FRAME WORKS AI

USER GUIDE

Frameworks Ethernet Service OAM

Ethernet Performance Monitoring Solution - extracted from the GigaHome demo

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Introduction

This documentation is extracted from the Frameworks Ethernet Service OAM demo - the brand GigaHome is a fictional Altnet for demo purposes only.

Ethernet OAM (Operations, Administration, and Maintenance) is a set of functions. They manage and monitor networks. They ensure fault detection, performance monitoring, security, diagnostics, and configuration. These tools speed up network recovery in the event of failure. Networks have equipment from various operators and manufacturers. So, we must standardize OAM for consistency and interoperability. Ethernet OAM injects packets into the data stream at layer 2. It uses endpoints to assess network performance. It checks node configuration, frame loss, delay, path, and error rates.

Ethernet Service OAM (SOAM) offers management tools to ensure and measure end-to-end performance. It supports end-to-end SLAs for standardized Ethernet services. It allows in-service SLA verification. It enables network monitoring and troubleshooting from the central office.

Ethernet Service OAM protocols have two key functions:

Connectivity Fault Management (CFM)
Detects and isolates network issues. It follows standards like ITU Y.1731, IEEE 802.1ag, and MEF 30.1.

Performance Monitoring (PM)
It checks network performance from end to end. It follows ITU Y.1731 and MEF 35 guidelines.

Dashboard Login Instructions

Logging into the Dashboard

When accessing the Frameworks Ethernet Service OAM,you will be directed to the Login page of the dashboard as seen on figure 1.

When you become a customer, you will be provided with your unique login information.

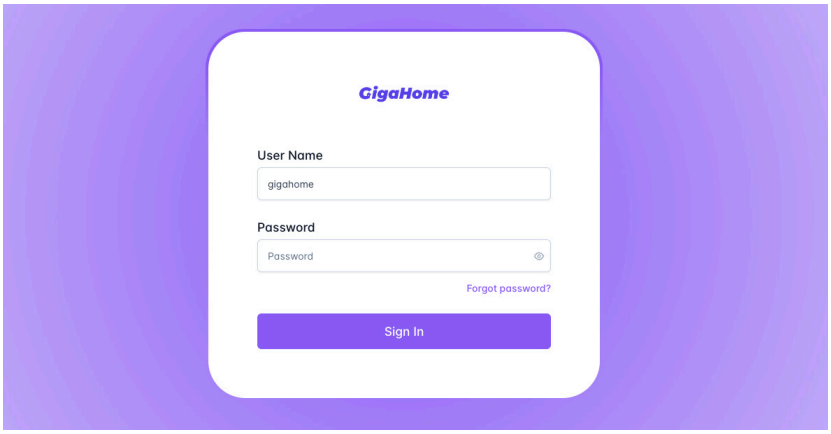
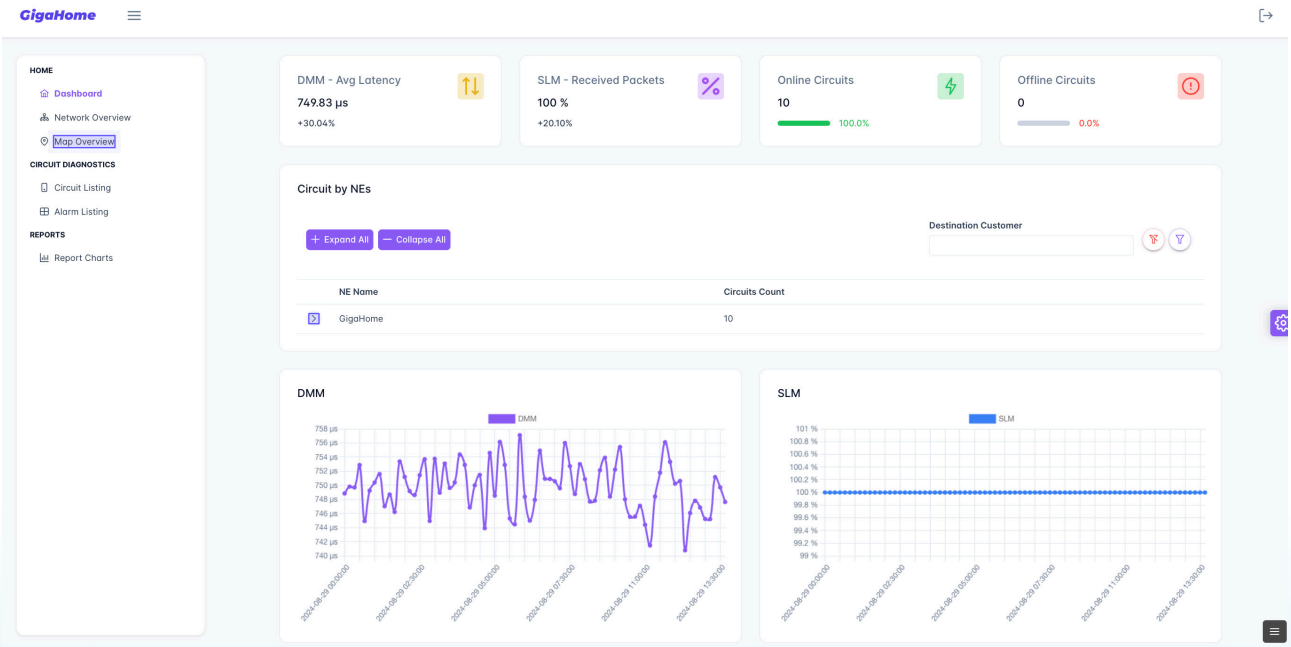


Figure 1. *Dashboard Login page from our GigaHome in house demo*

Navigating the Dashboard

The Main Dashboard

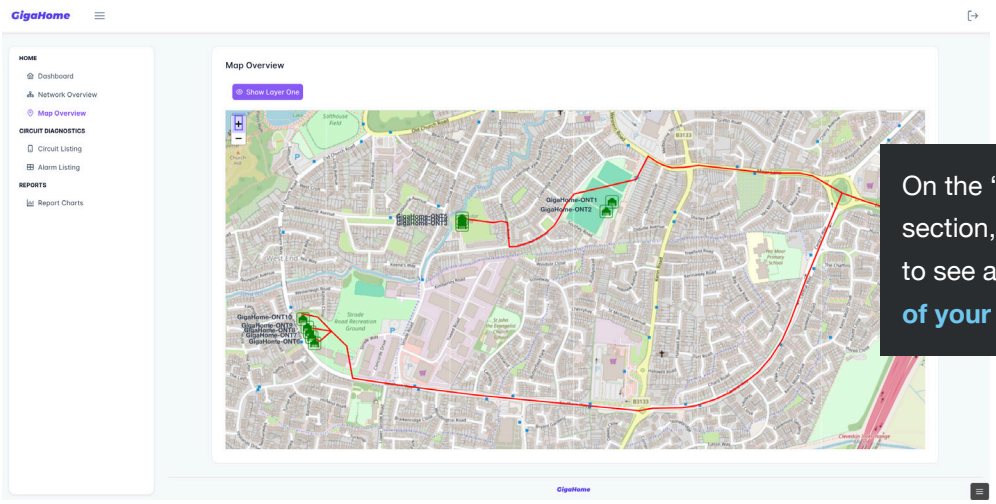


On the main dashboard, you will get an overview of your network outlining:

- DMM Average Latency
- SLM Received Packets
- Online Circuits
- Offline Circuits
- View Circuits by NEs and expand for a better, in depth view

Navigating the Dashboard

Map Overview



On the 'Map Overview' section, you will be able to see a **birds eye view of your network.**

You can **zoom and toggle** between layers.

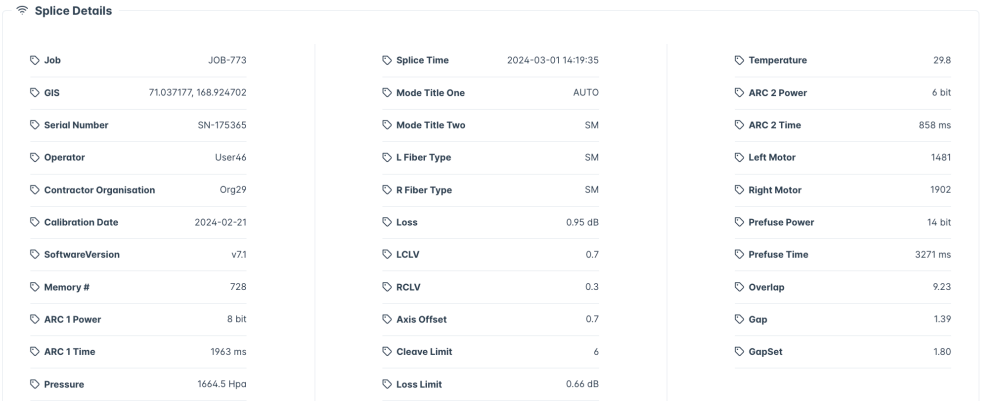
You can **hover over connections for more details,** and with layer one privileges, you can **click on splice points**.

Navigating the Dashboard

L1 Visibility - Frameworks L1 Cloud Management

(Under Development)

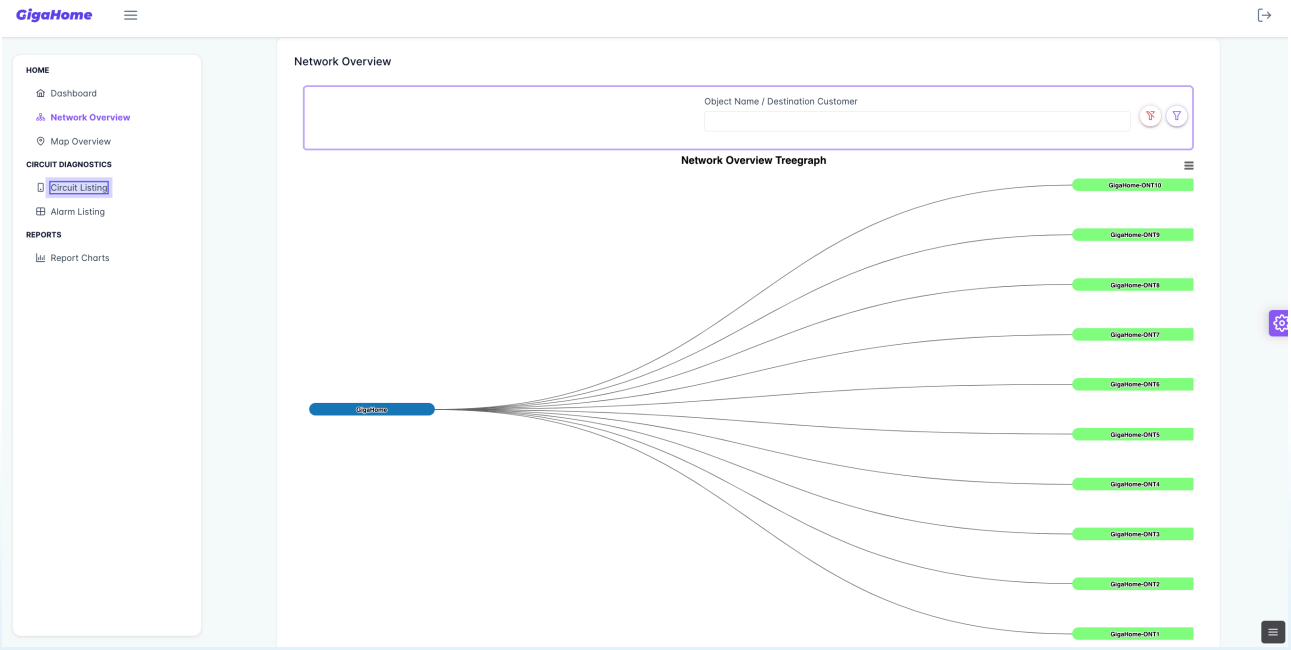
After clicking on and individual splice point you will be presented with the ‘Splice Details’ page.



This gives you a huge amount of detail and data. You can see things like who owns and operates the connection and get information on the network infrastructure itself with details like temperature and loss.

Network Overview and Topology

By clicking on ‘Circuit Listing’ you are able to take a broad look at your network topology. As you can see in the picture above we have the main connection and then all the ONT’s coming off of it. From this page you can then take a specific look at each ONT if required by clicking on it, which will then bring up performance statistics for that particular ONT.

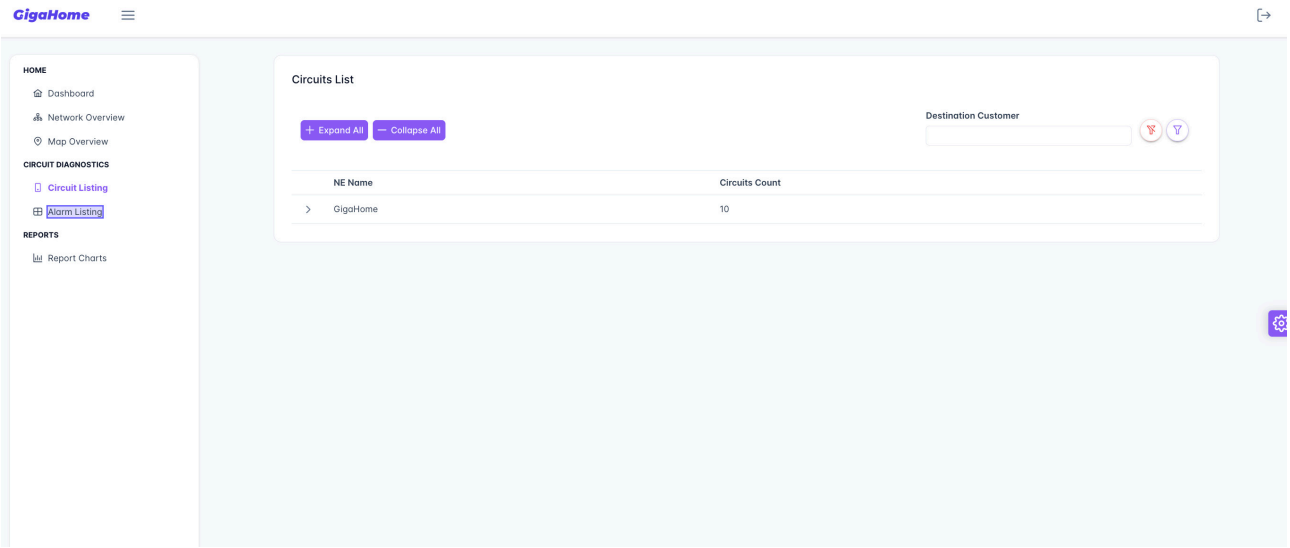


Navigating the Dashboard

Other Dashboard Pages

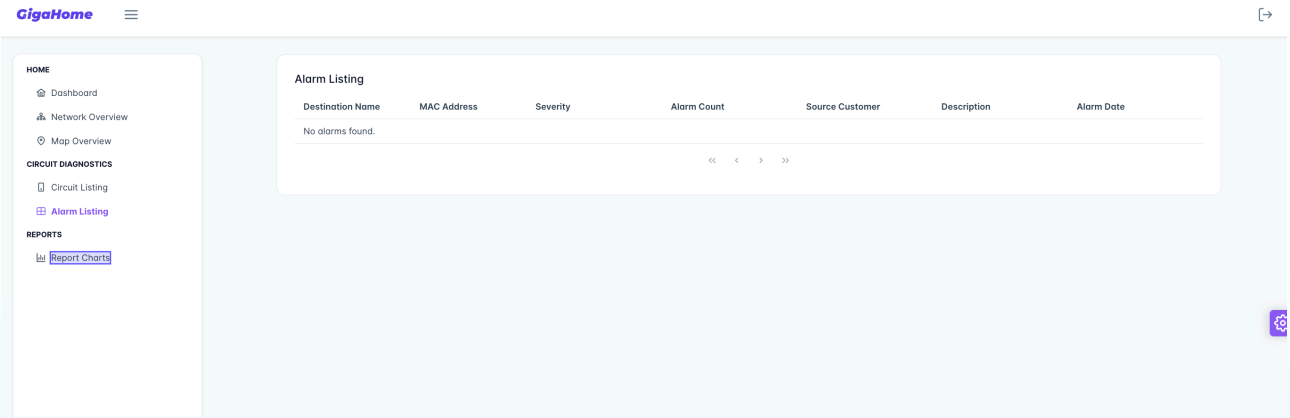
Circuit Listing

Now let's look at some other pages on the dashboard. 'Circuit Listing' gives you a list of circuits for your company with details like Mac address and online/offline.

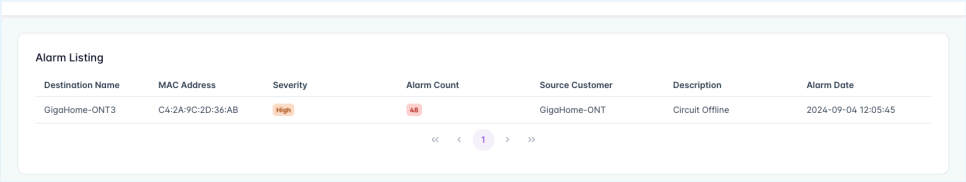


Alarm Listing

'Alarm Listing' this will give you details of any issues with a connection. Details include things like severity, alarm count and the customer details of who has the issue.



If an ONT has a fault or has gone down, the Alarm Listing page will look similar to this.

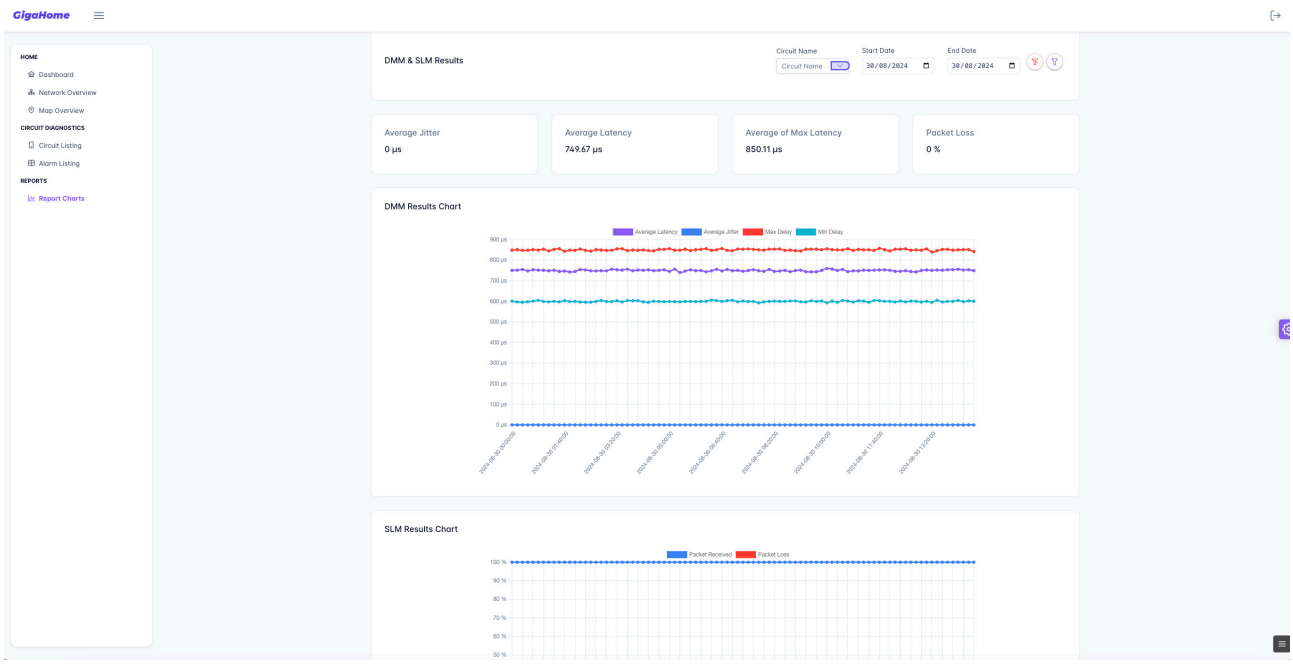


Navigating the Dashboard

Other Dashboard Pages

Report Charts

Finally 'Report Charts' is where you are able to access detailed reports in relation to each customer connection. You are able to filter by each individual ONT and then select a date range so you can take a look at connectivity stats within a specific time frame. You are able to filter by each individual ONT and then select a date range so you can take a look at connectivity stats within a specific time frame.



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