GRID OBSERVER®

FEATURE OVERVIEW AND QUICK-START MANUAL

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GRIDOBSERVER®
FEATURE OVERVIEW AND QUICK-START GUIDE

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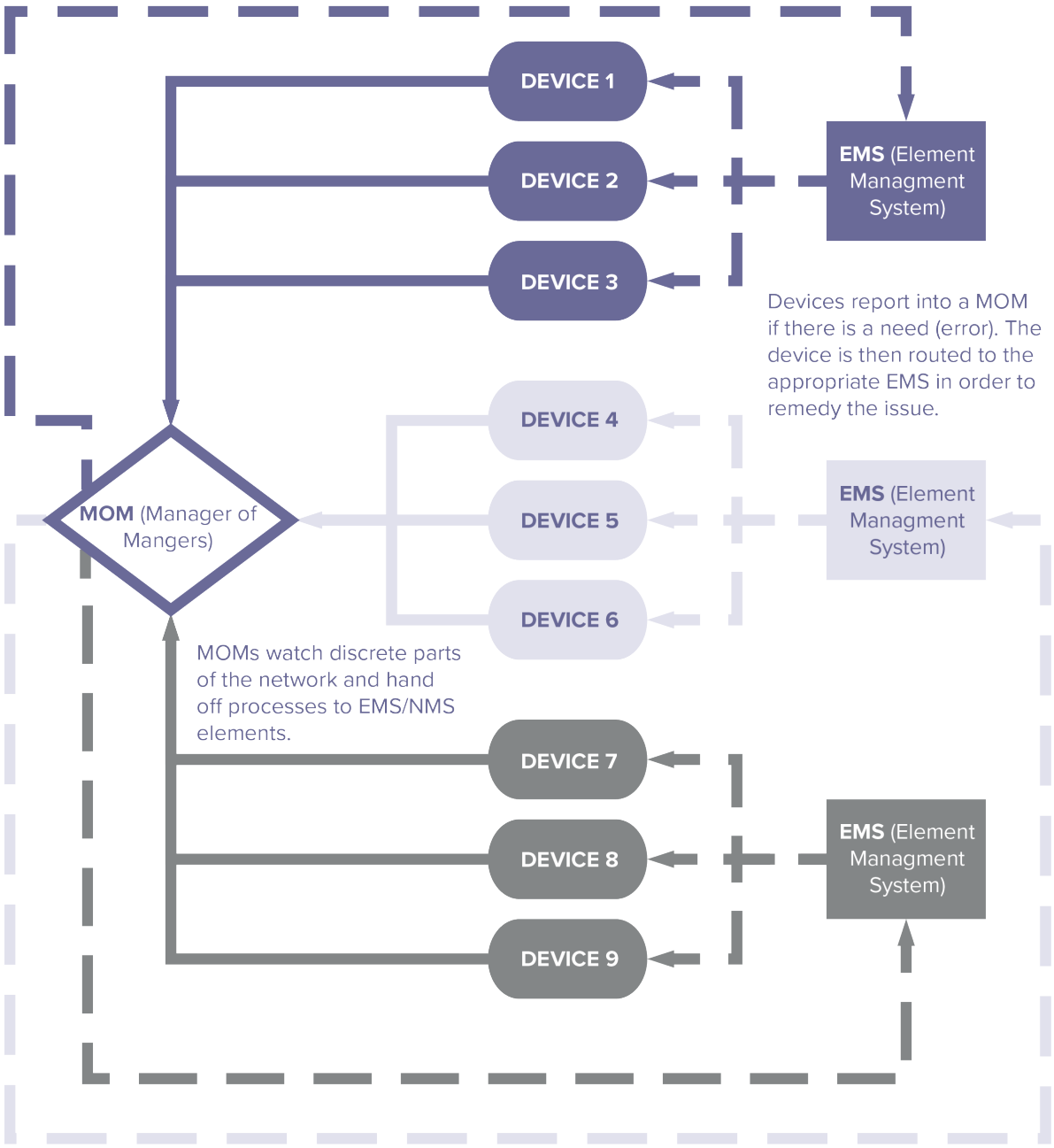
GRIDOBSERVER OVERVIEW

MANAGER OF MANAGERS VS. ELEMENT MANAGEMENT SYSTEMS

GridObserver is a comprehensive Manager of Managers (MOM) which fully integrates into your current smart grid. As a MOM, GridObserver fulfills a critical role within your network by detecting each piece of physical and virtual equipment, their relationships, and mapping your entire network to provide a complete view of its activity and status.

Typically, an element management system (EMS) or a network management system (NMS) is used to monitor a network. Some larger networks even require several EMS and NMS configurations to ensure the smooth operation of all the equipment within the network. EMSs and NMSs only look at discrete pieces of equipment from the manufacturer who created it.

As a Manager of Managers, GridObserver collects data from the EMSs and NMSs within your network to assess all aspects of your grid. Once integrated, GridObserver also hands control to those smaller, more specialized systems when appropriate to ensure your network is operating at maximum efficiency.



How a MOM and EMS/NMS Work Together

GRIDOBSERVER PROVIDES A COMPLETE VIEW OF YOUR NETWORK

Although there are other Manager of Managers on the market, GridObserver grabs more data from your network and paints a clear picture of your system. GridObserver goes to work immediately after installation, detecting your network's devices and stitching together information to build a model of your entire smart grid.

Most MOMs are designed only to retrieve surface level data and pre-defined metrics. GridObserver looks beyond the industry standards to bring you more significant data than any other management system. With the ability to gather, analyze, and report more than 100,000 different indicators, GridObserver gives you more power and possibilities than any other Manager of Managers.

WHY GRIDOBSERVER?

GridObserver is the product of over 20 years of careful engineering. Designed by network engineers with their fellow engineers in mind, GridObserver has been built from the ground up to be your ideal network management solution. This Manager of Managers goes far beyond the capabilities of other MOMs on the market, collecting more data and providing more actionable insights than any other management system.

Anomaly Analysis

Standard network management systems come with a fundamental flaw: they only report issues after a failure or outage occurs. GridObserver changes that way network monitoring is performed by continually tracking key indicators and data to detect performance anomalies and alert your team before it becomes a problem. Using machine learning,

the system filters out noise and insignificant data and delivers prompt alerts when it detects a problematic anomaly.management system.

Unmatched Data

GridObserver gathers all available data from devices within your network. Not only does it collect device information, but it also tracks the relationships between equipment, physical locations, and external factors. GridObserver finds the geolocation of each network component and generates a map to make dispatching technicians simple. The system even uses device locations to take local weather into account when analyzing performance and potential problems.

Agentless Access

Most network management systems require physical devices be installed specifically to interface with the network. GridObserver's completely agentless and clientless design means there is no physical user interface to maintain and no designated access portal. The GridObserver interface is accessible from any standard web browser. That ease of access allows you to retrieve your data, create reports, and respond to alerts anytime, anywhere.

Leading Indicator Technology

The heart and soul of GridObserver lie in Leading Indicator Technology® (LIT®). LIT uses your network's data to provide a complete view of what is currently happening, insights into what will happen in the future, and accurate diagnoses of problems before they occur. The secret to GridObserver's Leading Indicator Technology is its ability to understand devices and their relationships at a deeper level than any other management system. Through machine learning, this MOM processes device journals, metadata, device details, and SNMP information to provide valuable insights unavailable from other monitoring solutions.

Key Performance Indicators

Tracking key performance indicators (KPIs) is an essential aspect of any business. Through customizable reports and in-depth analysis, GridObserver provides more insights into your KPIs than any other network management system. GridObserver produces both on-demand and scheduled reports on any key metric you choose, ensuring each member of your team has the information they need to be successful.

C-level Executives

KPI tracking allows executives to see network health and needs giving them the ability to make informed decisions and invest funds and resources with confidence.

Network Engineers

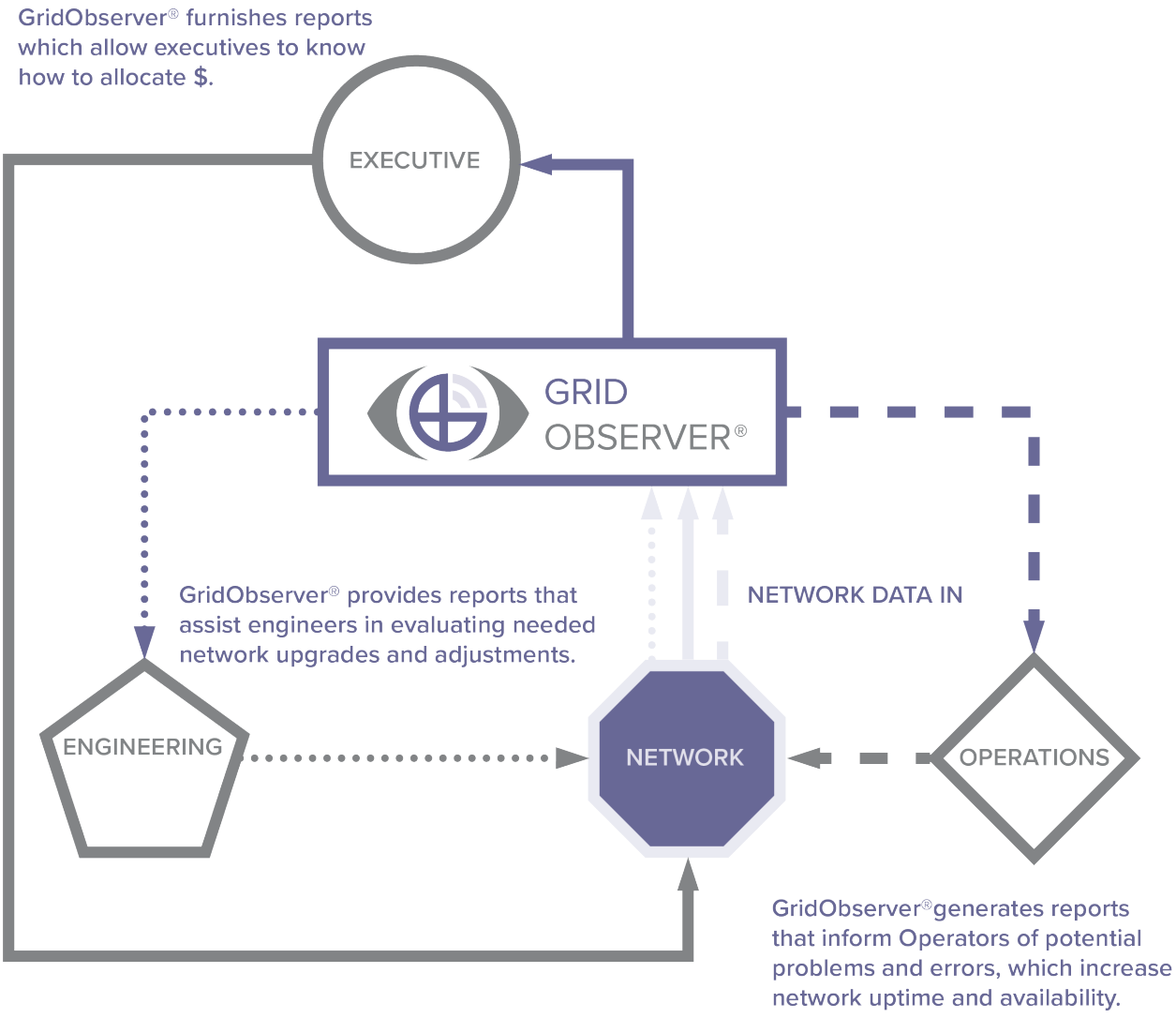
Engineers use KPI reporting to see when equipment needs to be upgraded, changed, or added to maximize network coverage and efficiency.

Network Operators

KPIs allow operators at all levels to keep tabs on the network they service and stay informed of potential issues before they cause outages.

Ease of Implementation

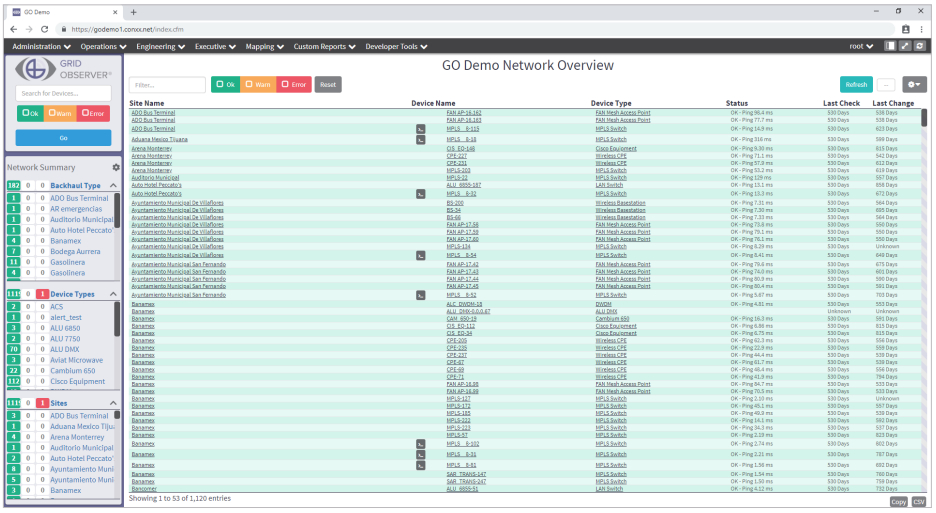
Most network management systems are cumbersome to install and can take months, or even years to fully deploy. GridObserver quickly integrates into your smart grid and, in most cases, is fully operational in under 30 days. Customization is a crucial component of GridObserver, so each installation is explicitly tailored to fit in the existing network. This personalized approach to installation maximizes utility and minimizes unscheduled downtime. GridObserver is also manufacturer agnostic, allowing it the flexibility to install seamlessly into any smart grid system.


GridObserver® furnishes reports which allow executives to know how to allocate $.
EXECUTIVE
GRID OBSERVER®
GridObserver® provides reports that assist engineers in evaluating needed network upgrades and adjustments.
NETWORK DATA IN
ENGINEERING
NETWORK
OPERATIONS
GridObserver®generates reports that inform Operators of potential problems and errors, which increase network uptime and availability.

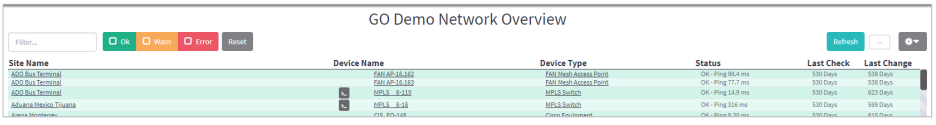
GRIDOBSERVER INTERFACE: WHAT AM I LOOKING AT?

Main Dashboard

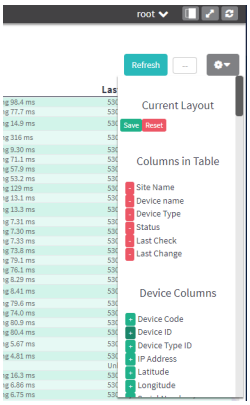
The first screen you encounter when you log into GridObserver is the main dashboard. This screen displays the most recent query of the network at the time the page loads. From this main dashboard, you can access the various tools and components of GridObserver. The following information is intended to provide an overview of the different tools and elements of the system.



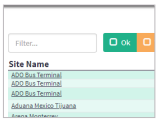
The main screen displays a list of all the devices that are in the network. This table shows all network devices and can be customized to display selected device information.



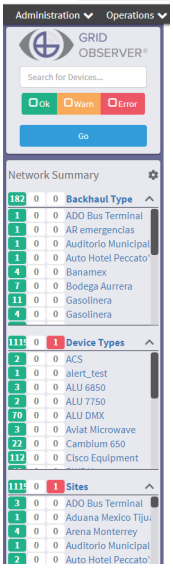
Refresh table with the latest data from the network.



Add/Remove displayed fields on the table.

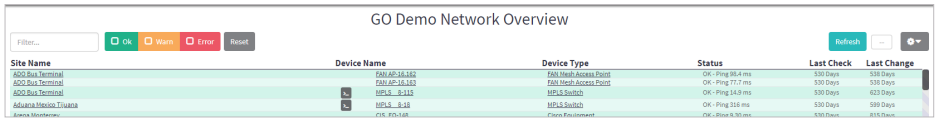


Quick sort filter that sorts the devices according to the query.



The left panel on the dashboard allows you to view customizable collections of devices and sites. This panel is visible on every screen you navigate to in GridObserver.

One of the prominent features on the GridObserver dashboard is the red, yellow, and green status options. With these options, you can sort quickly through the various states of the devices on the network.



Error (Red)

If **Error** is selected, the screen will display a list of all devices that are actively responding with errors. The errors might indicate the following:

- The device is not responding to monitoring service
- The device needs immediate attention

Warn (Yellow)

If **Warn** is selected, the screen will display all devices that are actively responding with warnings. The warnings might indicate the following:

- Something may be wrong with a device
- Potential concerns ranging from environmental factors to configurations and connections.

Ok (Green)

If **OK** is selected, the screen will display all devices that are operating according to their configuration.

Top Menu

The different features, reports, and tools are accessible through the top menu. The following is an overview of what can typically be found under each menu option.

Note: Because the menu system is customizable (depending on the needs of the network), not all options are described.

Administration

This primary menu option is found in all builds of GridObserver. From this menu you can do the following:

- Access, edit, and view Devices, Device Types, and Sites
- Discover devices on the network
- Create, edit, and view Device Probes
- View SNMP profiles
- Create, edit, and view Groups and Group Collections
- Manage users and their roles

Operations

This option supports the tools and reports that are useful to network operators. Many tools and reports are customizable under this section based upon network operation needs.

- Actionable Intelligence Engine
- The Operations Dashboard provides a central location for operators to view the network status
- Reports on information such as availability, latency, loss, SNMP browsers, MAC lookups, and MIB tables

Engineering

The Engineering options are typically industry specific and customizable to meet the needs of network engineers.

- The Engineering Dashboard provides a central location for operators to view various network KPIs
- There are also options for MPLS related reports, alarms, and other various tools

Executive

The Executive options allow executives to access and view pertinent data related to desired metrics.

- The Executive Dashboard provides a general overview of key metrics that help influence business decisions
- Custom reports, such as a metric report, provide KPIs to executives

Mapping

GridObserver can geocode locations and devices. The Mapping option contains various tools available for that purpose:

- Point-to-Point Planner and Point-to-Multi-Point Line of Sight Analysis for location and equipment planning
- The option to view all sectors
- Maps, a map builder, and Google Earth
- Custom tools or options related to geolocations and mapping

Custom Reports

This menu option contains any custom reports that are pertinent to multiple responsibilities within your network and organization.

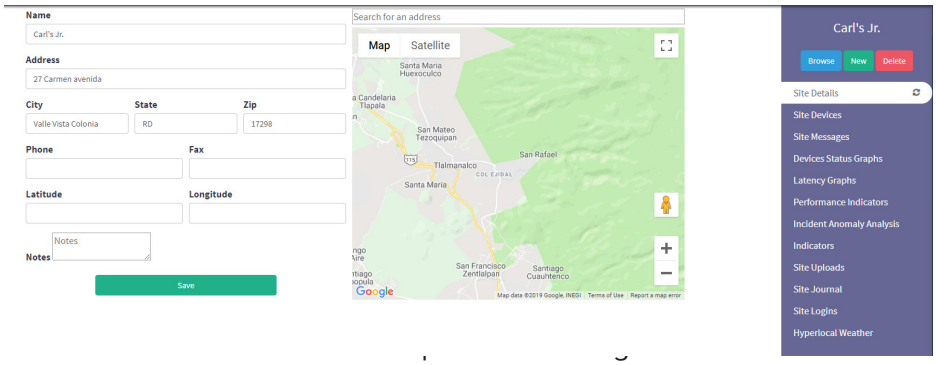
Sites

Another important component in GridObserver is the Sites list. Following is a brief look at what you can find in the Sites section under the Administration option in the top menu.

Each device in the network will be assigned to a specific site. Sites are the physical locations for devices. A site can have multiple devices.

When you navigate to the Sites list, you will see a table with a list of sites. From this screen you can select sites to view or edit and create new sites for the network.

When you select or create a new site, a screen will load with a number of fields and a vertical menu of options on the right.



You can select from the following options:

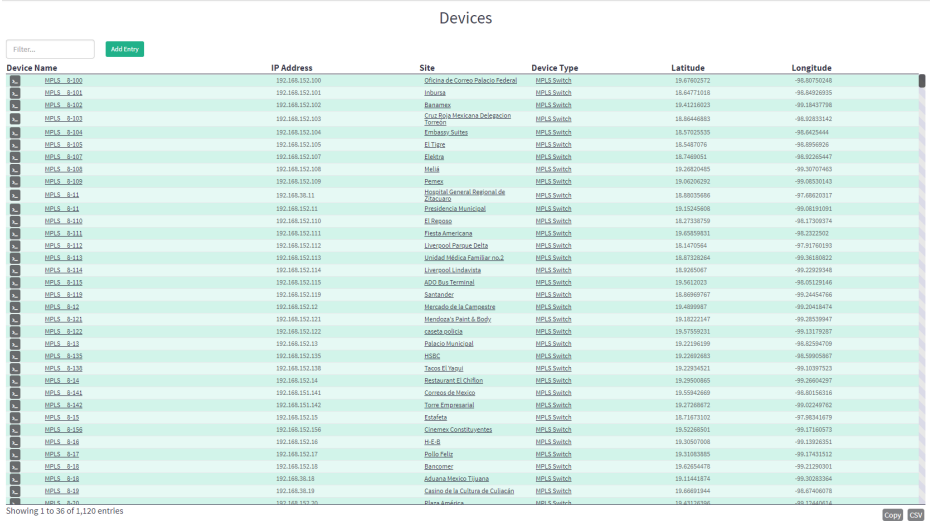
- **Site Details**
  Includes basic information about the site, such as the name of the site, the address, latitude and longitude, and any notes related to

the site, such as instructions to follow when accessing this site.

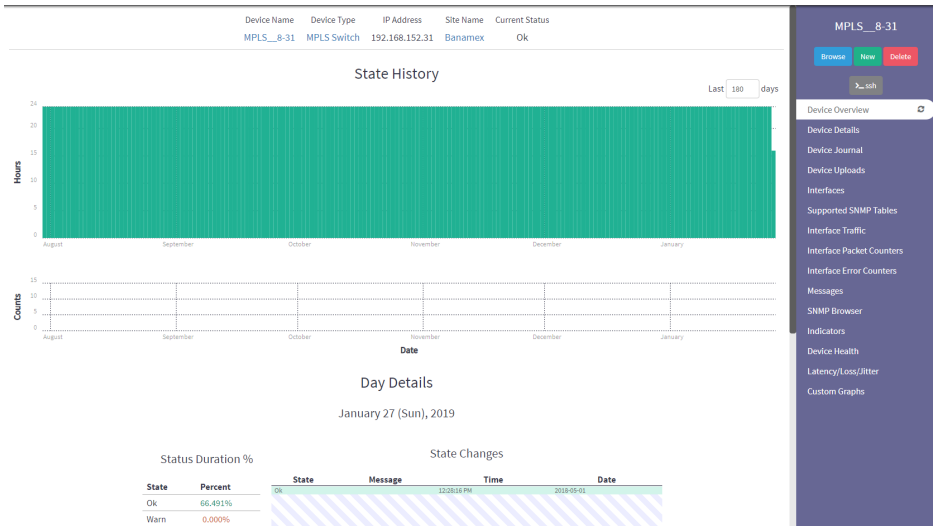
- **Site Devices**
  Lists all devices currently assigned to the Site as well as device details, such as device name, IP address, device type, and physical location. Clicking on a device from this menu navigates you to that device's page.
- **Site Messages**
- **Devices Status Graphs**
  Provides graphs representing the status of every device associated with the site.
- **Latency Graphs**
- **Performance Indicators**
- **Incident Anomaly Analysis**
- **Indicators**
- **Site Uploads**
- **Site Journal**
- **Site Logins**
- **Hyperlocal Weather** - (If enabled in the build).

Devices

The Device list is accessed through the Administration menu or from the left side bar. Devices are pieces of equipment in a network.



As in the Sites section, once a device is created or selected a set of fields and vertical menu will appear on the right.



The following are some of the options accessible through a Device screen.

- **Device Overview**
  View State History, Day Details, and State Changes
- **Device Details**
  Access site, device location, device information, and IP address
- **Device Journal**

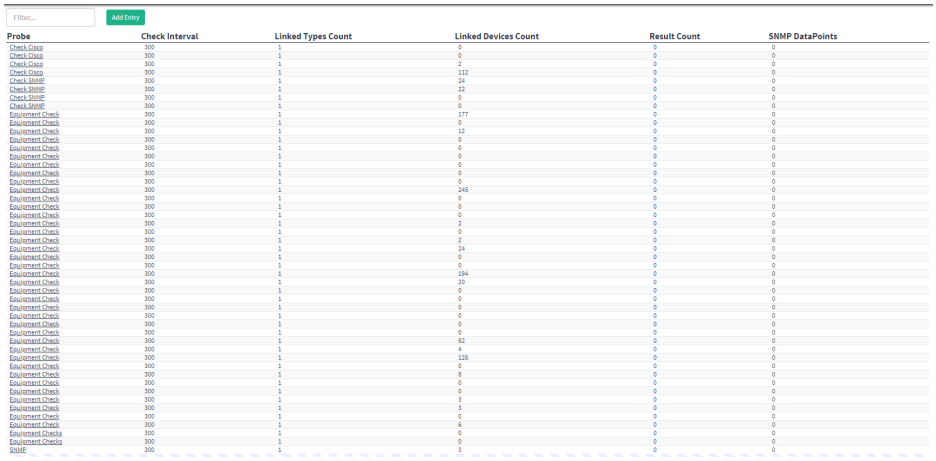
Allows notes to be taken and stored with other device information.

- **Device Uploads**
  Select and upload device-specific files here (e.g., manuals and photographs)
- **Interfaces**
- **Supported SNMP Tables**
- **Interface Traffic, Packet Counters, and Error Counters**
  Monitors the flow of packets and any packet delivery failures
- **Messages**
  Searchable semantic data sent from the device and color-coded to indicate severity
- **SNMP Browser**
- **Indicators**

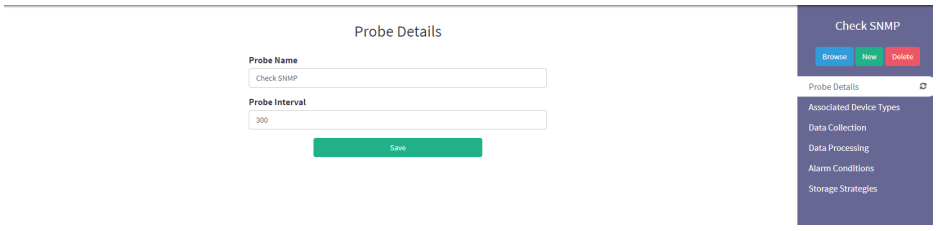
- **Device Health**
- **Latency/Loss/Jitter**
- **Custom Graphs**

Device Probes

Probes track specific device features on a repeated basis. You can access the list of Device Probes through the Administration menu option. Like Devices and Sites, Probes are displayed in a table format that allows you to view, edit, or create new probes.



Once a probe is selected or created, a new screen with a vertical menu on the right appears with fields and options relating to the probe.



The following are some of the options that can be found in the probe screen:

- **Probe Details**
  Probe name and Intervals (in milliseconds)
- **Associated Device Types**
  Add or remove existing Device Types
- **Data Collection**
  Add or remove SNMP Queries, OIDs, and Request Types
- **Data Processing**
  Add basic expressions
- **Alarm Conditions**
  Specify alert messages for Return Codes (OK, Warning, Error)
- **Storage Strategies**
  View existing or add new storage strategies

QUICK-START GUIDE

OVERVIEW

To get up and running, you'll need to complete these steps:

1. Add/Verify Network Information
   - Sites (pg.23)
   - Device Types (pg.26)
   - Devices (pg.29)
   - SNMP Profiles (pg.33)
2. Add Additional Information
   - Custom Field Sets (pg.36)
   - Uploads and Documents (pg.41)
   - Journals (pg.45)
3. Monitor Your Network
   - Devices and Sites (pg.48)
   - Group Collections (pg.51)
   - Reporting (pg.54)

Conxx has likely completed some of these steps for you. You may skip sections that are already complete after verifying the information present is correct.

ADD/VERIFY NETWORK INFORMATION

The first step you must complete is to verify that the network information you provided to Conxx for input is correct, complete, and up-to-date. New information may need to be input if changes have been made to your account since it was created.
Information that needs to be added or verified includes the following:

- Sites
- Device types
- Devices
- SNMP profiles

Once you have added and verified your information, your account will be up and running.

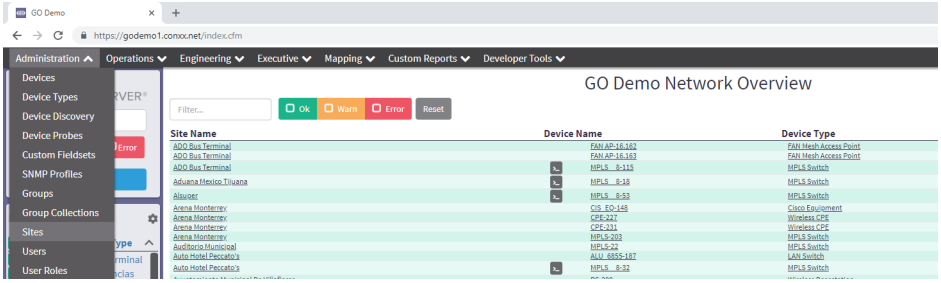
Sites

Sites are the physical locations of devices. Site information serves as the primary system for grouping and tracking your devices. Each time you create a new device you will designate which Site it belongs to.

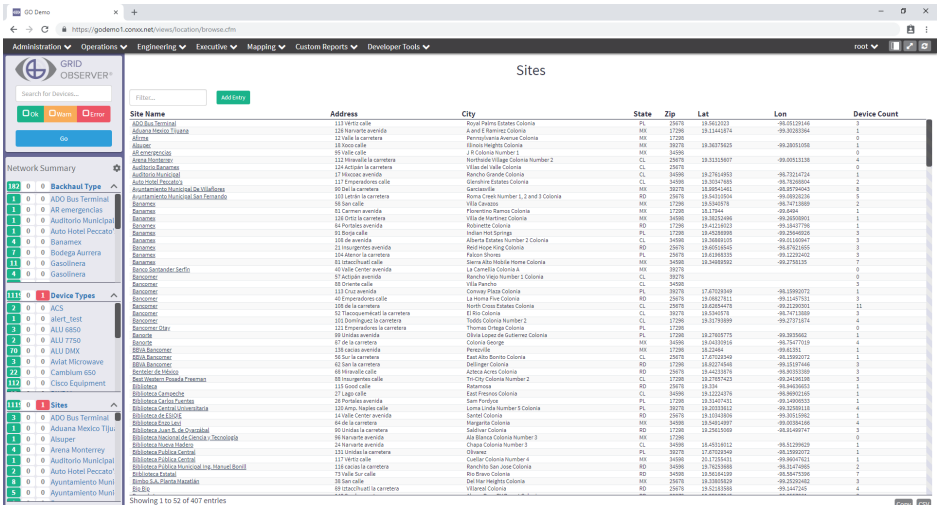
If you have already provided information to Conxx for your sites, many of the steps below will already have been completed. Navigate to the appropriate pages to verify or input the correct information.

Adding a Site

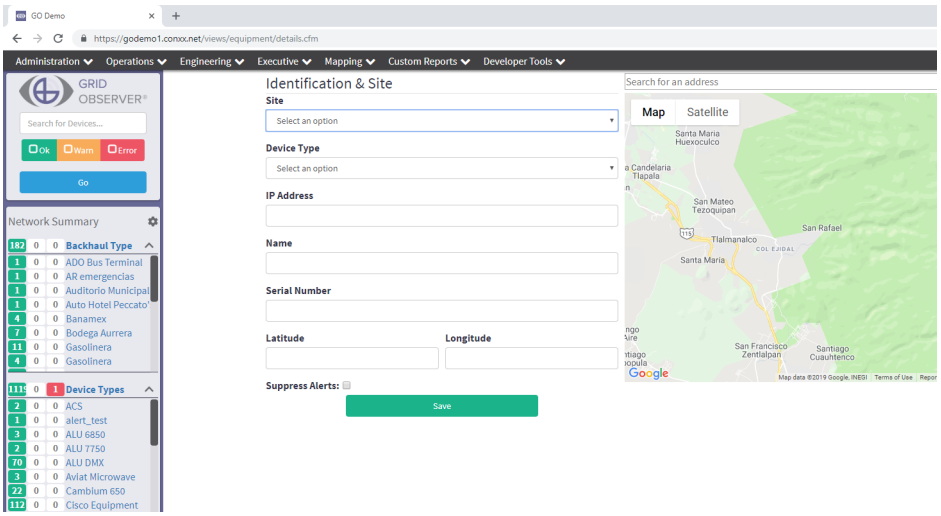
1. Select **Sites** from the **Administration** drop-down menu.



2. Click the **Add Entry** button.



3. Input the following information:



TIP: Pick a name that will help you easily identify the site in the future.

- **Name**. Create a custom name for this site.
- **Address**, **City**, **State**, and **Zip**
- **Phone Number** and **Fax Number** associated with this specific site.

- **Latitude** and **Longitude**. Input the latitude and longitude manually, or use the Google Map window at the bottom of the page to auto populate the information.
- **Notes**. Notes can be updated or changed at any time and include additional information related to this site.

TIP: It is important to input latitude and longitude for sites, because not all devices will have this information individually assigned.

4. When finsihed, click the **Save** button.

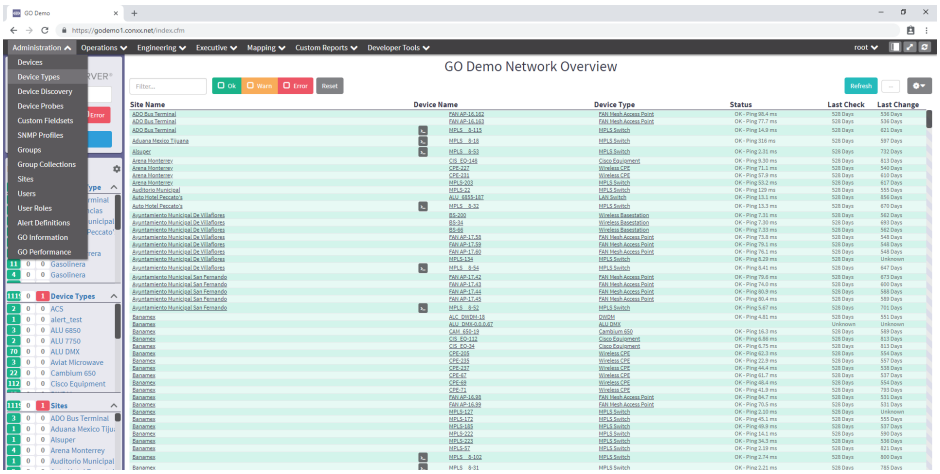
Device Types

The Device Type is the role a piece of equipment plays in the network. Many pieces of equipment can be the same make/model but have different device types. The Device Type determines what will be monitored and what data will be collected from that device. Devices can be grouped by Device Type for such purposes as creating fieldsets, collecting data, or reporting.

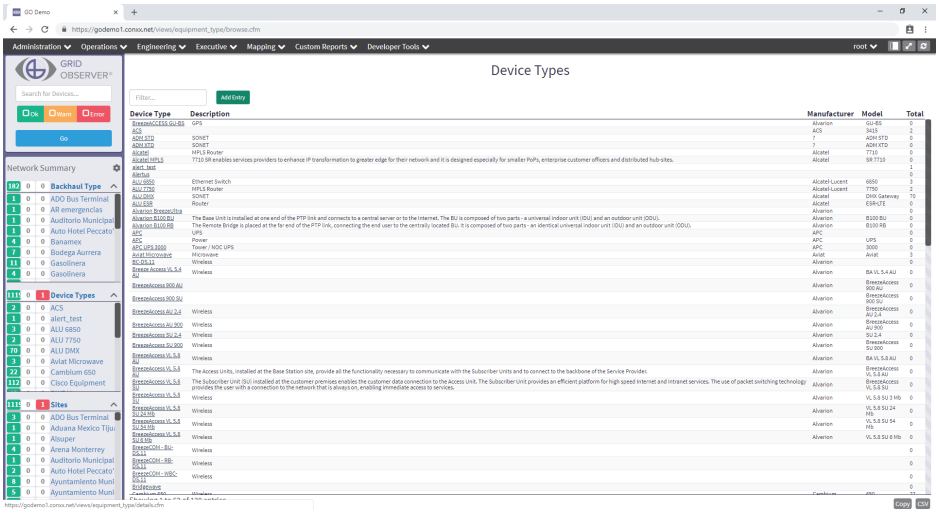
If you have already provided information to Conxx for your device types, many of the steps below will have already been completed. Navigate to the appropriate pages to verify or input the correct information.

Adding a Device Type

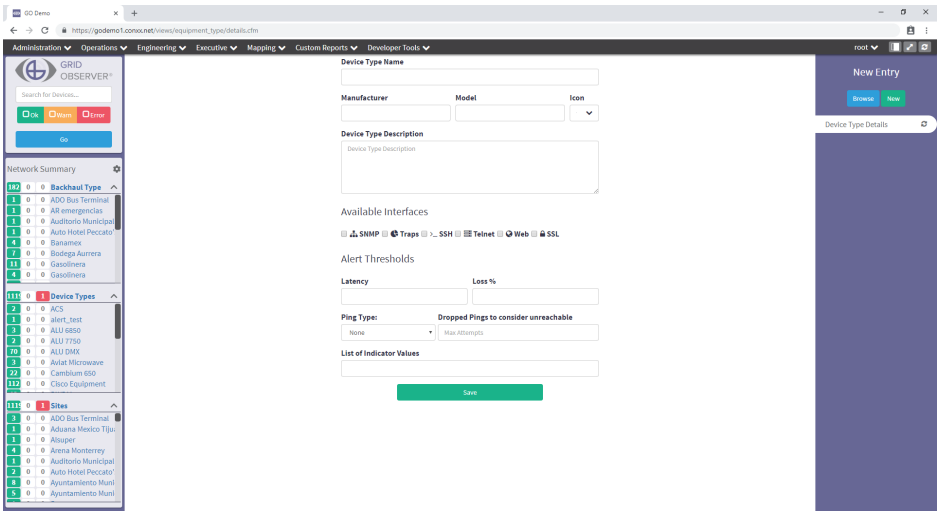
1. Select **Device Types** from the **Administration** drop-down menu.



2. Click the **Add Entry** button.



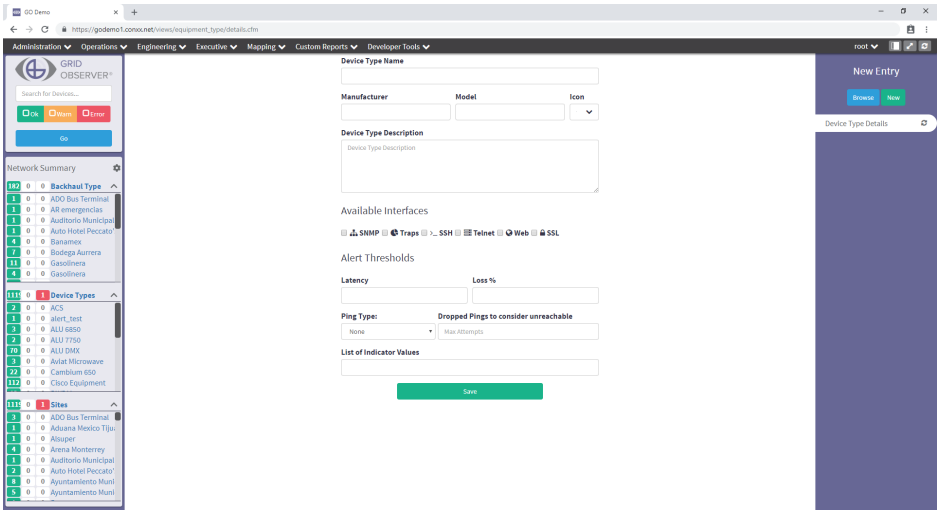
3. Input the following information:



- **Device Type Name**
- **Manufacturer**
- **Model**
- **Icon** (select from the drop-down list)
- **Device Type Description** (information related to how the device is used)

TIP: You can select any icon to represent your device type, but it's best to use something that will be meaningful to you and other users.

4. Fill out the following information:



* **Available Interfaces** (how that device type can respond)
* **Alert Thresholds**

4. When finished, click the **Save** button.

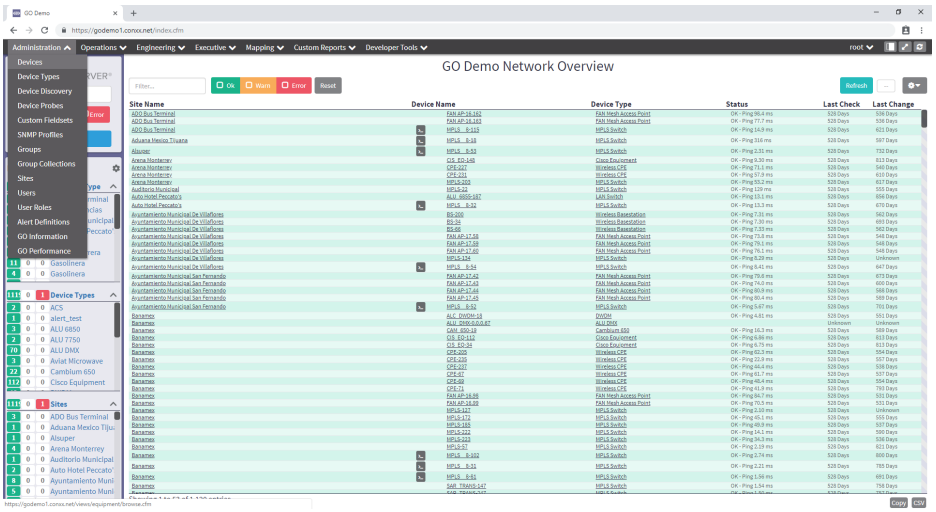
Devices

Devices are pieces of equipment. They are grouped by Site and Device Type (the role the Device plays in the network). Examples of Devices are switches or routers. Each time you add a new device you will need to specify its name, site, and type.

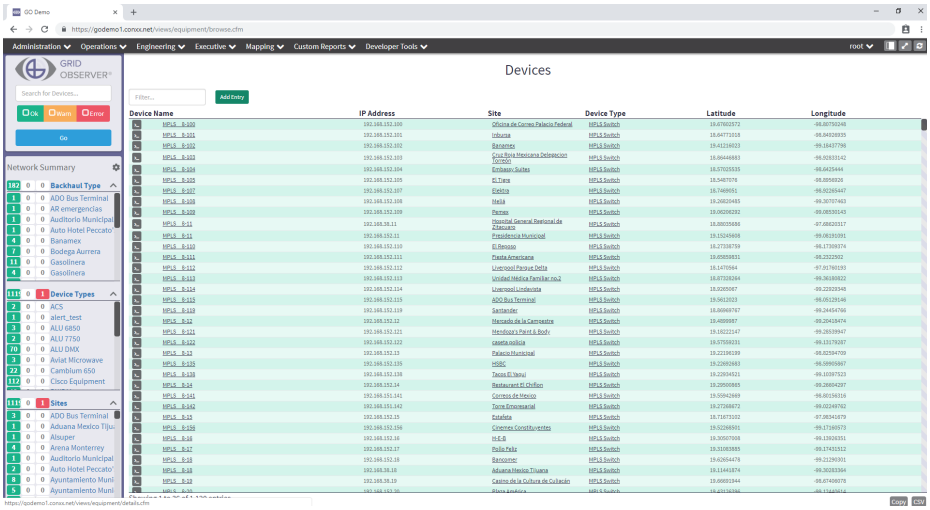
If you have already provided information to Conxx for your devices, many of the steps below will already have been completed. Navigate to the appropriate pages to verify or input the correct information.

Adding a Device

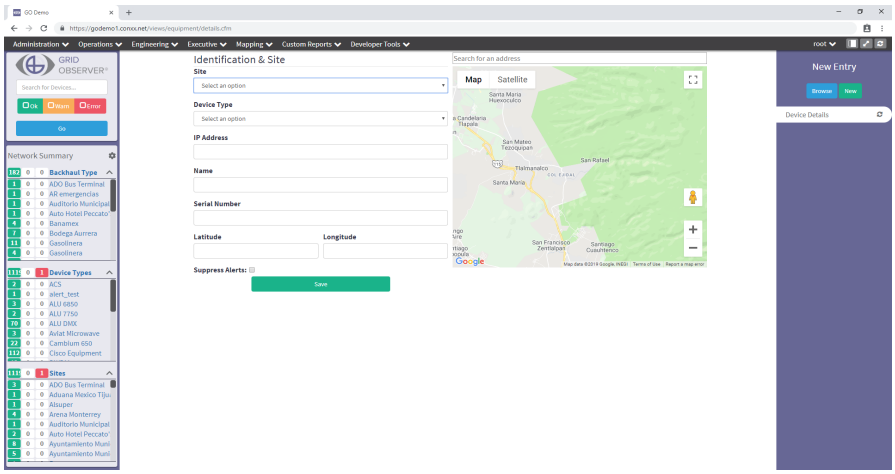
1. Select **Devices** from the **Administration** drop-down menu.



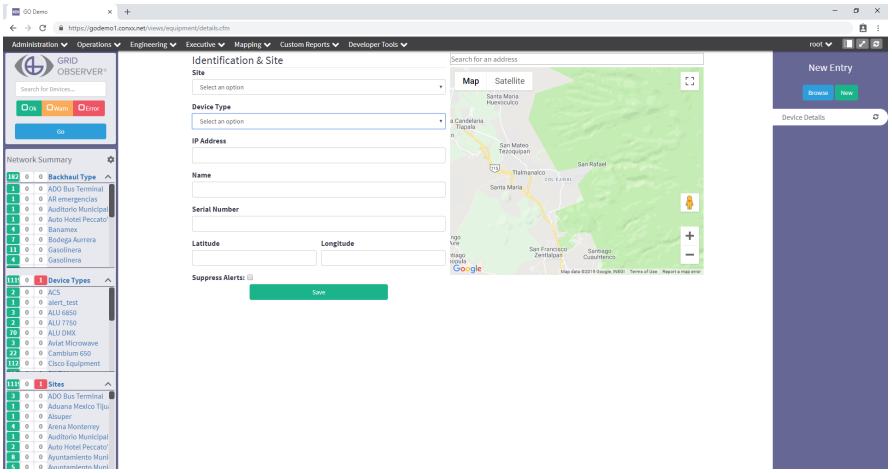
2. Click the **Add Entry** button.



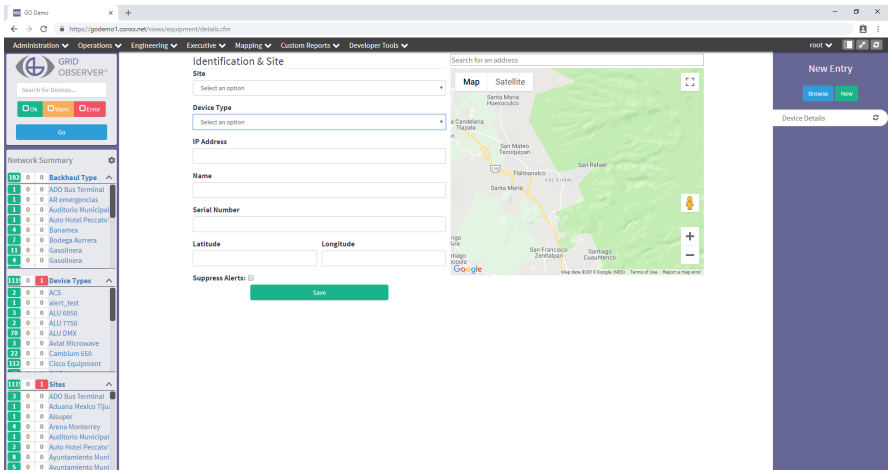
3. Select the **Site** for this device from the drop-down menu.



4. Select the **Device Type** from the drop-down menu.



5. Input the following information:

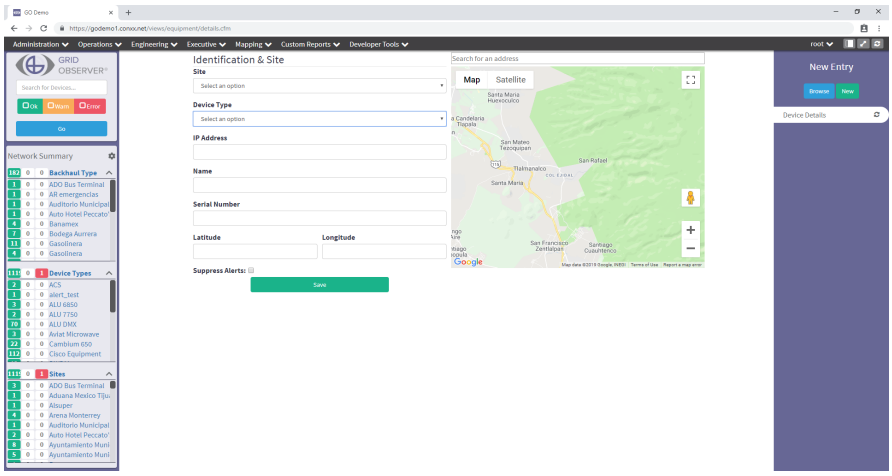


- **IP Address**
- **Name**

  Create a custom name for this specific device.
- **Serial Number**
- **Latitude** and **Longitude**. Either input location manually or use the Google Map search at the bottom of the page to find the site's location.

TIP: Pick a name that will help you easily identify the device in the future.

6. Select the **SNMP Profile** for this device from the drop-down menu.



7. When finished, click the **Save** button.

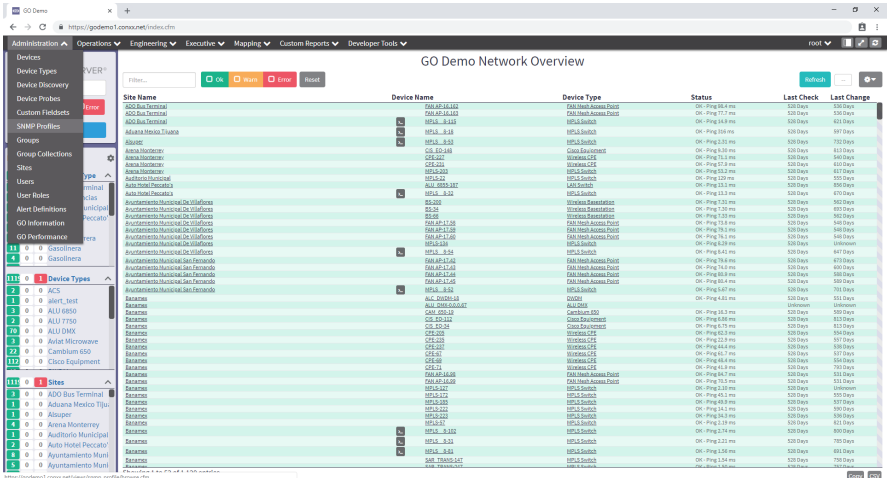
SNMP Profiles

SNMP (Simple Network Management Protocol) Profiles are used for device logins. Profiles can be applied to any device or device type. A profile contains the access credentials your system uses to communicate with the devices to which the profile is applied so you can make queries or changes. This feature provides a means for efficiently storing or changing authentication credentials. When SNMP credentials need to be updated, you can make changes in one place rather than having to change credentials for each device separately.

If you have already provided information to Conxx for your SNMP Profiles, many of the steps below will already have been completed. Navigate to the appropriate pages to verify or input the correct information.

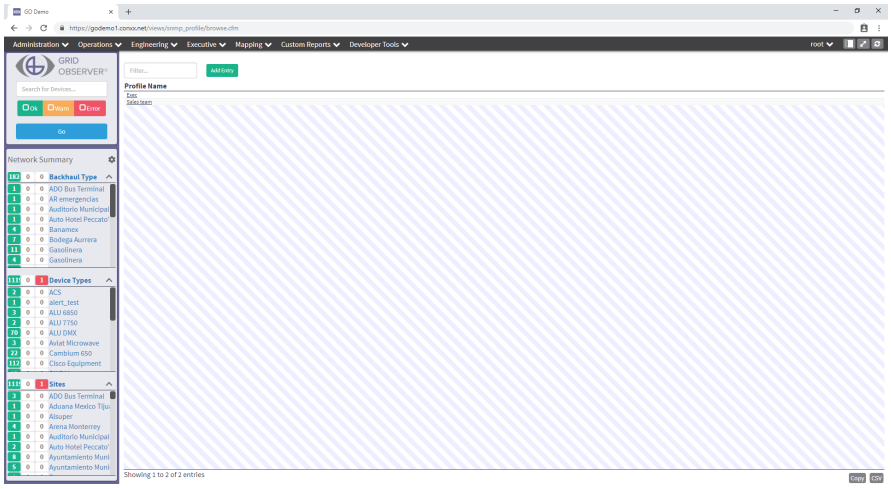
Adding an SMP Profile

1. Select **SNMP Profiles** from the **Administration** drop-down menu.

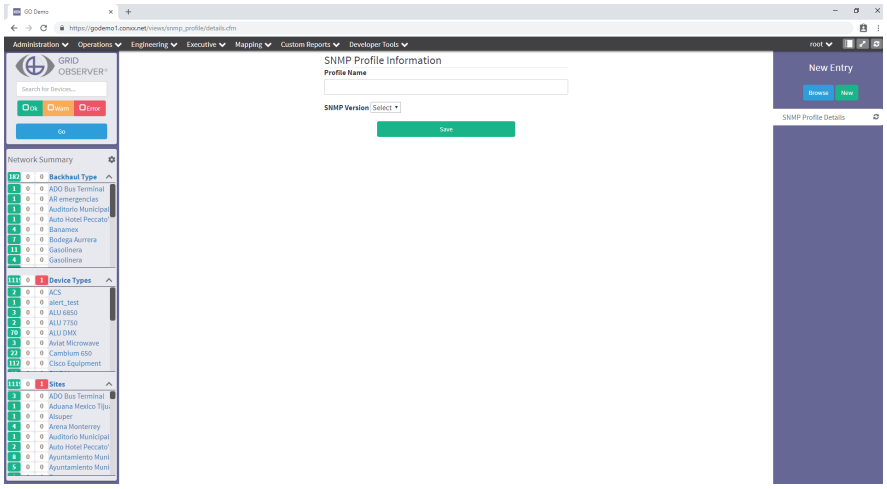


TIP: You can search for and edit existing SNMP Profiles by entering text in the Filter field.

2. Click **Add Entry.**



3. Input the following information:

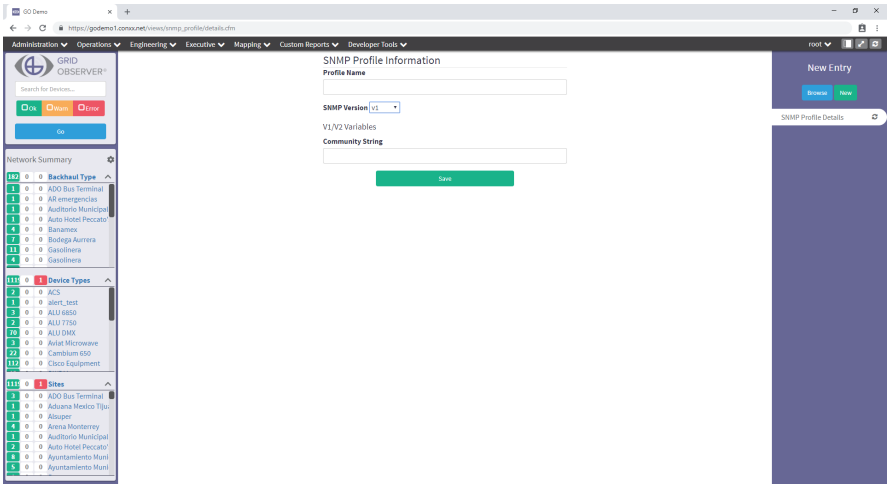


- **Profile Name**
- **SNMP Version**

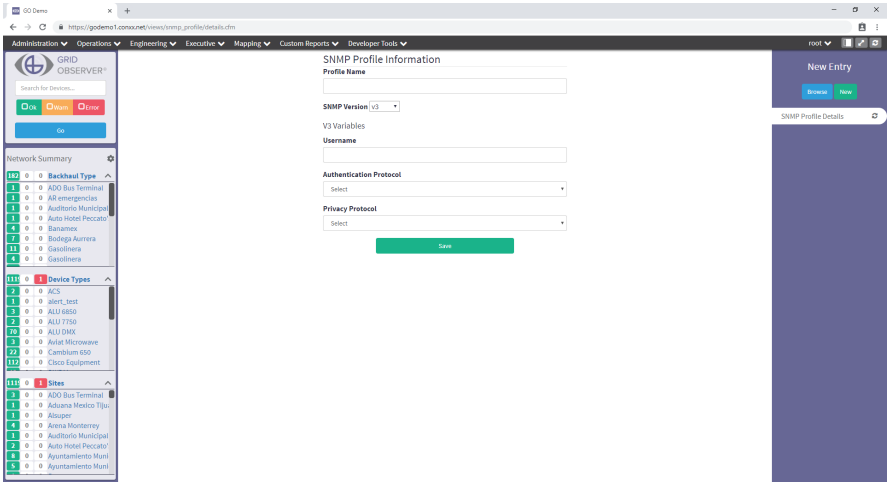
TIP: The SNMP version specifies how the string is being encrypted.

4. Depending on the SNMP Version you are using, input the following information:

v1 or v2c: **Community String**



v3: **Username, Authentication Protocol**, and **Privacy Protocol**



5. When finished, click the **Save** button.

ADD ADDITIONAL INFORMATION

After you've verified and added basic information, you can add details to the devices and sites within your GridObserver® network. Adding additional information allows you to customize resources for each device. You can add things like user manuals, maintenance records, instructions for accessing devices, or information that cannot be determined from queries.

There are three features you can use to attach additional information: custom fieldsets, uploads and documents, and journals. Complete the following sections to optimize GridObserver's functionality.

Custom Fieldsets

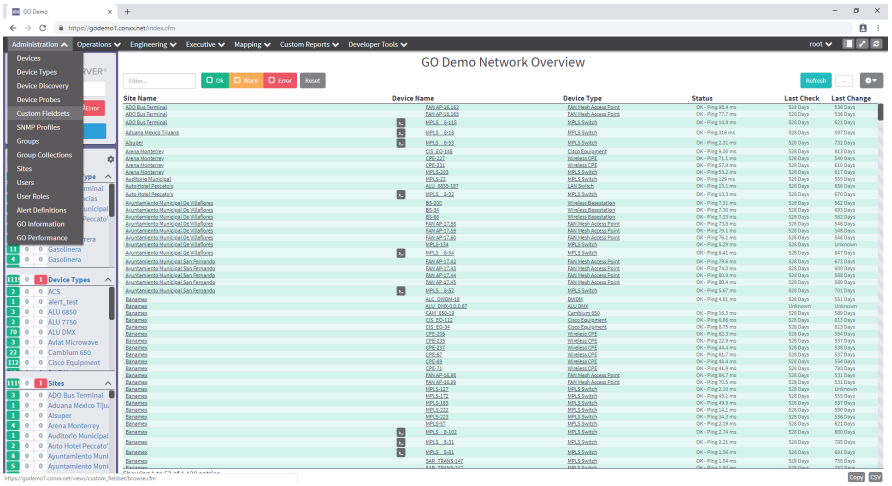
Custom Fieldsets are custom metadata labels that can be associated with either Sites or Device Types. Fields are completely free-form: you can add any kind of metadata you like, and fieldsets can be added to any device or site. The custom fields will show up on the details page of any Sites or Devices that you associate with that fieldset.

Fieldsets are used to include information that cannot be determined from an SNMP device query or information that would be useful when accessing a particular device or location.

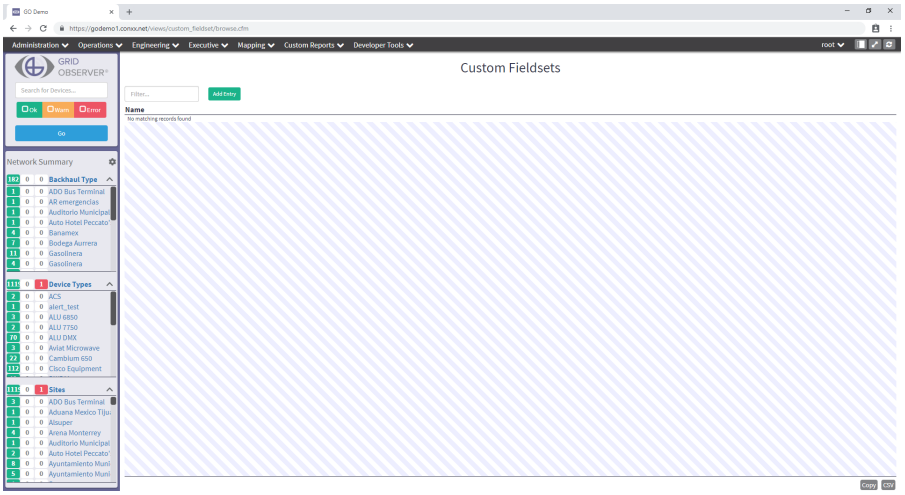
Examples
Site: Info on tower height; PIN codes for entry to locked areas.
Device: Name of the room it's located in; wifi broadcast name and password.

Adding a Custom Fieldset to a Device Type or Site

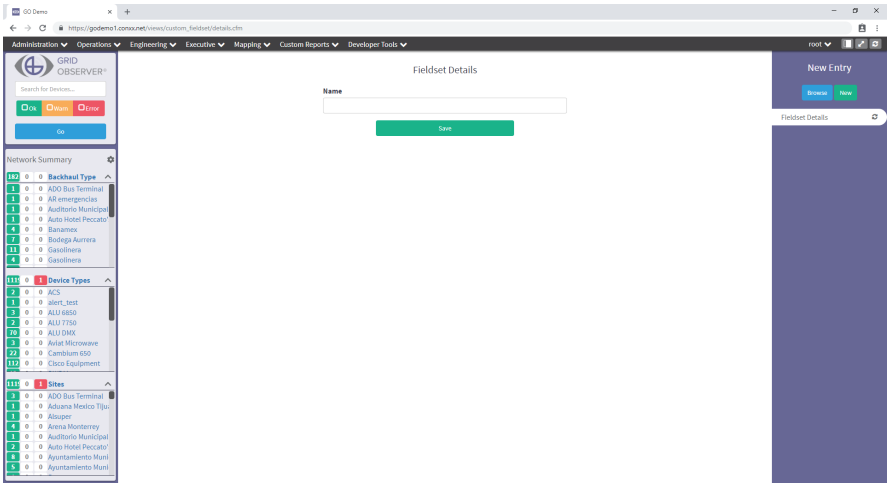
1. Select **Custom Fieldsets** from the **Administration** drop-down menu.



2. Click **Add Entry.**



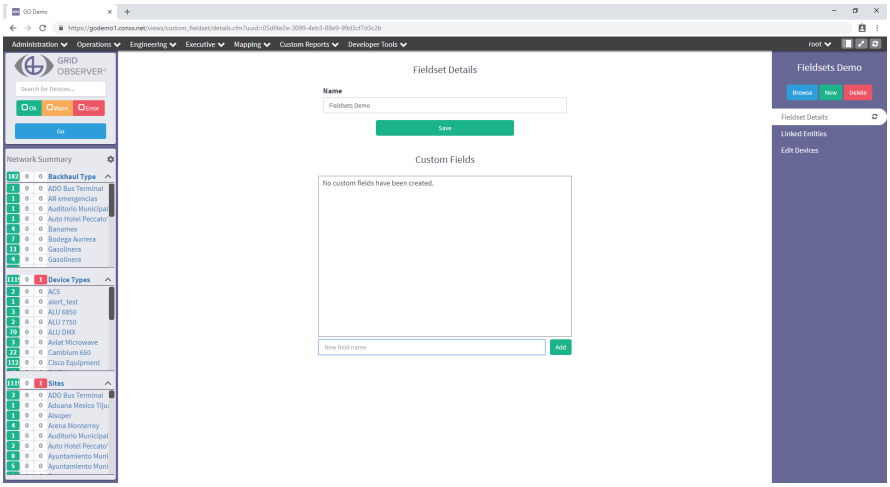
3. Input the **Name** of the Fieldset.



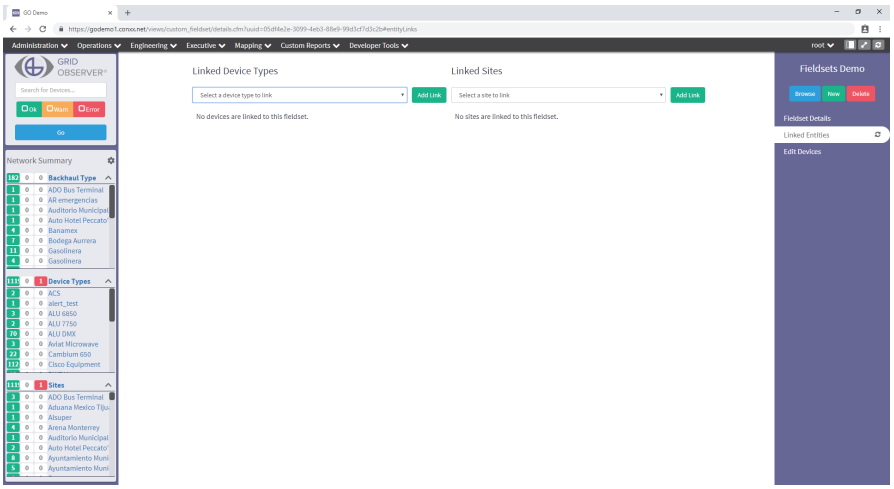
TIP: The Name of the fieldset is the label for a group of fields. The name you use should make sense for all the fields you're including in that fieldset.

4. Click the **Save** button.

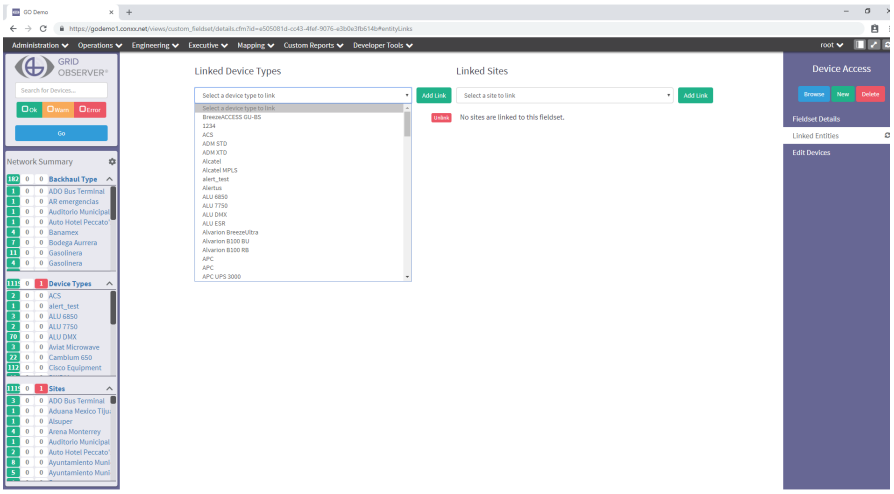
5. Input the **New Field Name** and click **Add**. You can add as many new fields as you want.



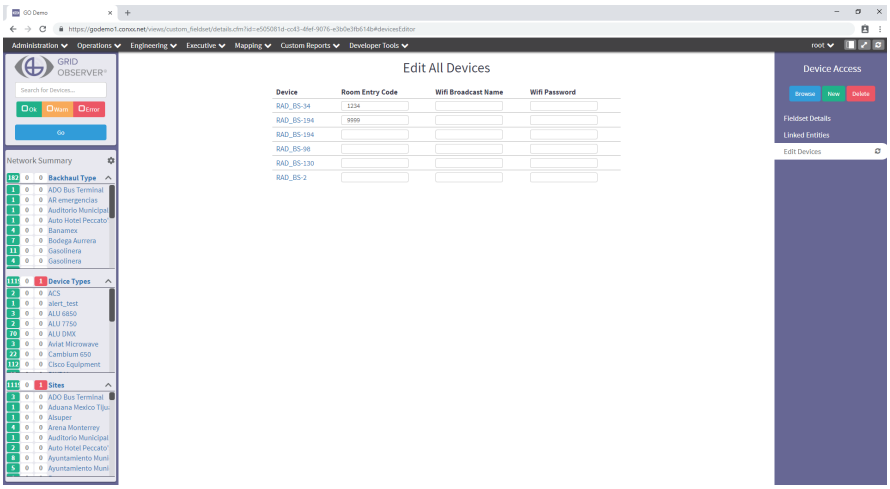
6. In the menu on the right, click **Linked Entities** to add or edit device types or sites associated with this new fieldset.



7. Use the Select a device type to link or Select a site to link drop-down menus to link the custom fieldset to device types or sites.



8. Click **Edit Devices** in the menu on the right to view every device with this fieldset and add or edit entries in the custom fields.



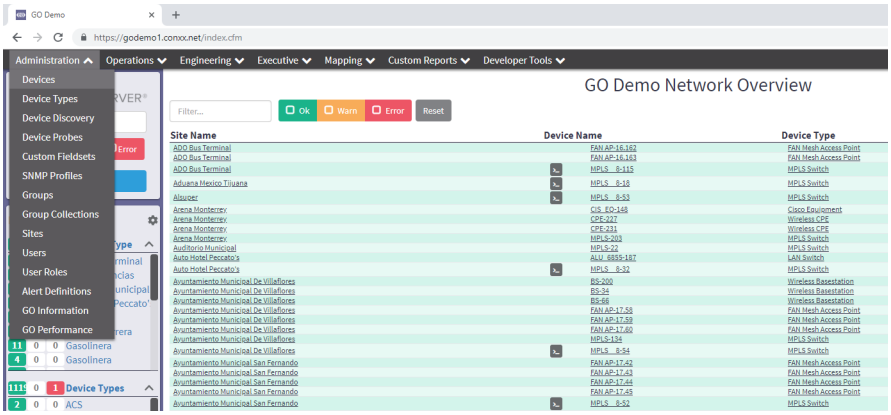
TIP: Custom fieldsets can also be filled out or edited in the Device's or Site's detail page.

Uploads and Documents

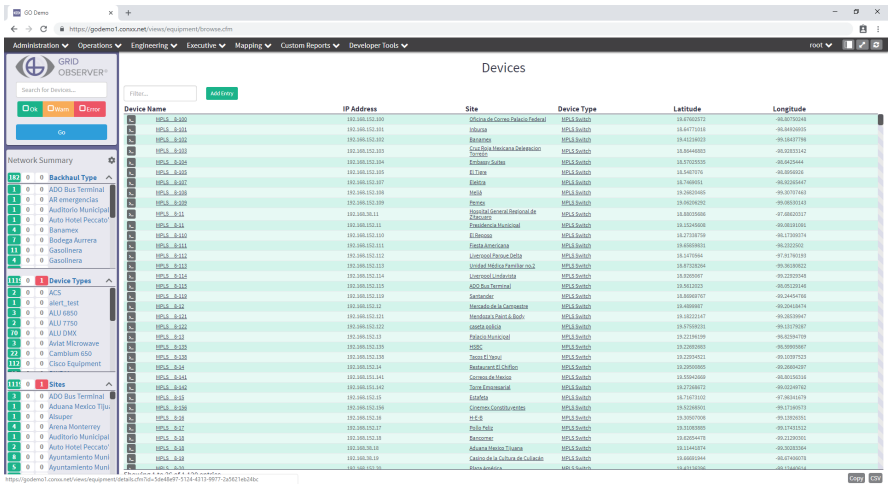
Uploads are files that can be associated with either Devices or Sites. Within Device Types, this feature is called Device Type Documents. An example of an Upload might be photos of the site or device, or the user manual.

Adding a New Upload or Document

1. Select **Devices** or **Sites** or **Device Types** from the **Administration** drop-down menu.

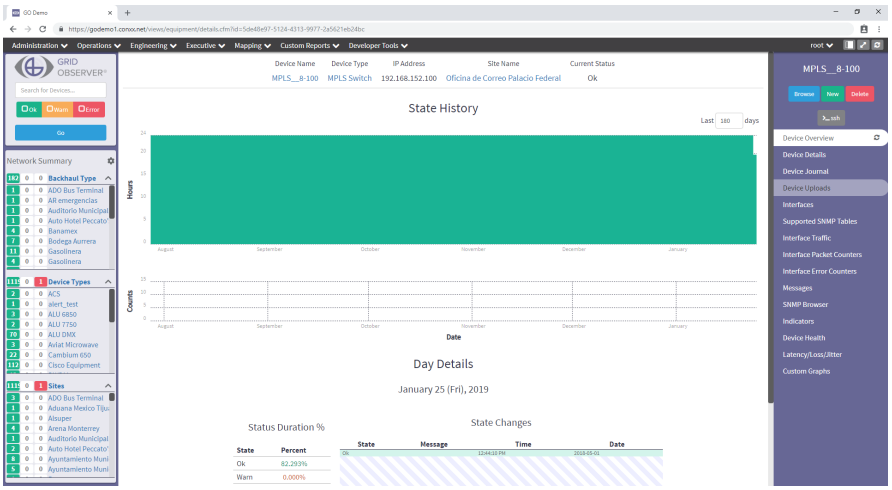


2. Select a device or site or device type by clicking on its name in the table or searching for it in the Filter input field.

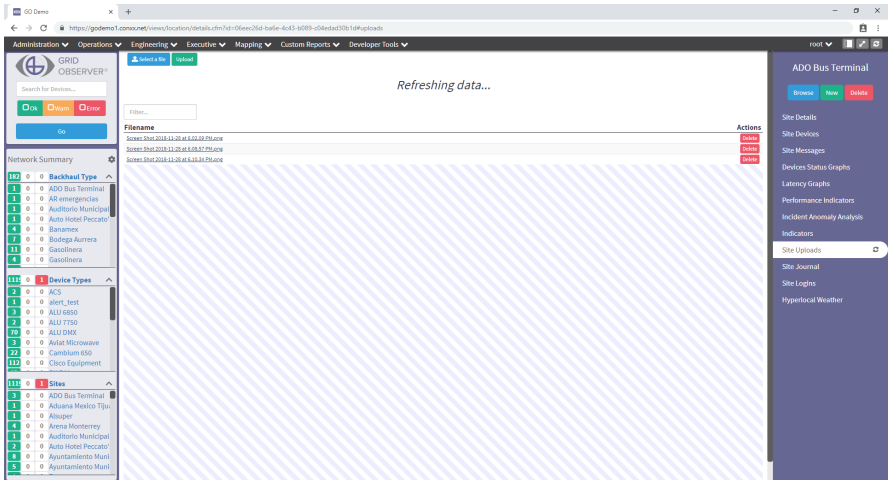


3. Select **Device Upload** or **Site Upload** or **Device Type Documents** from the menu on the right.

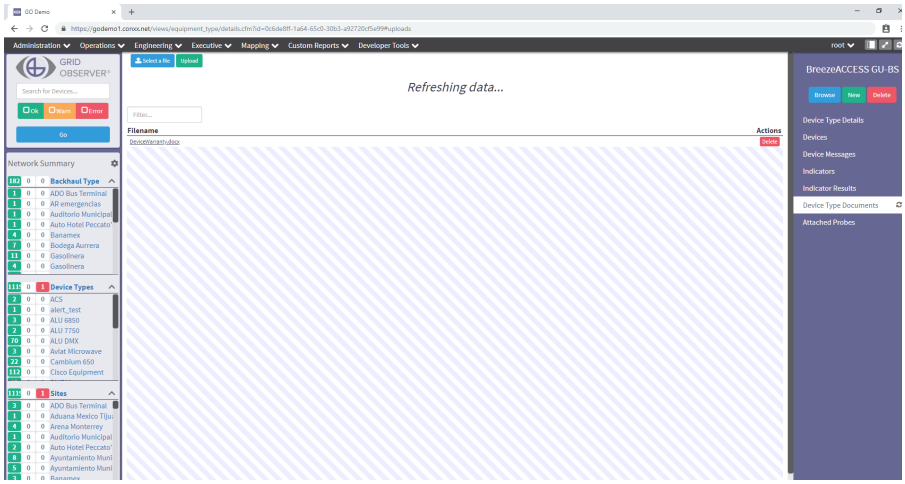
Device Upload option:



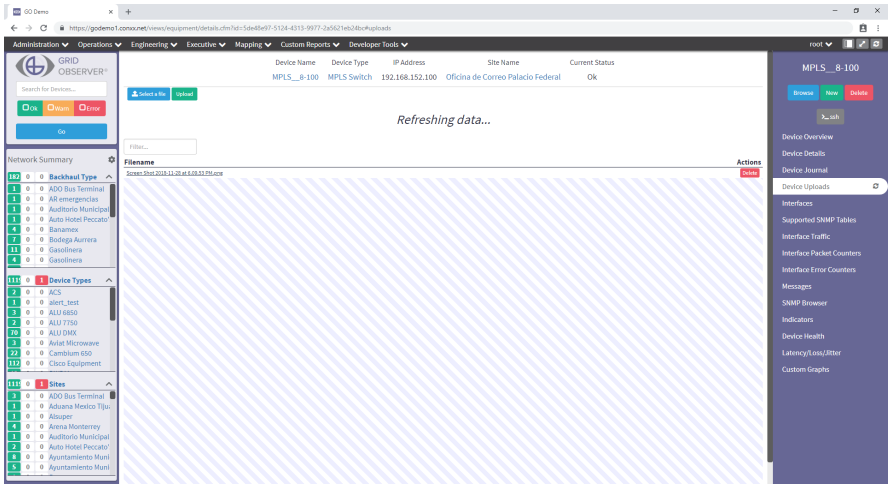
Site Uploads option:



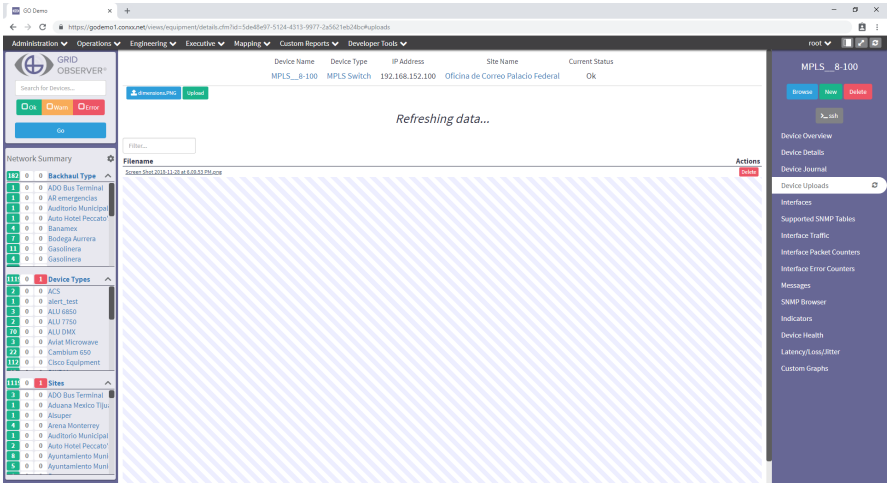
Device Type Documents option:



4. Click **Select a File** and choose your file to upload.



5. Click **Upload** after your file has been selected.



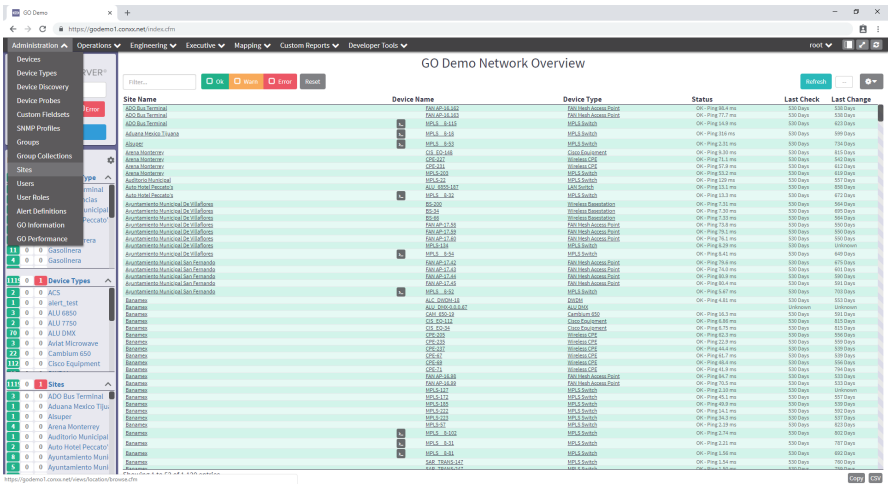
TIP: Uploads are organized alphabetically by file name.

Journals

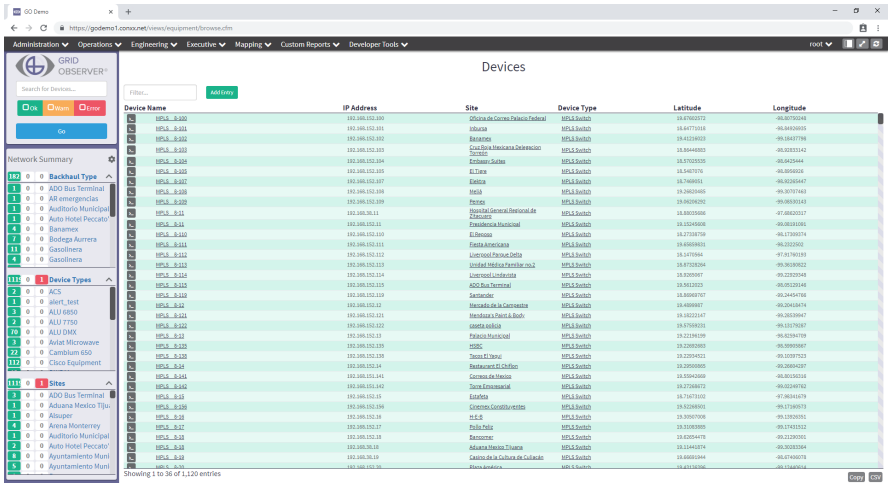
Journals can be associated with either a Device or a Site. Journals allow you to continually add important information related to a specific Site or Device in the form of notes. This might include equipment changes, special precautions, updates, problems, or repairs. Journals are an easy way to track unique information associated with a piece of equipment or a location. Entries are time-stamped and associated with the user who adds them.

Adding Journal Content

1. Select **Devices** or **Sites** from the **Administration** drop-down menu.

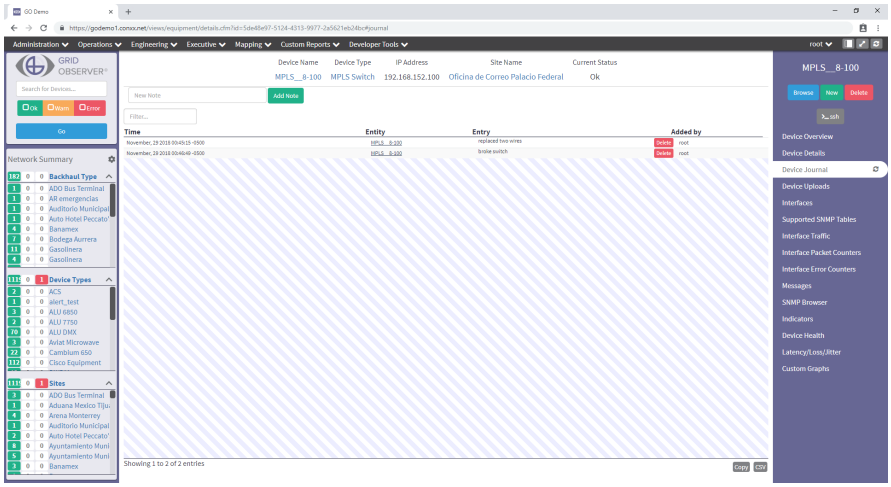


2. Select a device or site by clicking on its name in the table.

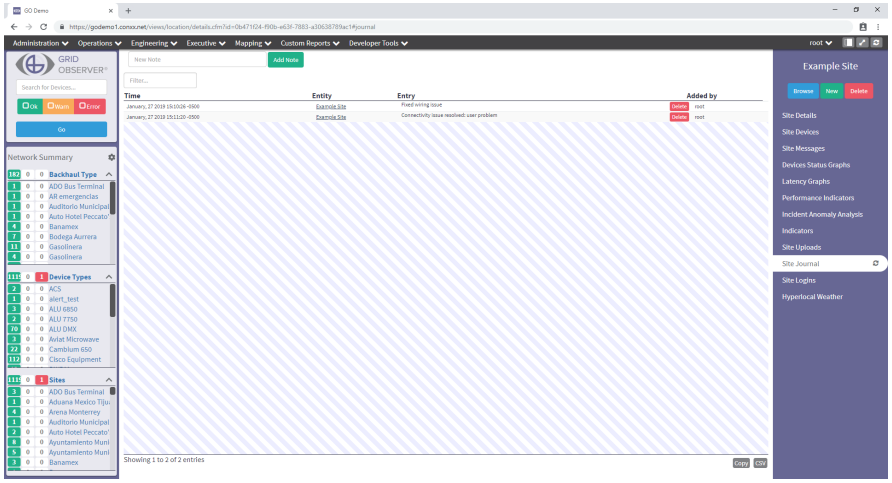


3. Select **Device Journal** or **Site Journal** from the menu on the right.

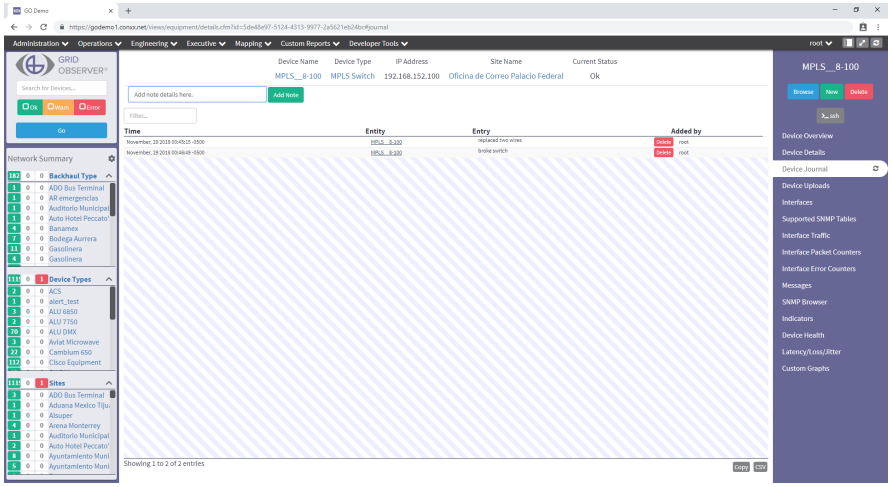
Device Journal option:



Site Journal option:



4. Write the journal entry in the **New Note** input field.



TIP: Sort the Journal entries table by clicking on the column headers. Use the Filter field to narrow the entries in any of the categories.

5. Click the **Add Note** button to save your entry.

MONITOR YOUR NETWORK

The main purpose of GridObserver® is to make it easy to monitor the health of your entire network. GridObserver's features allow you to organize and filter what you see so you can identify and locate errors rapidly. Monitoring your network with GridObserver also helps you identify devices or sites that are in a state of warning, allowing you to proactively prevent problems before they become disasters.

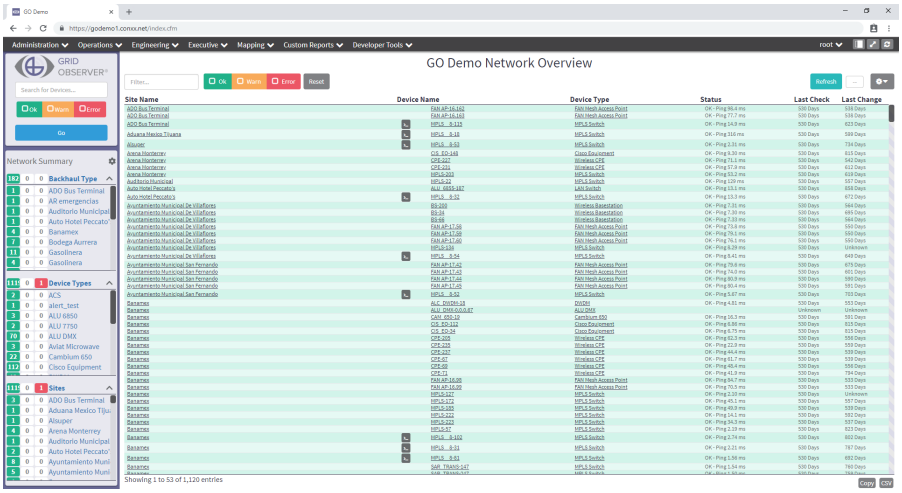
Complete the following sections to set up the probes that will identify problems and optimize your network functions.

Devices and Sites

The home screen shows the current status of all devices and sites. You can click on specific devices and sites or enter a filter parameter to narrow down the list. By frequently monitoring your devices and sites, you can quickly respond to status changes and reduce or prevent connectivity loss.

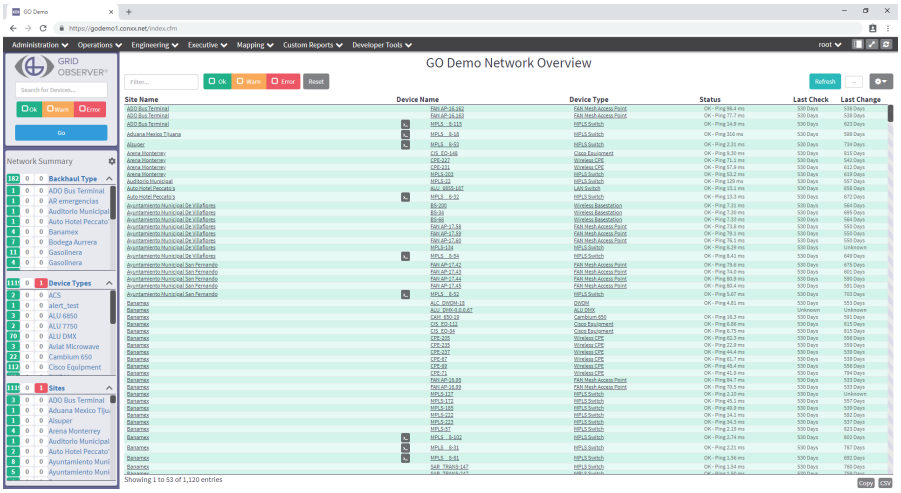
Monitoring Devices and Sites

1. Navigate to the **Home** screen by selecting the GridObserver logo. You can monitor all the devices and sites in your network from this screen.

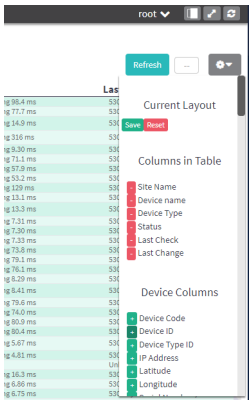


2. Click on the status quick-sort feature to see devices and sites that are in an **Ok, Warn,** or **Error** state.

The quick sort options are located to the left and center of the page.

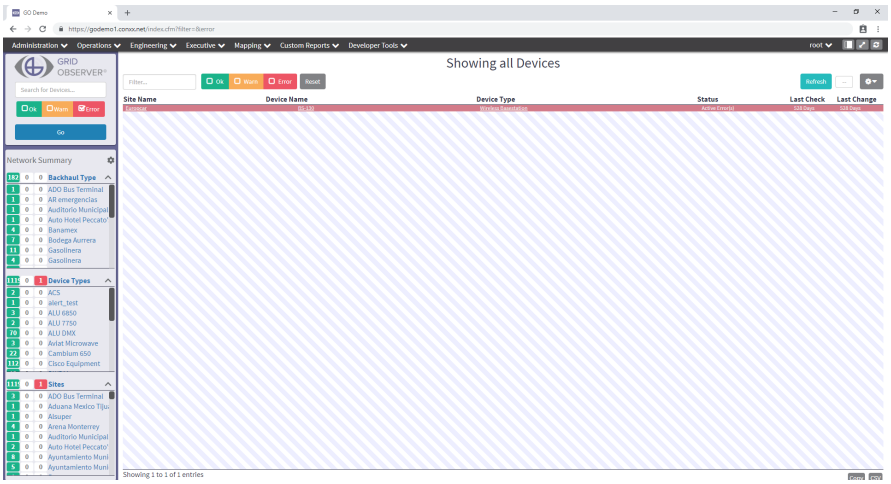


3. Select the gear icon in the top right corner above the table to customize the columns shown. In the drop-down menu, select and deselect the columns you want visible.



TIP: Click the column headings to sort items in that field.

4. To see the most current information, click the Refresh icon at the far right of the top menu.



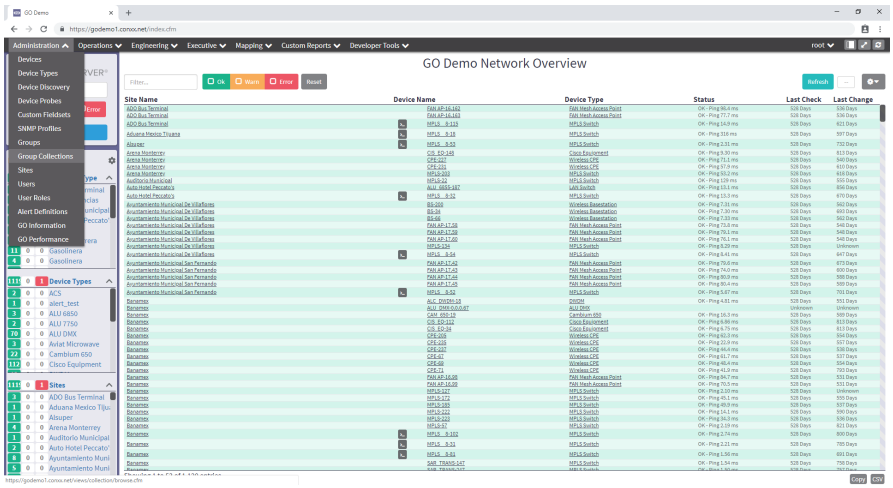
Group Collections

Group Collections are groups of devices or sites displayed in the left side bar. Two collections exist by default: Device Types and Sites. Default and custom collections and their content are displayed in alphabetical order. Content in the left sidebar is always visible (except when you change your display to hide the side menus), so create collections of what is most important for your operations.

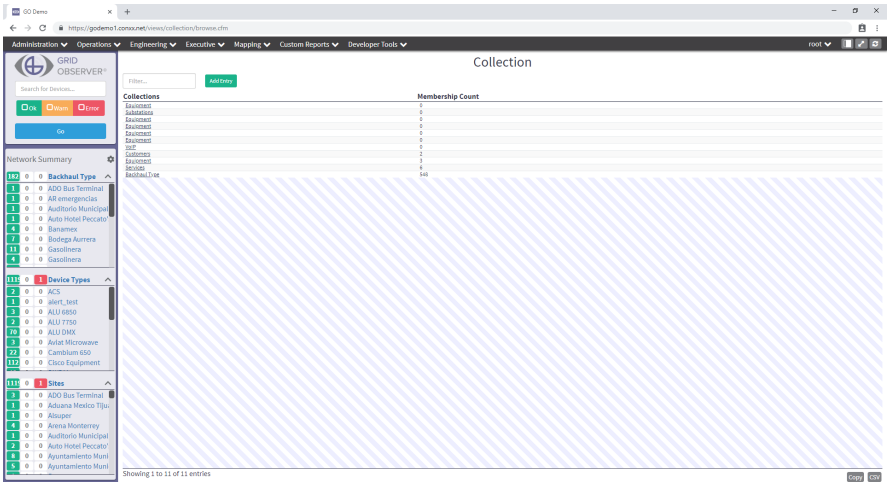
All existing collections can be edited at any time except the default collections, Device Types and Sites. Default collections include every device type or site in the network. To add a collection to the left sidebar, complete the following:

Adding a Collection to the Left Sidebar

1. Select **Group Collections** from the **Administration** drop-down menu.

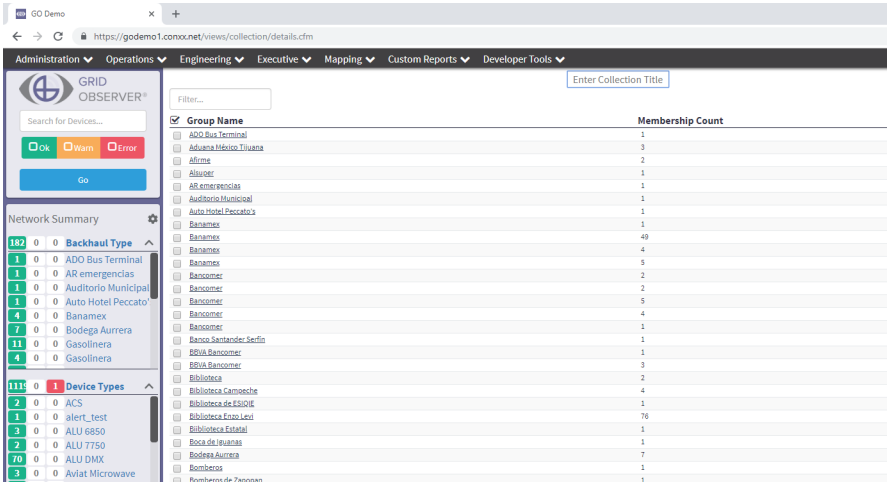


2. Click the **Add Entry** button.

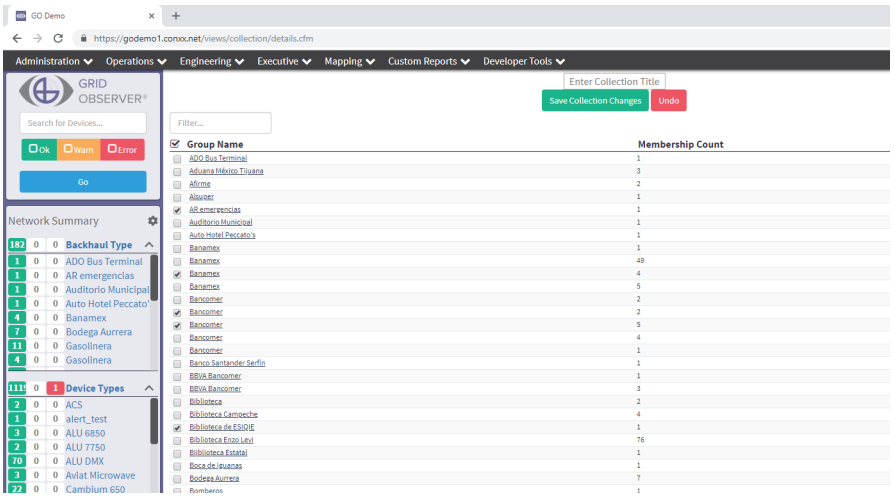


TIP: To edit an existing collection, click on the collection and select groups to add or remove them from the collection.

3. Enter a title for the collection in the **Enter Collection Title** form field.



4. Select the checkboxes by the groups, sites, or devices you would like to include in this collection.



TIP: Membership Count refers to the number of individual items in a collection or group.

5. When finished, click the **Save Collection Changes** button.

Reporting

Reporting is the main purpose for GridObserver. Actionable intelligence can improve the quality, reliability, and health of any network. GridObserver's extensive data collection and reporting capabilities provide useful information for many departments in your organization:

- Network operations staff
    - Day-to-day network issues
- Network engineering
    - Key data (historical and current) that can inform engineering and design considerations to accommodate growth and network changes
- Corporate- and management-level decision makers
    - Track the effectiveness of network investments and determine where to invest for optimal results .

Some standard reports come as a default in GridObserver. You can find them in the **Operations** drop-down menu.

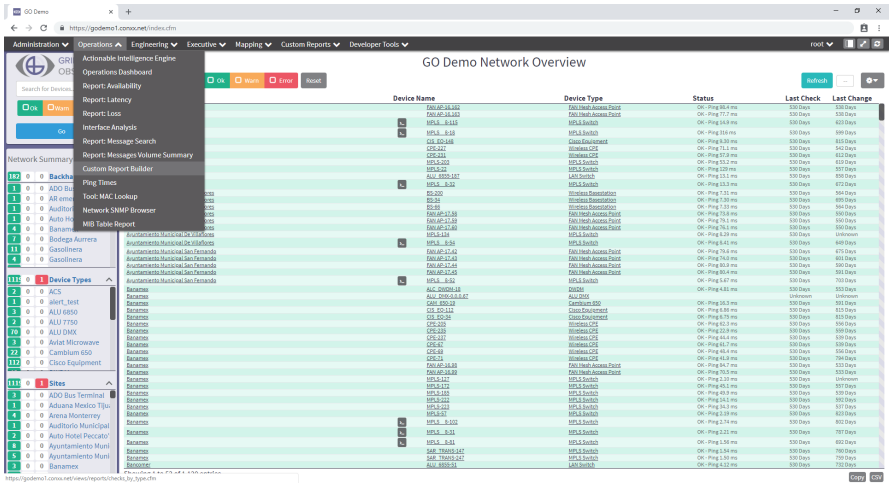
Examples of standard reports include the following:

- Problem identification
- Configuration variances
- Utilization
- Trends
- Performance parameters
    - Latency average
    - Latency speed
    - Loss (connection problems)
    - Overall availability (uptime)

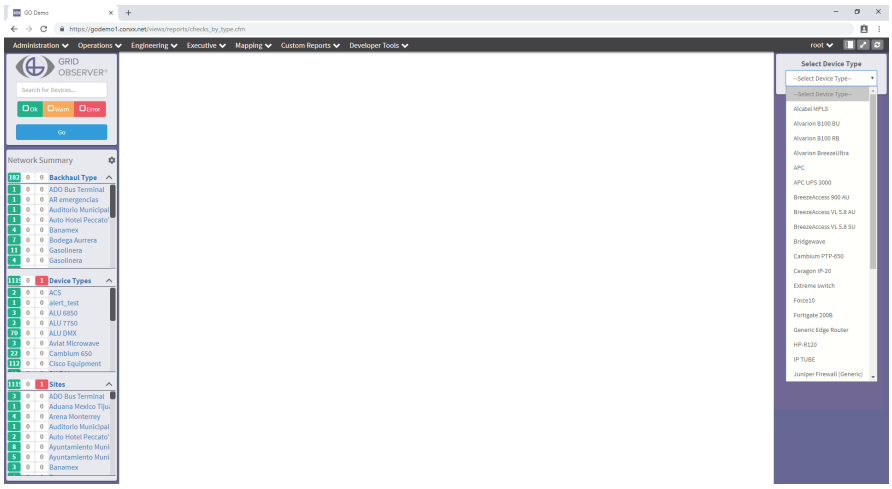
In addition to standard reports, you can create and configure custom reports that show any trackable data in whatever format you find most useful. Conxx can work directly with you to help with this process.

Creating a Custom Report

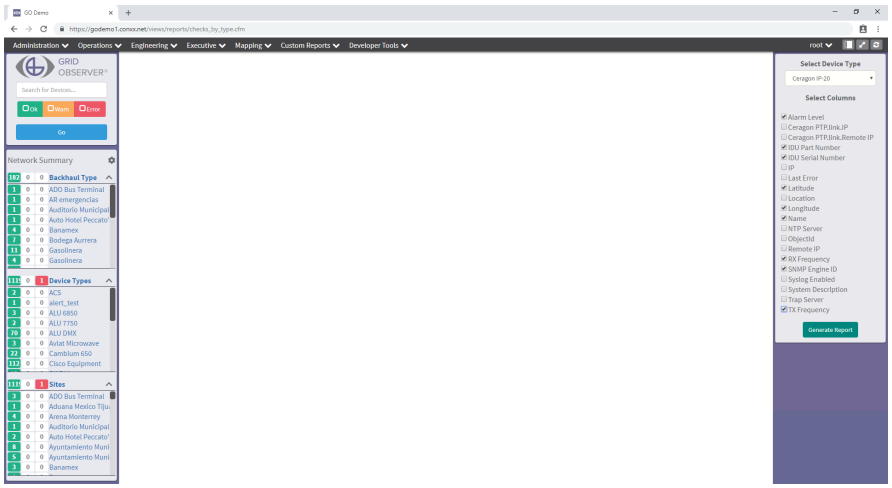
1. Select Custom Report Builder from the Operations drop-down menu.



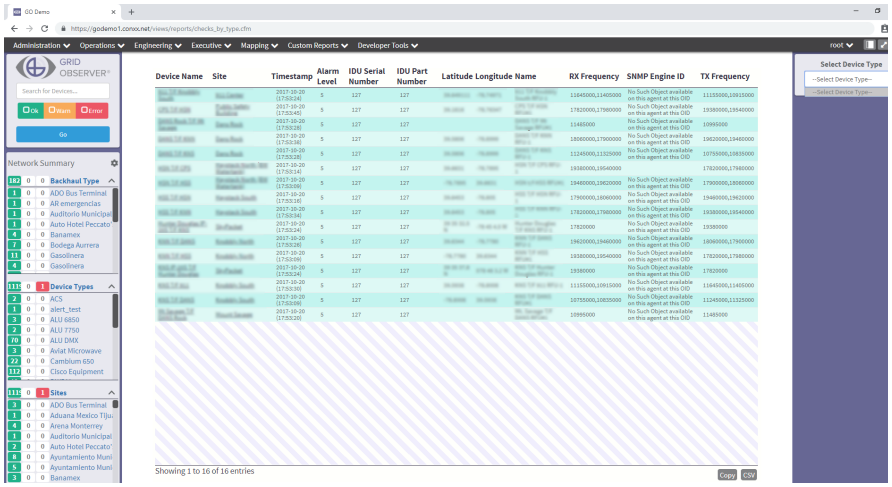
2. Select the device types you would like to include in the custom report from the **Select Device Type** drop-down menu on the right.



3. Select the information that you would like included in the report by choosing columns from the **Select Columns** list.



4. Click **Generate Report.**



GLOSSARY

Base station - Multipoint radio that serves as a hub to which multiple endpoints can connect.

CPE - Customer premise equipment such as a subscriber radio, or a remote switch on a premise.

Geocode - Process return codes by location.

IANA - Internet Assigned Numbers Authority - Global IP authorization.

Jitter - Interruptions during a probe.

Latency - An expression of how much time it takes for a packet of data to get from one designated point to another. In some environments, latency is measured by sending a packet that is returned to the sender; the round-trip time is considered the latency.

Loss - Packet loss occurs when one or more packets of data travelling across a computer network fail to reach their destination. Packet loss is either caused by errors in data transmission, typically across wireless networks or network congestion.

Machine Learning- A process whereby a system will take multiple data inputs into learning algorithms in order to identify actionable intelligence that would otherwise go undetected.

Management Tree - NIBs are chosen by operators in an organized directory.

MOM - Manager of Managers, typically

NIBs (Network Information Base) - Basic expression that can be built upon

Nodes - Either a redistribution point or a communication endpoint. The definition of a node depends on the network and protocol layer referred to.

OIDS (Object identifier) - Specific feature of a device that can be tracked.

Packet - Expressions in probe

Probe - Track alerts from device types over and over again.

Protocol - A set of rules by which data communications occur.

Remote site - A remote endpoint on a wide-area network.

SAIDI & NSAIDI - System Average Interruption Duration Index. This indicates the duration of an outage. (NSAIDI is a term that is established by GridObserver and adds the word “network” to the beginning of the name.)

SAIFI & NSAIFI - System Average Interruption Frequency Index. This indicates the duration of an outage. (NSAIDI is a term that is established by GridObserver and adds the word “network” to the beginning of the name.)

Site - Location with multiple devices.

SNMP - Simple Network Management Protocol

SNMP Table - Network tree of expressions

Subscriber - An endpoint radio that communicates back to a base station.

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