MIDAS

Geolocation Addon Documentation

https://mid.as/geolocation

v1.00

...making your facilities work for you!

MIDAS Geolocation Addon

Table of Contents

Geolocation Addon

Overview

The optional "Geolocation" addon for MIDAS room booking systems adds both geolocation and geofencing capabilities to the software.

What can this addon do?

- Show geographic locations for IP addresses displayed in the Recent Activity Log.
- Include geographic location information in new/unfamiliar login activity email notifications.
- Restrict logins to users with IP addresses within certain countries.
- Restrict logins to users with IP addresses within a radius of a certain geographic location (geofencing).

You can read more about this addon's capabilities in our Geolocation and Geofencing blog post.

Geolocation vs Geofencing – What's the difference?

Our optional "Geolocation" addon for MIDAS room booking systems adds both **geolocation** and **geofencing** capabilities to your scheduling software.

Whilst the two terms are related, they serve distinct purposes. Let's clarify the difference between geolocation vs. geofencing, explore their functionalities, applications, and how they relate to our optional addon.

What is Geolocation? Pinpointing Location on a Map

Geolocation focuses on identifying the precise real-world geographic location of a device or user. It can leverage various technologies, including:

- **GPS (Global Positioning System)**: Satellite-based navigation providing highly accurate location data.
- **Wi-Fi**: Identifying nearby Wi-Fi networks to estimate location.
- **Cellular Data**: Using cell tower triangulation to approximate location.
- **IP Address**: Determining a general geographic area based on the device's internet protocol address.

Geolocation Addon

Geolocation's primary function is to provide accurate location information. This data powers various applications, such as:

- **Navigation and Mapping**: Guiding users with turn-by-turn directions and displaying points of interest.
- **Location-Based Services (LBS)**: Enabling services like finding nearby restaurants, shops, or ATMs.
- **Emergency Services**: Locating individuals in distress for faster response times.
- **Social Media Check-ins**: Allowing users to share their current location with their network.

In MIDAS, our geolocation addon uses geolocation to show geographic locations for IP addresses listed in the Recent Activity Log, and to include geographic location information in new/unfamiliar login activity email notifications.

What is Geofencing? Creating Virtual Boundaries

Geofencing takes location a step further by establishing virtual perimeters around specific geographic areas. These "geofences" can act as triggers for actions when a device or user enters or exits the defined zone, or can be used to deny access to services when a device or user it outside of a defined area. Geofencing relies on the same location technologies as geolocation (GPS, Wi-Fi, cellular data) to determine if a device is within the virtual boundary.

The typical function of geofencing is to trigger pre-programmed actions. Common applications include:

- **Location-Based Marketing:** Sending targeted promotions or offers to customers when they enter a store's vicinity.
- **Security and Monitoring:** Alerting authorities or designated personnel when someone enters a restricted area.
- **Time Tracking:** Automating employee clock-in/clock-out based on their presence at a work site.
- **Home Automation:** Triggering smart home devices (lights, thermostats) based on arrival or departure.

In MIDAS, our geolocation addon uses geofencing to allow you to restrict logins to users within certain countries, or to restrict logins to users within a certain radius around your site's location.

Key Takeaway: Location Awareness vs. Location Action

The fundamental difference between geolocation vs. geofencing lies in their purpose. Geolocation provides the "where," while geofencing uses the "where" to initiate an action. Geolocation is about ***knowing*** a location; geofencing is about ***reacting*** to a location.

Installing the Addon

Our Geolocation addon is available as an optional extra for MIDAS v4.33 (or later), and can be initially purchased together with MIDAS, or added to an existing MIDAS system at a later stage.

- To purchase MIDAS and the Geolocation addon, please visit: mid.as/pricing.
- To add the Geolocation addon to an existing MIDAS installation, please go to MIDAS Admin Options → Manage Addons → Available Addons → Geolocation.

After purchase, the Geolocation addon will become available for one-click installation via MIDAS Admin Options → Manage Addons → Addons Ready To Install → Geolocation.

Once installed, you'll then need to configure the addon via MIDAS Admin Options → Manage Addons → Installed Addons → Geolocation.

Configuration

Once the Geolocation plugin has been installed to your MIDAS system, it may be configured by going to MIDAS Admin Options → Manage Addons → Geolocation.

The following settings screen will be displayed:

Geolocation Addon Settings

Geolocation Addon

Enable Geolocation support in the Recent Activity Log

If this option is enabled, then clicking an IP address in the "Originating IP" column of the Recent Activity Log will retrieve the geolocation (city, region, country) of the selected IP.

Enable Geolocation support for New Login Alerts

Enabling this option allows geolocation data (city, region, country) to be included in new login email notifications.

In order for this to work, the following needs to be setup:

1. Enable the "Enable Geolocation support for New Login Alerts" option.
2. Enable the "Alert users upon logins from unfamiliar devices?" option (MIDAS Admin Options → Manage MIDAS → Security → Device Control)
3. Insert a "%LOCATION%" placeholder variable into the "e-mail: New Login" template (MIDAS Admin Options → Manage MIDAS → Templates). This variable will be substituted with geolocation data when new login alert emails are sent.

Enable Geofenced logins

This option enables or disables geofencing enforcement (both country and distance).

IMPORTANT: Before enabling this option, be sure to read and understand our information on Geolocation Data Accuracy.

Restrict logins by country

If enabled, logins to your MIDAS system can be restricted to IP addresses residing in specific countries.

Enter a comma separated list of 2-letter ISO 3166-1 country codes to allow logins from these countries. For example, entering "US,GB" will only permit logins from IP addresses determined to be within the United States of America, or within the UK (Great Britain).

Where MIDAS is unable to determine the country from an IP address, you have the option to continue to allow the login, or to block it.

Restrict logins by distance

If enabled, logins to your MIDAS system can be restricted to within a distance (radius) of a set geographic position. IP addresses whos location is determined to be outside of this distance will not be permitted.

Where MIDAS is unable to determine the latitude / longitude of IP address, you have the option to continue to allow the login, or to block it.

Geo IP Lookup Tool

The Geo IP Lookup Tool can be used to query geolocation information of any IP (IPv4 or IPv6) address. The information this tool returns is as follows:

- City, Region, Country
- 2-letter ISO 3166-1 country code *(Useful for checking whether an IP address would be allowed by restricted logins by country)*
- Latitude
- Longitude
- Distance from set Latitude / Longitude *(Useful for checking whether an IP address would be allowed by restricted logins by distance)*

Frequently Asked Questions

How accurate is geolocation and geofencing?

The accuracy of IP-based geolocation data depends on a number of factors.

These include:

- The quality and freshness of the geolocation database.
- The method that is used to determine the geographic location of the IP address.
- The type of IP address.

The IP geolocation data we use in the Geolocation addon for MIDAS is never more than 30 days old. In general, IP geolocation data is most accurate for larger geographic areas, such as countries or states.

Data can become less accurate for smaller geographic areas, such as cities or neighborhoods.

As such, if you use the distance (radius) based geofence features of the Geolocation addon, you should always set a larger liberal distance than necessary, rather than a very small strict distance from your location. To aid in testing, the Geolocation addon includes an instant IP lookup test tool, allowing you to check the distance of an IP address before you apply new settings.

The Geolocation addon also includes "fallback" options for both country and distance geofence enforcement. For IP addresses where a country and/or latitude and longitude coordinates cannot be determined, you can configure MIDAS to either block or to allow these connections.

It's also worth noting that the accuracy of IP geolocation data can be affected by the use of proxy servers and VPNs. Proxy servers and VPNs can mask the true IP address of a device, making it difficult to determine the device's geographic location.

All our users login from "local" IP addresses, how does this affect geofencing?

It is not possible to determine the geographic location of private or local IP addresses or ranges, such as 127.0.0.1 or 192.168.x.x.

If you have users connecting from local/private IP addresses, you should configure the addon settings to allow logins from unknown countries/locations, or disable the geofenced login options.

I've set my geofence settings too strict, and now I can't log in!

Cloud-hosted customers, please contact us for assistance.

Self-hosted customers, please use our online self service tool to disable geofence security to allow you to log in.

Release Notes

v1.00	
July 2023	· Initial release

For the most up-to-date Geolocation documentation,
please visit https://mid.as/geolocation