Network Monitoring with PRTG Network Monitor

Overview

In this project, we will configure network monitoring using PRTG Network Monitor to ensure the health, performance, and availability of our network devices and services.

Software Used

- PRTG Network Monitor

Steps to Configure Network Monitoring

1. Install PRTG Network Monitor:
    - Download and install PRTG Network Monitor on a dedicated server or workstation within your network.

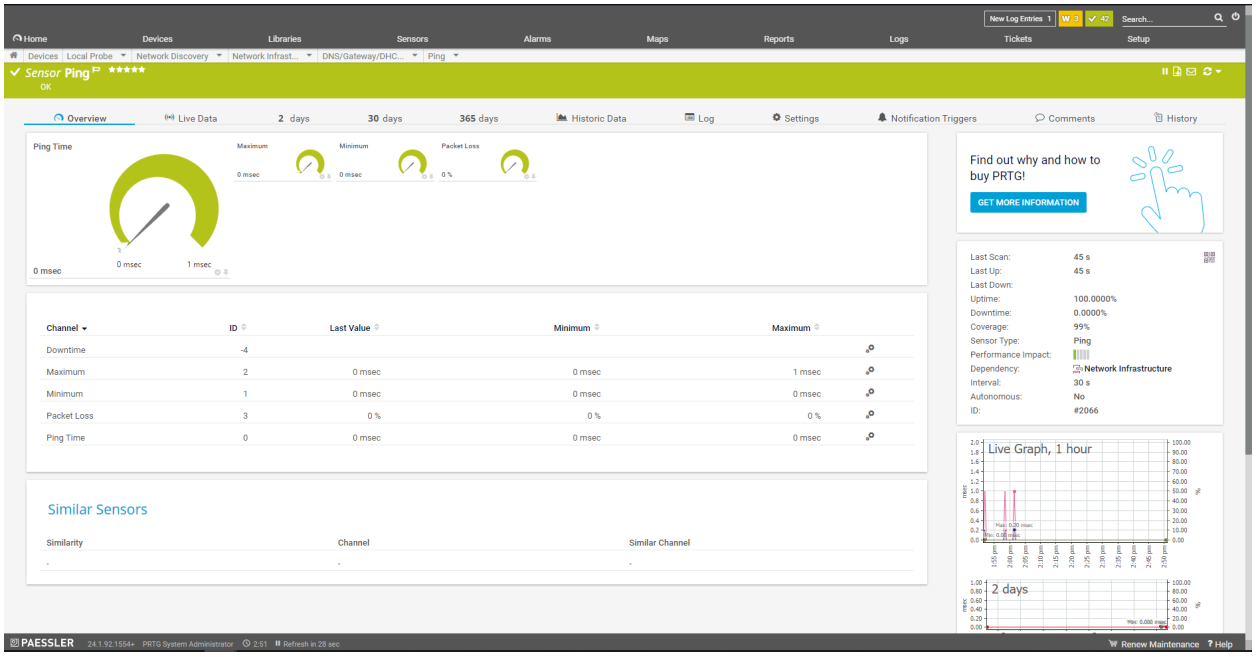
2. Add Devices to PRTG:
    - Log in to the PRTG web interface.
    - Navigate to "Devices" and click on "Add Device".
    - Enter the necessary information for each device you want to monitor, including:
        - Device IP addresses or hostnames.
        - SNMP community strings for devices that support SNMP.
        - Device types (router, switch, server, etc.).

3. Add Basic Sensors:
    - For devices that support SNMP, add the following basic sensors:
        - Ping Sensor:
            - Monitors the availability and response time of devices.
        - SNMP Traffic Sensor:
            - Monitors the traffic on network interfaces.
        - SNMP Uptime Sensor:
            - Monitors the uptime of devices.

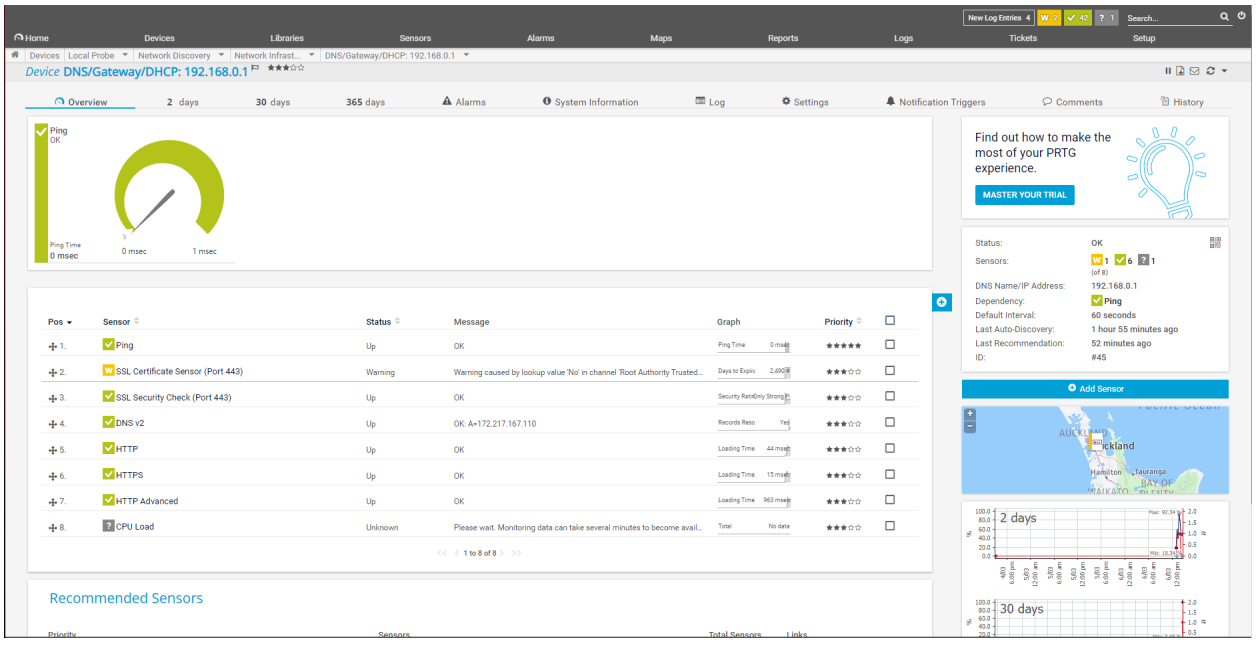
4. Group Devices:
    - Organize devices into logical groups based on location, function, or type.
    - Create groups such as "Servers", "Routers", "Switches", etc.

5. Monitor Internet Connectivity:

    - Add a Ping Sensor to monitor the availability and response time of your internet gateway or DNS server.



6. Monitor Router Status:
    - For each router, add sensors to monitor:
        - Ping Sensor for availability.
        - HTTP/HTTPS Sensor to check router web interface availability.
        - CPU Load Sensor to monitor router CPU usage.
        - Traffic Sensors for monitoring incoming and outgoing traffic.



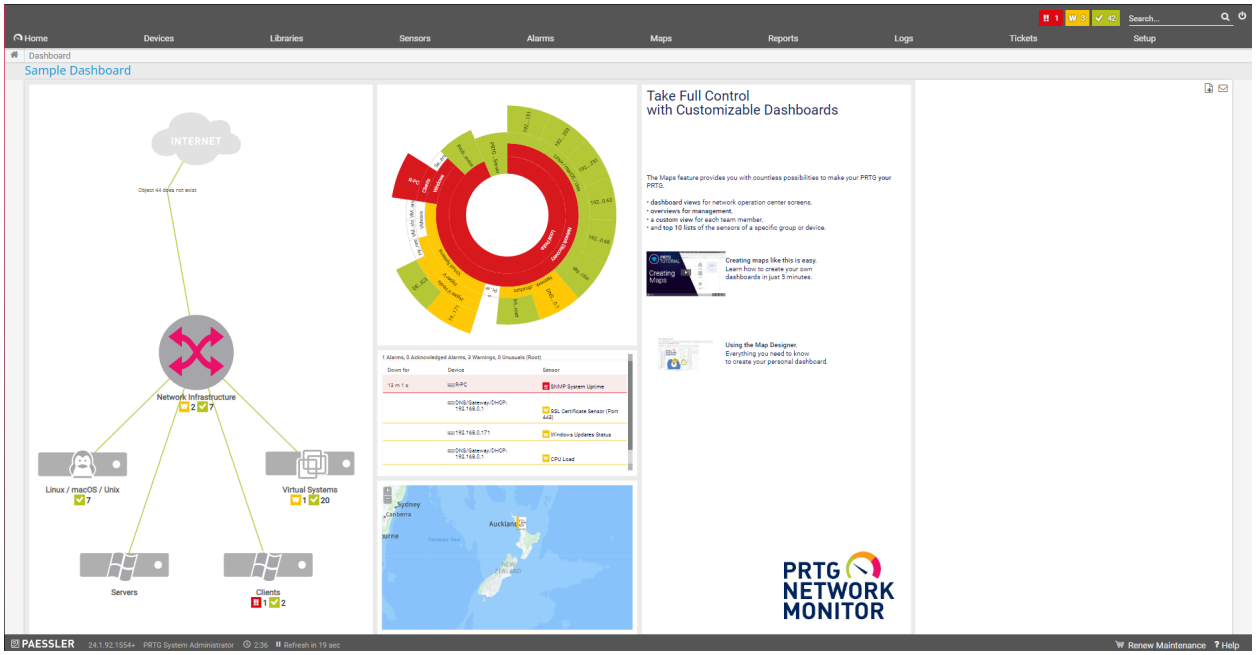
7. Monitor Server Health:
    - For servers, add sensors to monitor:

- Ping Sensor for availability.
- HTTP/HTTPS Sensor for web server availability.
- CPU Load Sensor to monitor CPU usage.
- Memory and Disk Sensors for resource usage.
- Where: Add these sensors to each server device in the "Servers" group.

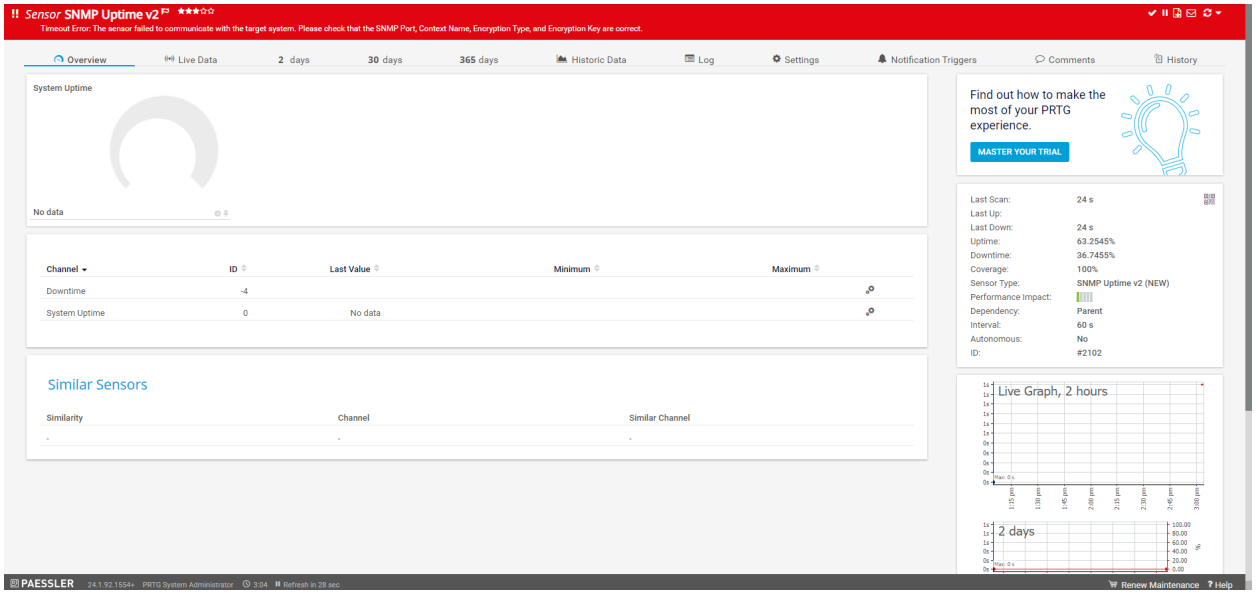
8. Alerting and Notifications:

- Configure alerting rules to notify administrators of issues.
- Set up email or SMS notifications for critical alerts.
- Define thresholds for sensor values to trigger alerts.
- Where: Add details on configuring alerts and notifications in the "Alerting" section of the documentation.

9. Dashboard and Reports:
   - Customize dashboards to display important metrics and statuses.
   - Generate regular reports on network performance and uptime.
   - Where: Add details on creating dashboards and reports in the "Dashboard and Reports" section.



10. Testing and Verification:
    - Ensure that sensors are collecting data and reporting correctly.
    - Verify that alerts and notifications are functioning as expected.
    - Perform test scenarios to simulate network failures and monitor PRTG's response.

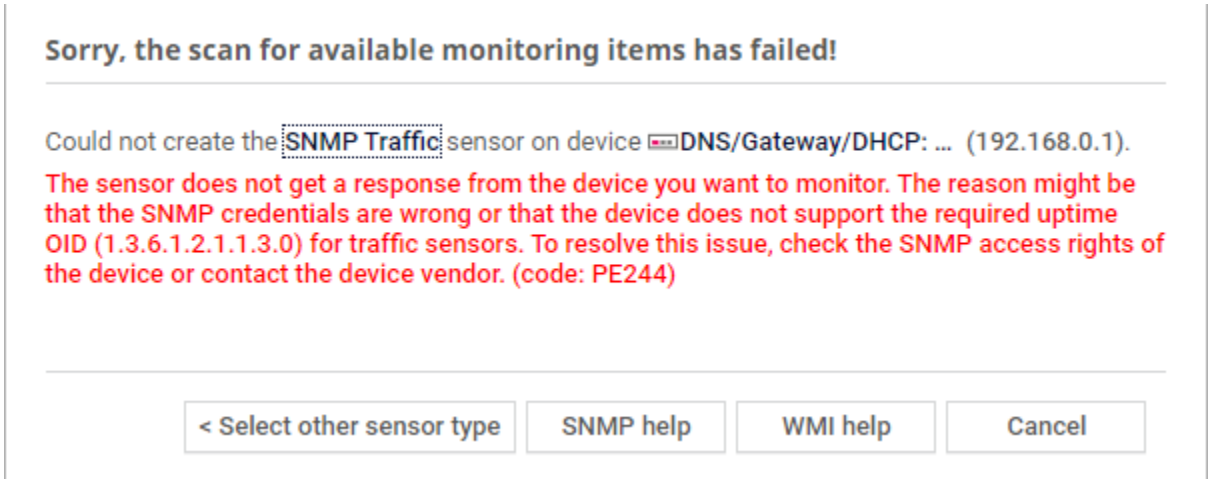


11. Documentation and Maintenance:
    - Document the setup, configuration, and monitoring procedures.
    - Update documentation regularly as changes are made to the network.
    - Perform regular maintenance tasks such as updating PRTG software and reviewing sensor configurations.
    - Where: Include a section on documentation and maintenance best practices.

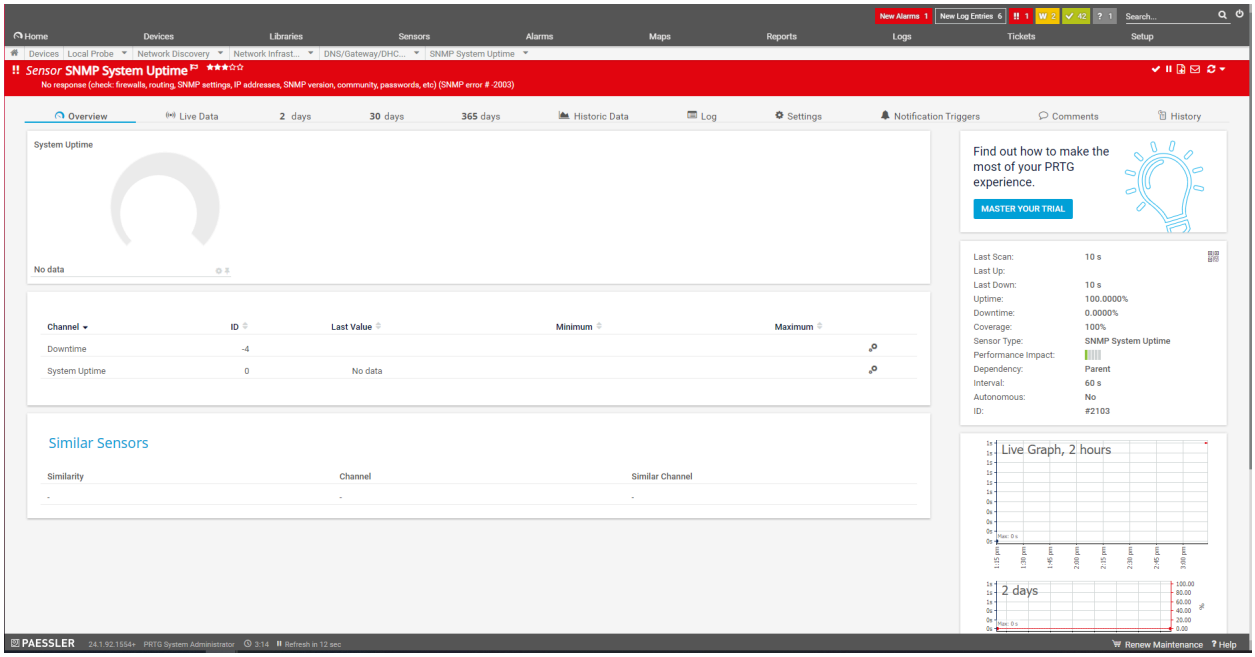
SNMP Sensors (Not Applicable)

Due to the limitations of the router, SNMP sensors were not applicable for monitoring. The router does not support SNMP protocols, resulting in errors when attempting to add SNMP sensors. Below are screenshots of the attempted SNMP sensors for reference.

SNMP Traffic Sensor:



SNMP Uptime Sensor:



Conclusion

Setting up network monitoring with PRTG Network Monitor provides real-time visibility into the health and performance of your network infrastructure. By following these steps and security recommendations, you can proactively detect and address network issues, ensure maximum uptime, and optimize network performance.