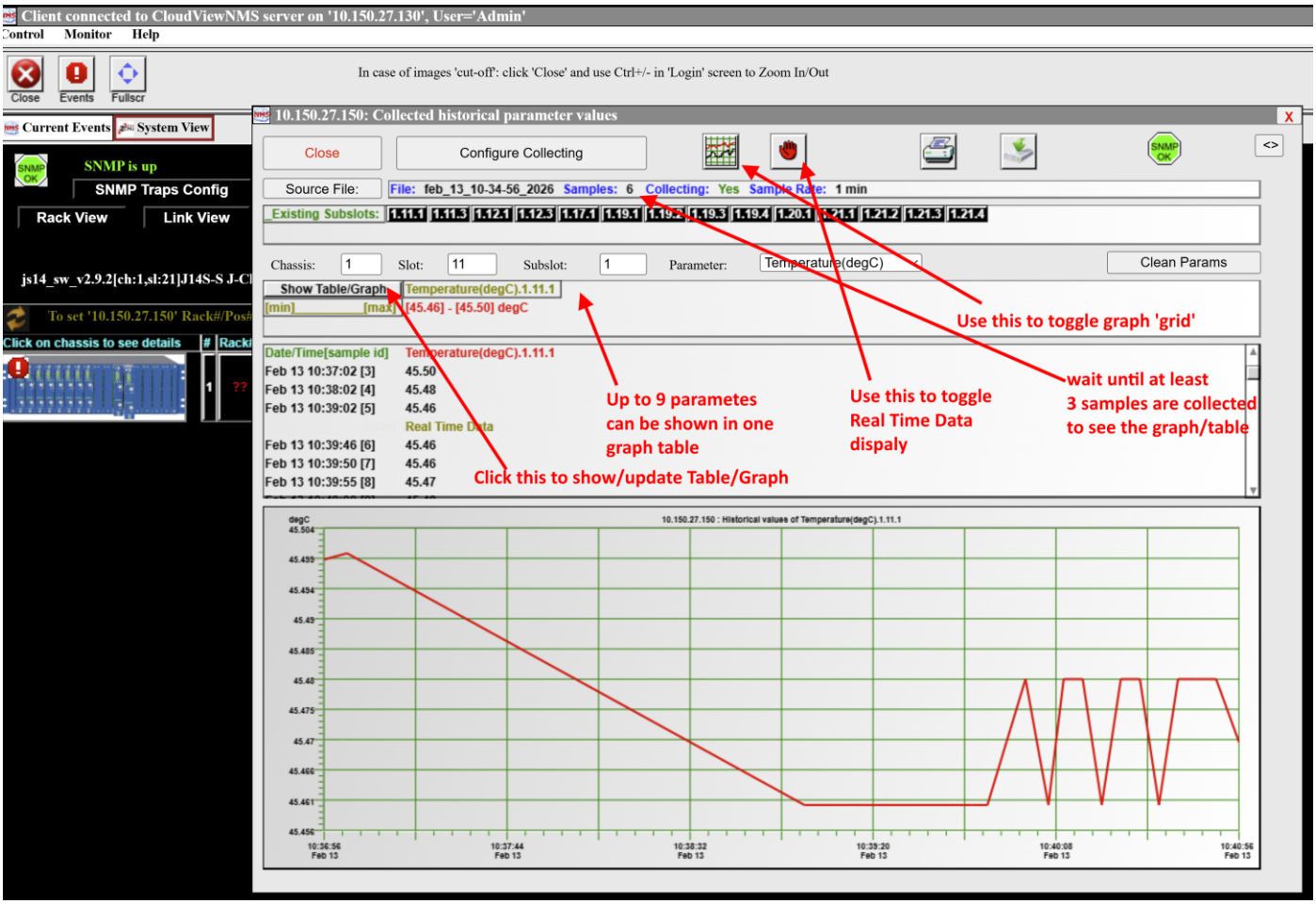


In the window shown above, select a parameter to display using the combo box. Note that the list of available subslots will appear after the first sample has been collected. Click on a "subslot" to add the desired parameter.

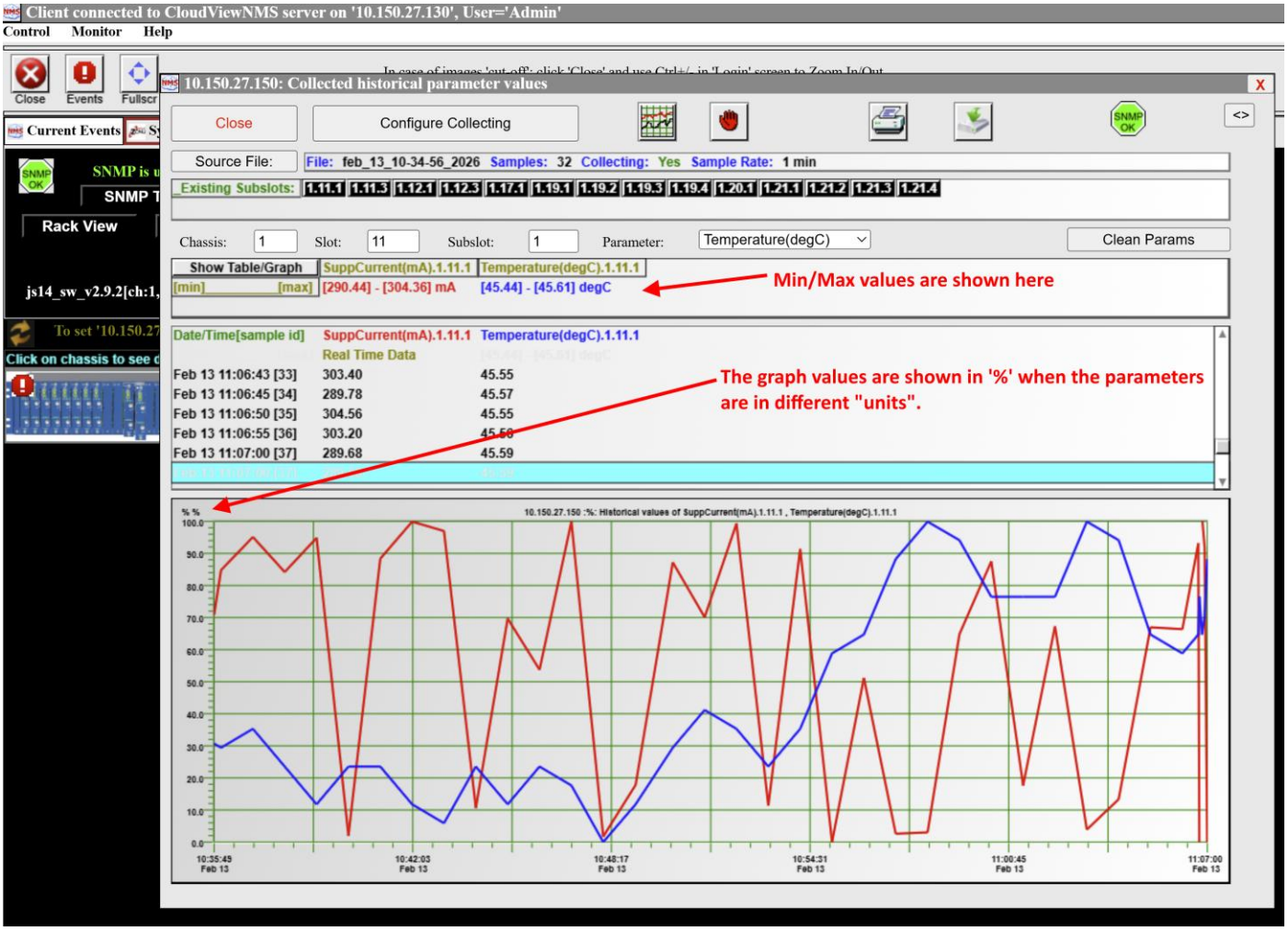


3. Showing Data Table and Graph for selected parameters

You can add up to 9 parameters to be displayed in the table or graph. Note that when parameters are measured in different units, the graph will show values as percentages for better comparison. Finally, click the "Show Table/Graph" button to view the data table and graph. However, you must wait until at least 3 samples have been collected before the table data and graph canbe displayed.

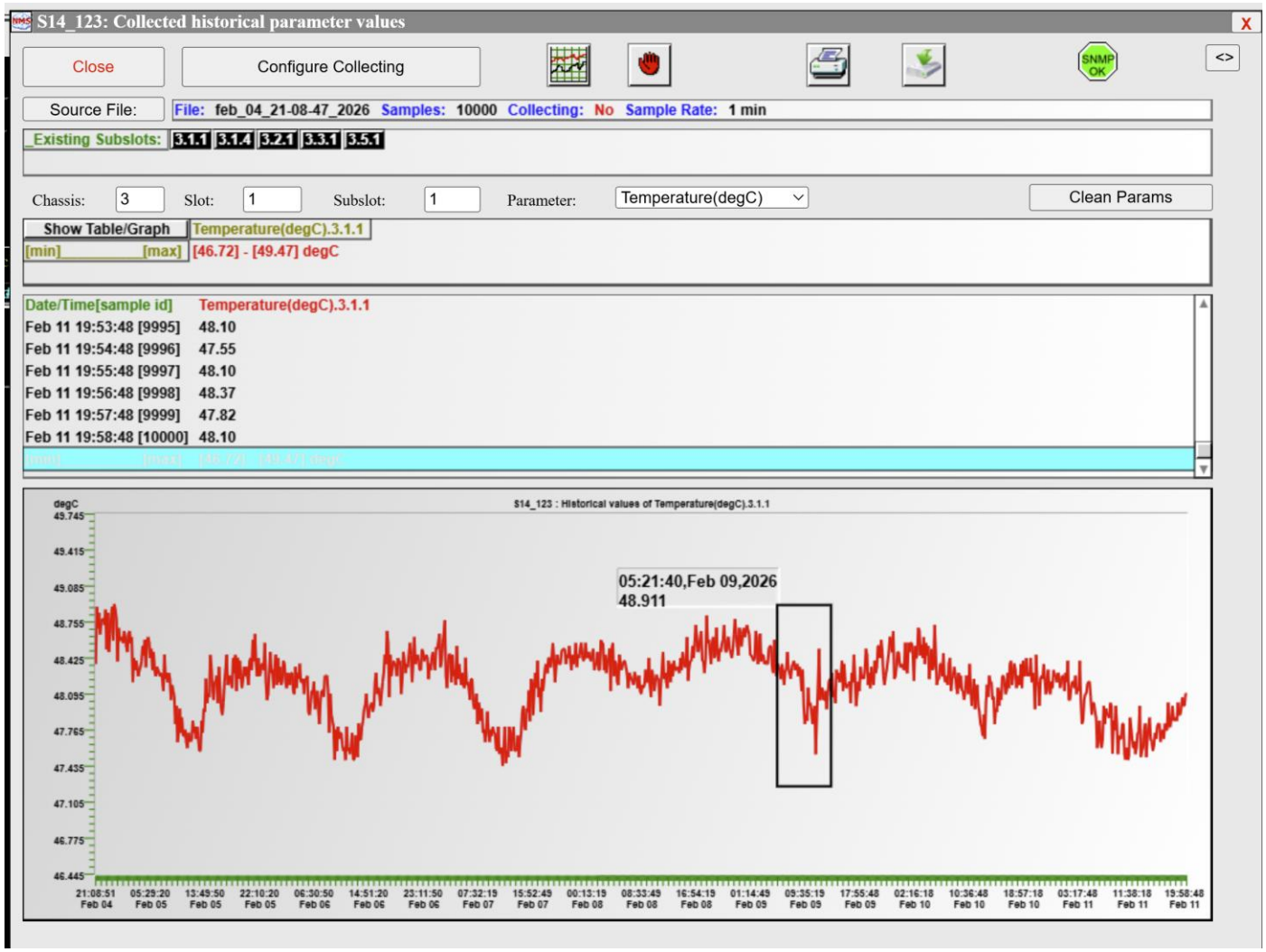


The data table and graph will appear, although it may take up to one minute to load all data if the number of samples or parameters is large. Please refer to the screenshot above: if the "Collecting" field shows "Yes" for the current file, the "Real Time Data" will begin displaying immediately after 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.

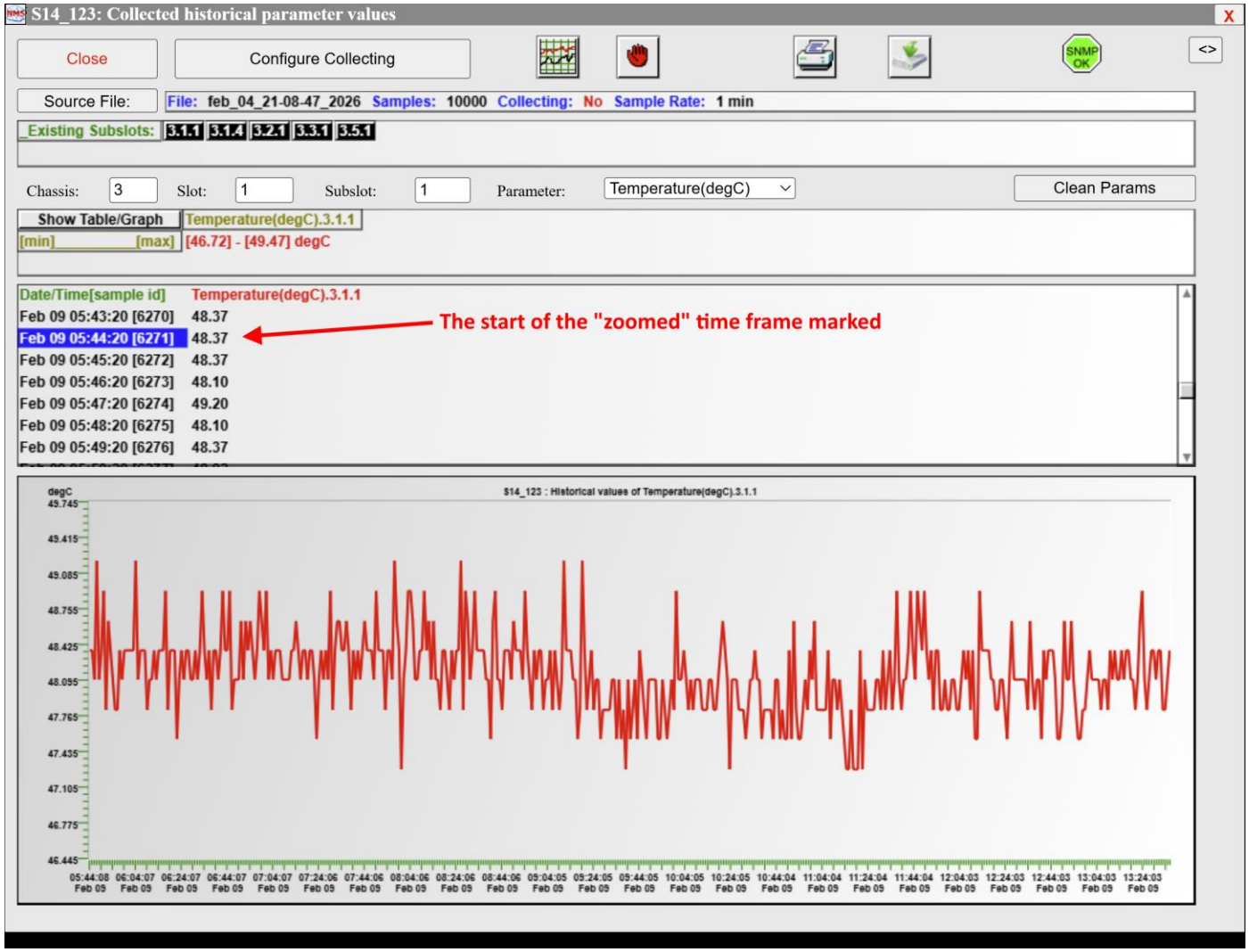


4. Zooming

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.

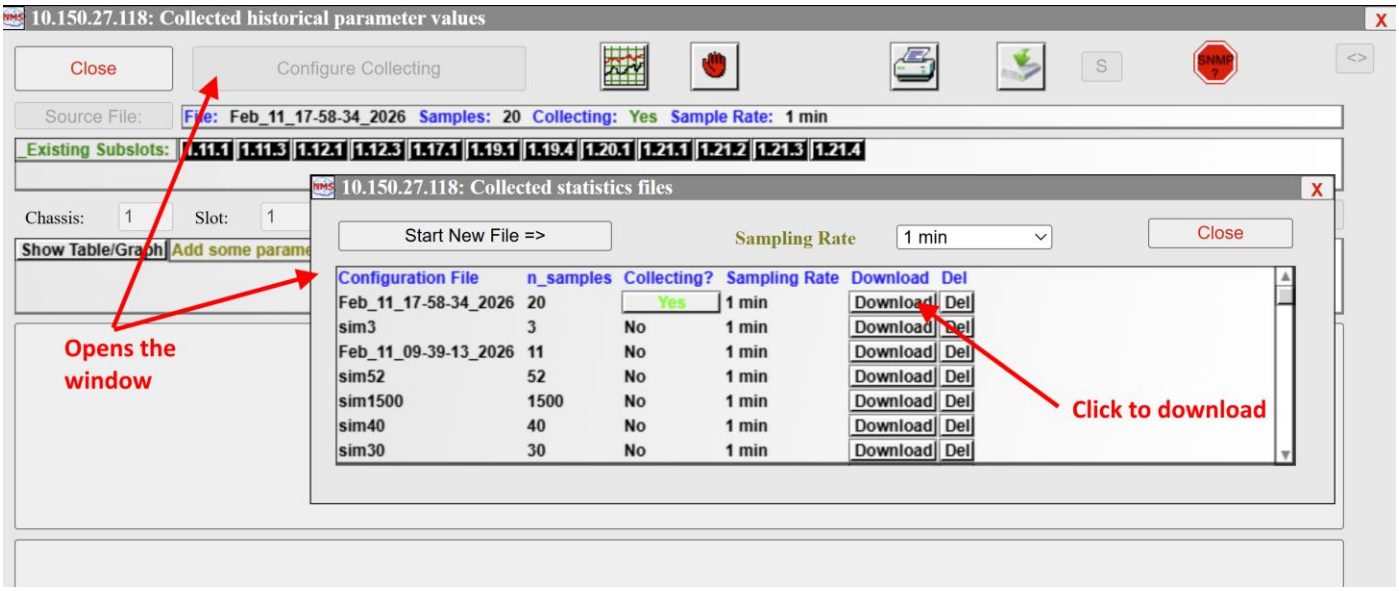


After releasing the mouse button, the selected time range will be highlighted on the graph, and the corresponding time frames will be marked in the data table.

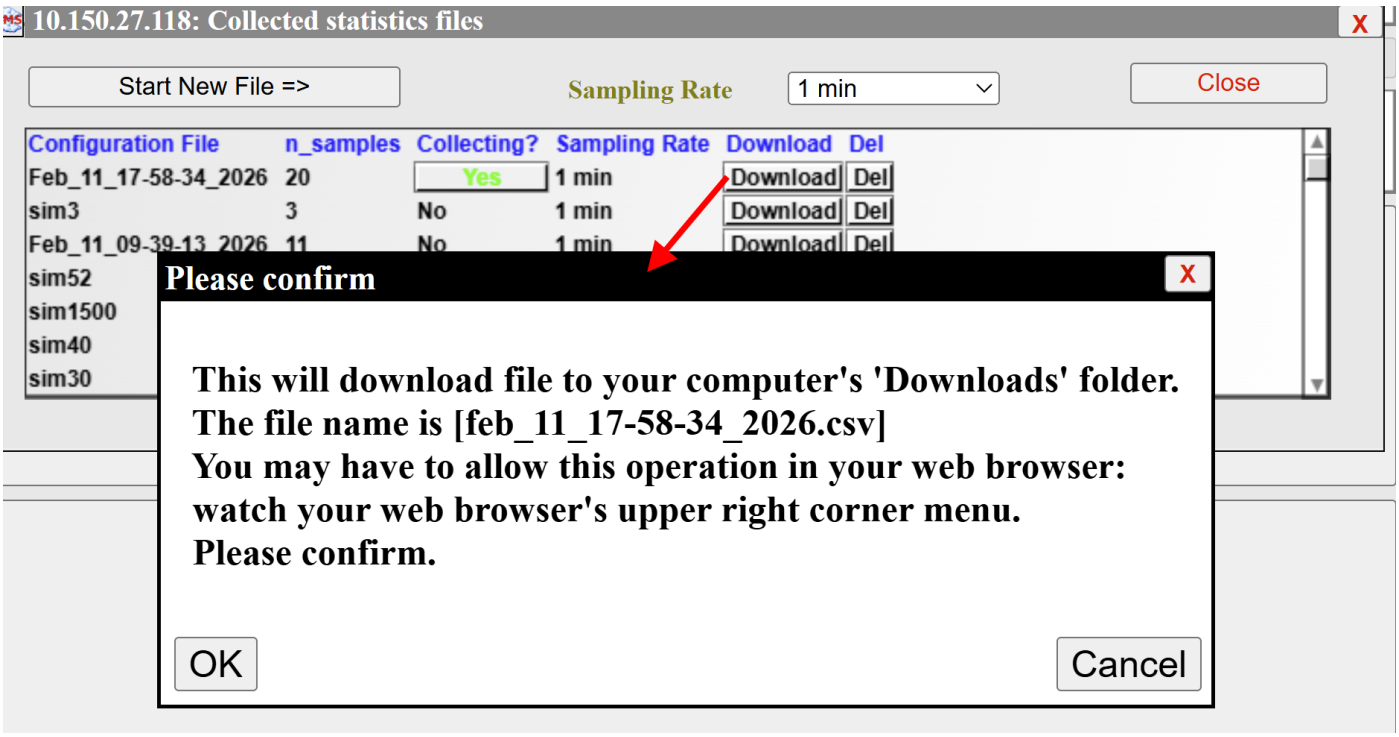


5. *Downloading the CSV file*

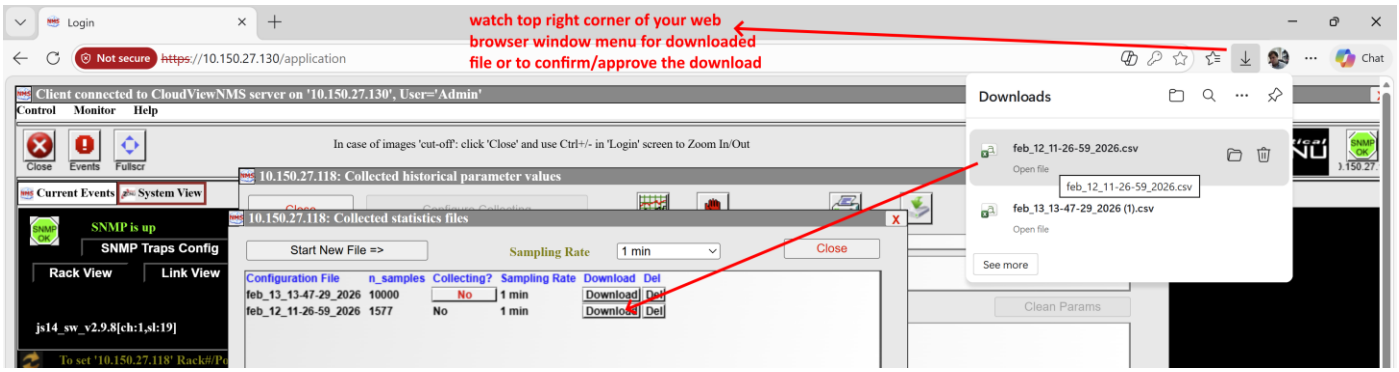
CloudView NMS can keep multiple files collected at different periods. The maximum number of samples per file is 10,000, but you can stop collecting at any time. To download the resulting CSV file (and/or manage the files), click on the "Configure Collecting" button at any time.



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.



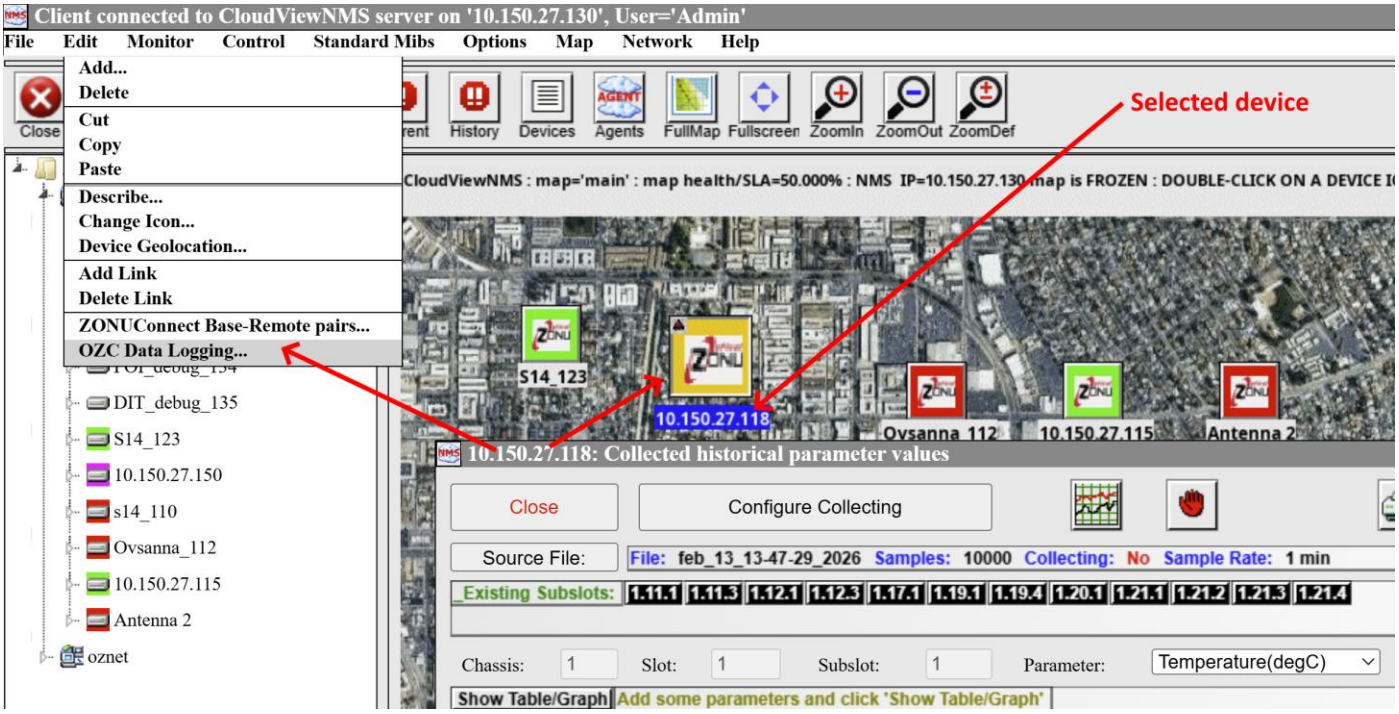
Please see the above and below screenshots. As the popup message says, you may need to allow the download operation in your web browser: watch for a red "blocking" mark in the upper right corner of the web browser.



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

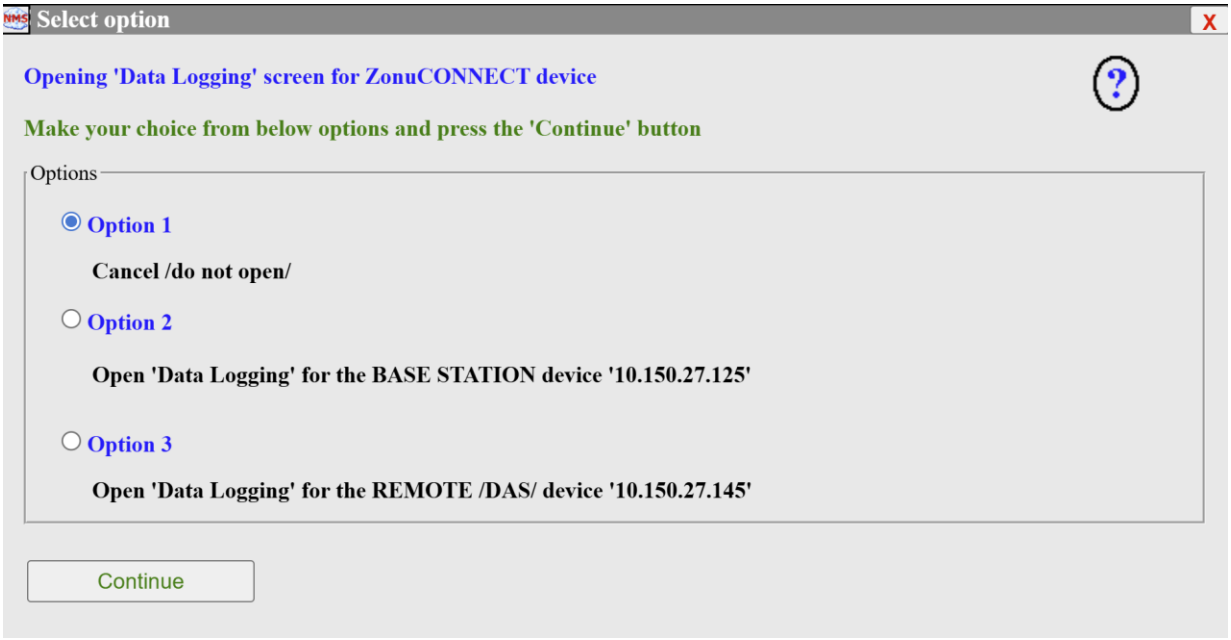
6. Working with more than one OZC device simultaneosely

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.

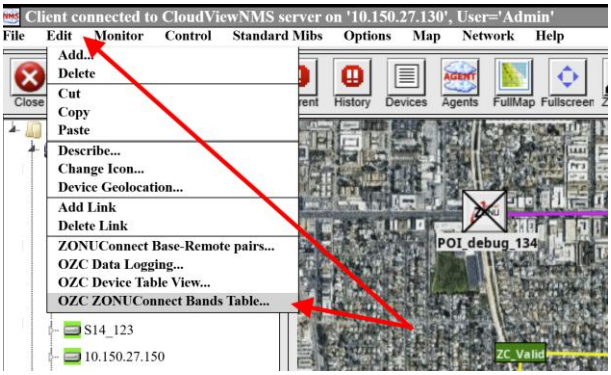


7. Collecting/Graphing OZC ZONUConnect DAS/DIT 'Remote' Device RF Power by Band Names

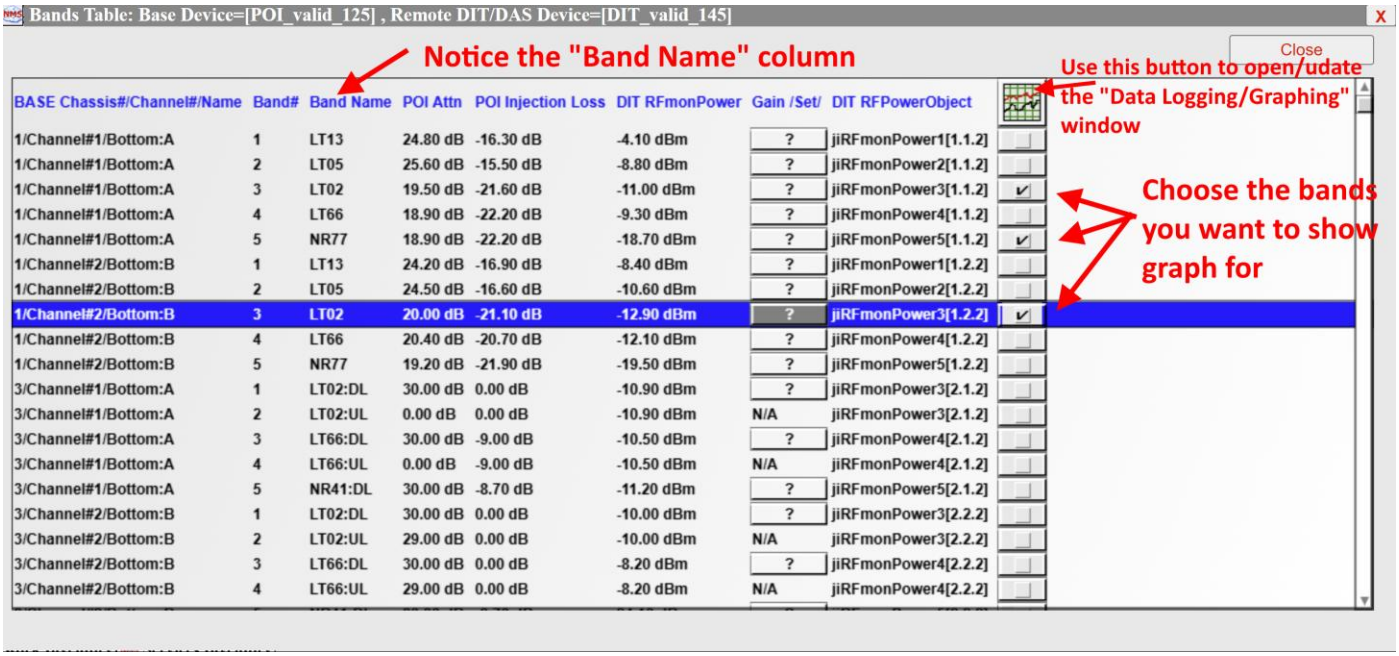
The **Data Collecting/Graphing** screen is fairly generic and sometimes requires familiarity with the underlying OZC device data-scheme architecture to correctly choose which parameters and sub-slots to collect.
Users of the OZC ZONUConnect GUI may prefer to work with familiar **band names** instead 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**.

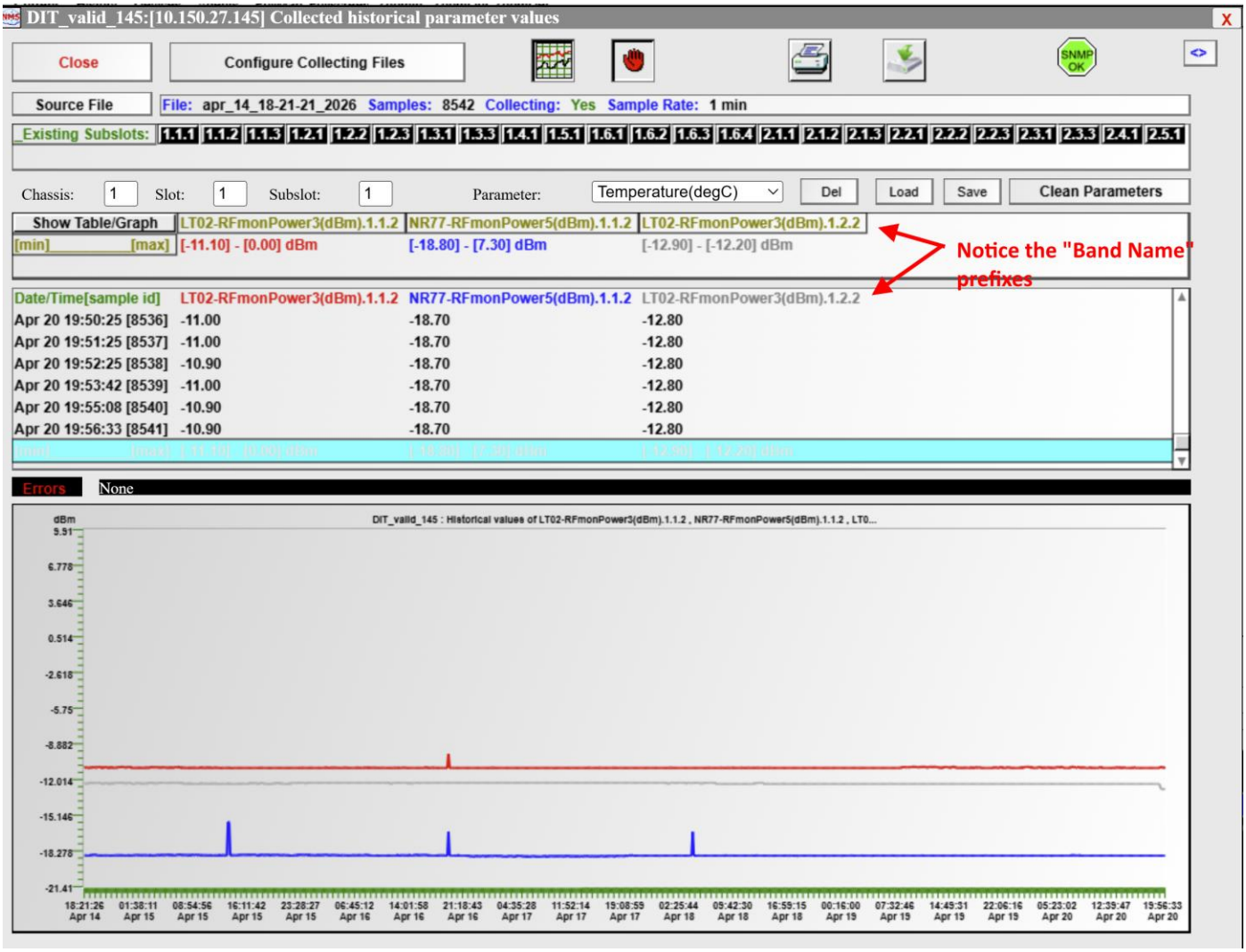
Refer to the screenshots below for guidance.



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

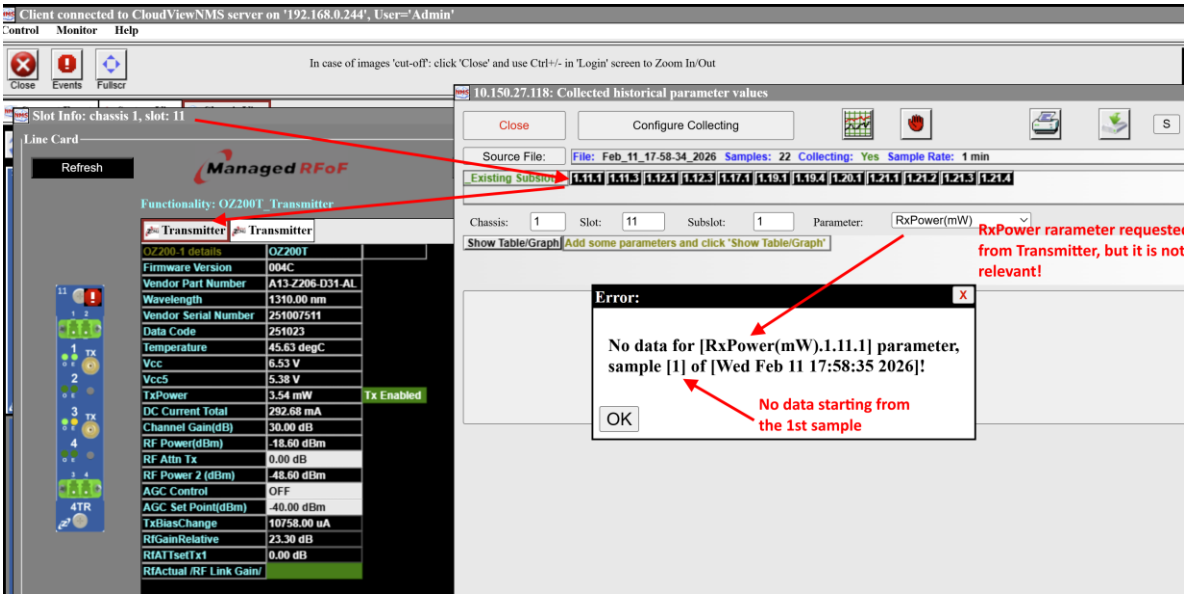


In this window, use the checkboxes to select the desired bands. When finished, click the **Graph** button to open the pre-configured **Data Collecting/Graphing** screen. See the screenshot below.

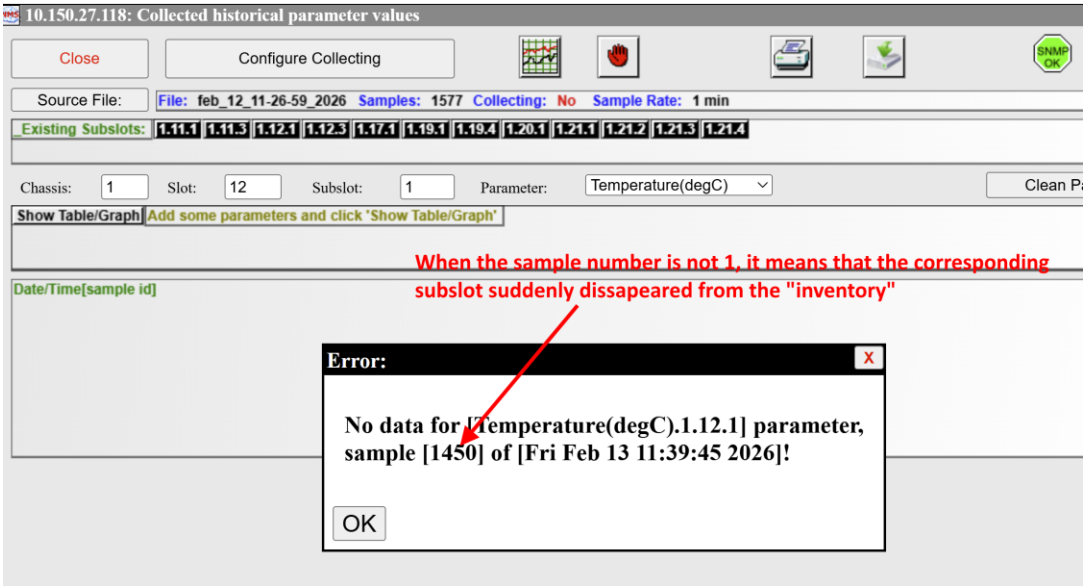


8. Errors

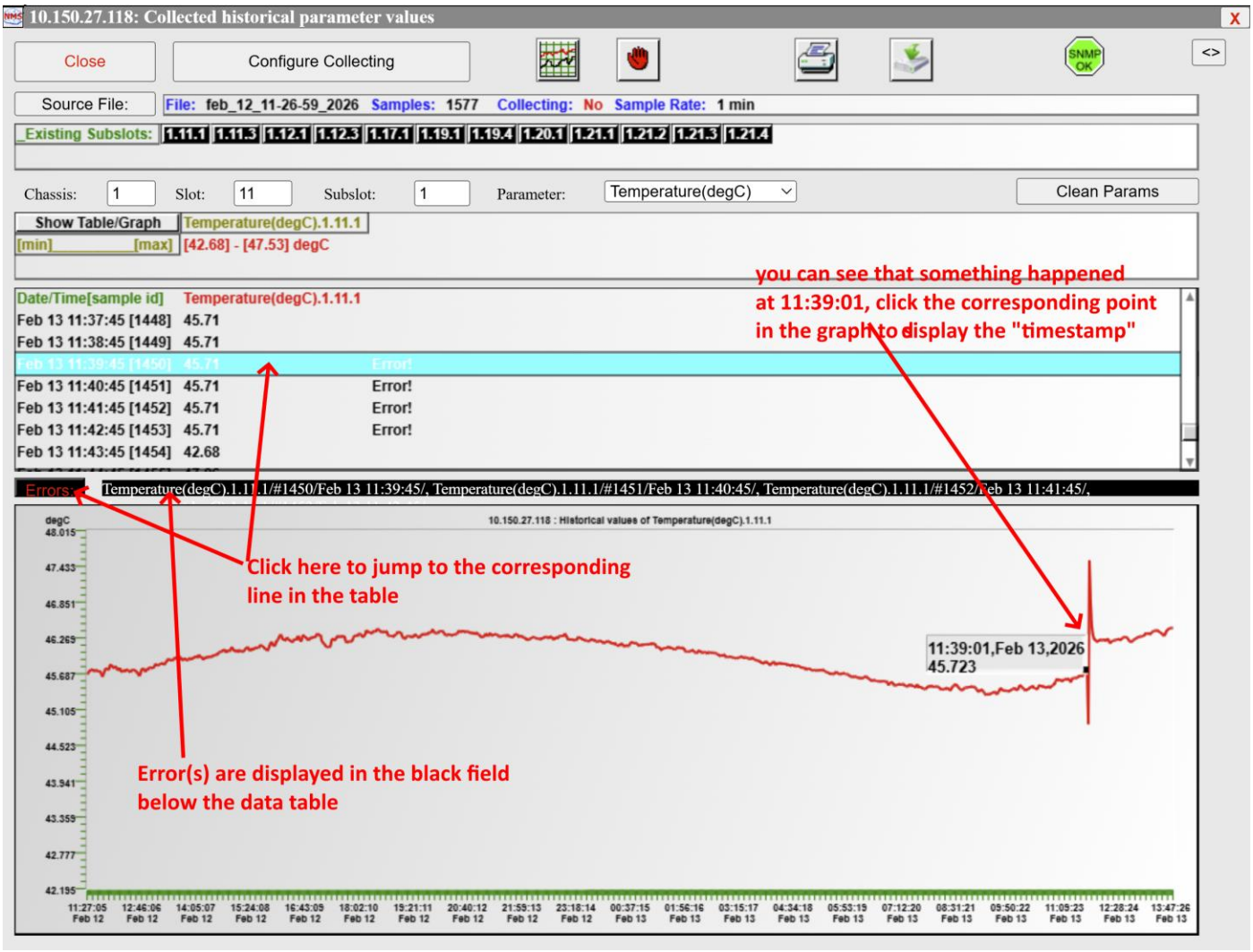
Not all parameters are relevant to all subslots. For example, RxPower is not relevant to “Transmitter” subslots. In such cases, the corresponding fields in the CSV file will be empty, and you will get an error message when requesting the not-relevant parameter to be shown in the table and graph. Notice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



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



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.