

Geolocation

Using Geolocation

Geolocation



Note: This article applies to Fuji and earlier releases. For more current information, see *Geolocation*^[1] at <http://docs.servicenow.com>. **The ServiceNow Wiki is no longer being updated. Visit <http://docs.servicenow.com> for the latest product documentation.**

Overview

The geolocation feature uses Google Maps to track users, plan efficient routes between locations, and assist in finding accurate travel times for applications that require this information, such as Work Management. The system locates users from latitude and longitude information provided by their mobile devices or browsers. Tracking the location of certain users can improve business processes such as the completion of work order tasks. For example, in work management geolocation, the system updates an agent's position each time that agent updates a task record. When the system updates an agent's location frequently, agents and dispatchers can use features like auto-routing to create efficient schedules. Geolocation is available starting with the Eureka release.

Google Key

ServiceNow geolocation requires a Google Maps API for Business license to enable the use of Google driving time estimates and to use Google Maps. Applications, such as Work Management, have functionality that requires this license. If you are using auto-routing or auto-dispatch in Work Management, both the Google Maps API for Business private key and the client ID must be set for precise time estimates. Without these values, driving times for auto-routing and auto-dispatch are not available, and a rough estimate or fixed time is used. Use these properties, found in **System Properties > Google Maps**, to enable the geolocation features in ServiceNow. For a full list of properties available with Google Maps, see Google Maps Support.

- **Client ID for Google Maps API for Business:** Google client ID for your organization. This ID is from Google and starts with **gme-**, such as **gme-mycompanyname**.
- **Private key for Google Maps API for Business:** Key required to get accurate driving time estimates from Google for some features of Geolocation. An example of an encoded key is:
vNIXE0xscrmjlyV-12Nj_BvUPaw=

Geolocation History

The Geolocation History [geo_history] table contains the history of each tracked user's location over time. To view geolocation history, navigate to **Geolocation > Geolocation History**. The record list shows time stamped location data for all users configured for geolocation tracking.

The following system properties, located in **Geolocation > Administration > Geolocation Properties**, control the data that appears in this table. For the entire list of geolocation properties, see Properties.

- **Minimum distance an agent must move to be considered in a new location (in meters):** Perimeter that defines a single location in which multiple tasks are present. This property prevents the system from creating unnecessary history records when multiple tasks are in the same general location.
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- **Maximum distance an agent can be from a specific location and still be placed at that location (in meters):** Distance that a user can be from a specified location and still be placed at that location when the system creates history data.
- **Number of days to keep history data:** Time period for which the system retains history data.
- **Minimum amount of time between updating the user's location (in seconds):** Time period the system waits before updating a user's location, regardless of how often the user accesses tasks.

Location Tracking

Geolocation adds the **Geolocation tracked** field to the User form. In the default view of a user record, select the **Geolocation tracked** check box to enable location tracking for the user. When a user has geolocation tracking enabled, the system updates the user's geographic coordinates whenever the user opens, or *loads*, a record from the Task [task] table or from a table that extends Task. After this initial update, the system continues to update the user's geographic coordinates at a recurring interval if the user does not close or reload the record. To edit the length of this interval, navigate to **Geolocation > Administration > Geolocation Properties** and change the setting for the property that regulates the update interval for the user's location. The default setting for this property is **300** (5 minutes).



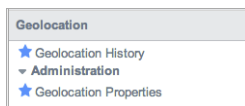
Note: The system can update geographic coordinates only for users who have location services enabled in their browsers. Even users who have the **Geolocation tracked** check box selected may be prompted by their browsers to share or withhold their location.

Roles

Geolocation features can be configured by users with the admin role.

Menus and Modules

The Geolocation application menu contains the following modules:



- **Geolocation History:** Shows geolocation history for all users with geolocation tracking enabled.
- **Administration**
 - **Geolocation Properties:** Provides access to properties installed with the Geolocation plugin.

Activating Geolocation

An administrator can activate the Geolocation plugin.

Click the plus to expand instructions for activating a plugin.

If you have the admin role, use the following steps to activate the plugin.

1. Navigate to **System Definition > Plugins**.
2. Right-click the plugin name on the list and select **Activate/Upgrade**.

If the plugin depends on other plugins, these plugins are listed along with their activation status.

3. [Optional] If available, select the **Load demo data** check box.

Some plugins include demo data—sample records that are designed to illustrate plugin features for common use cases. Loading demo data is a good policy when you first activate the plugin on a development or test instance. You can load demo data after the plugin is activated by repeating this process and selecting the check box.

4. Click **Activate**.

References

[1] https://docs.servicenow.com/bundle/jakarta-servicenow-platform/page/administer/geolocation/concept/c_Geolocation.html

Installed with Geolocation

Overview

The following components are installed with Geolocation:

- Tables
- Properties
- Script Includes
- Client Scripts
- Business Rules

Tables

Geolocation adds the following table.

Table	Description
Geolocation History [geo_history]	Contains the history of each agent's location over time. Only agents whose user records are configured for geolocation tracking are added to this table.

Modified by Geolocation

The Geolocation plugin adds a field called **Geolocation tracked** to the User [sys_user] table. This field allows the ServiceNow system to track individual users by their geographical coordinates.

Properties

Geolocation provides the following configurable properties in **Geolocation > Administration > Geolocation Properties**. The Google Maps plugin provides additional map properties that are used to implement and control specific geolocation features. You must have a private key for Google Maps API for Business to take advantage of the properties listed here.

Name	Description
glide.geolocation.allow.toll.roads	Allow toll roads to be used. Allows the system to use toll roads when auto-routing an agent's tasks. <ul style="list-style-type: none">• Type: True/false• Default value: True
glide.geolocation.default.start.time	Default start time for all agents when no schedule is set. This value sets the start time for a day other than the current day, when no scheduled task exists or is continued from the previous day. This property uses a 24 hour clock. <ul style="list-style-type: none">• Type: String• Default value: 08:00

<code>glide.geolocation.evening.rush.hours</code>	<p>Evening rush hour span, formatted as 14:30-16:00. All times are expressed as a range, separated by a dash with no spaces. Times not using this format are ignored. This property must be used with the <code>work.management.morning.rush.hours</code> and <code>work.management.rush.travel.buffer</code> properties and uses a 24 hour clock.</p> <ul style="list-style-type: none"> • Type: String • Default: 0
<code>glide.geolocation.history.cleanup</code>	<p>Number of days to keep history data. ServiceNow keeps agent geolocation history records for the number of days specified by this value.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 30
<code>glide.geolocation.morning.rush.hours</code>	<p>Morning rush hour span, formatted as 06:30-08:00. This property uses a 24 hour clock. All times are expressed as a range, separated by a dash with no spaces. Times not using this format are ignored. This property must be used with the <code>work.management.evening.rush.hours</code> and <code>work.management.rush.travel.buffer</code> properties.</p> <ul style="list-style-type: none"> • Type: String • Default: 0
<code>glide.geolocation.proximity</code>	<p>Minimum distance an agent must move to be considered in a new location (in meters). This setting establishes a geolocation perimeter that prevents ServiceNow from creating unnecessary history records when an agent has multiple tasks in the same vicinity. An example of this might be when an agent has several tasks in one building. The system assumes that all task activity within the specified radius is part of a single record and does not create additional records when the agent moves from task to task around the building.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 500
<code>glide.geolocation.proximity.location</code>	<p>Maximum distance an agent can be from a specific location and still be placed at that location (in meters). This setting defines the maximum distance that an agent can be from a specified location and still be placed at that location by the system.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 200
<code>glide.geolocation.rush.travel.buffer</code>	<p>Percentage to add to all rush hour travel times. The system uses this percentage to calculate schedules when auto-routing an agent. Use this property when both morning and evening rush hour times are defined. An example of a valid time buffer percentage is 15.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 0
<code>glide.geolocation.tracking.frequency</code>	<p>Sets the length of the recurring interval, in seconds, that the system waits between attempts to update a user's geographic coordinates. The system updates geographic coordinates only for users who have geolocation tracking enabled.</p> <p>Minimum amount of time between updating the user's location (in seconds). This setting defines how long the system waits before updating an agent's location, regardless of task activity or travel. This prevents ServiceNow from creating unnecessary history records if an agent in one location views a task multiple times.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 300
<code>glide.geolocation.travel.buffer</code>	<p>Percentage to add to all travel times. An example of a valid percentage value is 15.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 0
<code>glide.geolocation.work.spacing</code>	<p>Amount of time (in minutes) to add between the end of a task and the travel start of the next. An example of a valid time value is 10.</p> <ul style="list-style-type: none"> • Type: Integer • Default value: 0

Script Includes

Geolocation adds the following script includes.

Name	Description
GeolocationAJAX	Utilities the system uses when making geolocation AJAX calls.
GeolocationUtils	Core utilities for geolocation functionality.

Client Scripts

Geolocation adds the following client script.

Name	Table	Description
Update Geolocation on Task	Task [task]	Populates the Latitude and Longitude fields on a user record with GPS coordinates when that user loads any record on the Task table or a table that extends Task. This occurs only when geolocation tracking is enabled for the user.

Business Rules

Geolocation adds the following business rule.

Name	Table	Description
GeoLocation Data updated	User [sys_user]	Populates the Latitude and Longitude fields on the Geolocation History [geo_history] table when the Latitude and Longitude fields are updated on the User [sys_user] table.

Article Sources and Contributors

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