

In-ADS User Guide

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Estonian Land Board



European Union
European Structural
and Investment Funds



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1. Introduction

In-ADS widget is an integrated address search interface containing data from the address data system. It can be easily integrated into various web-based information systems to provide a high-quality address search functionality.

The In-ADS widget can be used either as a classical address search bar, or by systems that need to find a list of normalized addresses, meeting the requirements set by ADS, with all relevant meta-information.

This guide is meant for everyday users, who generate embed code by using the respective interface <http://inaaddress.maaamet.ee/inaaddress>. It is highly suitable e.g. for adding an address search function to a website.

On the initial page of the user interface there is a sample In-ADS widget, which the user can see and try out. There are also links to the user guide and the developer guide. The last one is meant for developers, who wish to use In-ADS e.g. in an information system.

Interacting with In-ADS widget happens via JavaScript interface. Various events like selecting the address (that are implemented as *DOM* events) trigger In-ADS widget to return JavaScript object with address data. The external system can also invoke different functions of In-ADS. Further information can be found in the developer guide.

2. Requirements

The latest browser versions supported by operating systems are supported:

- Windows: Mozilla Firefox, Google Chrome, Microsoft Edge (Chromium)
- MacOS: Mozilla Firefox, Google Chrome, Safari
- Linux: Mozilla Firefox, Google Chrome

The recommended minimum size of the widget with a map is 300x300 px.

3. Embed code generation

The code generation is divided into separate pages where the user can choose which settings to create the component with.

3.1 Main modes of operation

First the desired mode of operation has to be chosen:

Mode of operation	Description
Address search bar with a map	Both the address search box and the map, on which the found addresses are displayed, are shown. It is also possible to select the address on the map.
Address search bar with a map (by default the map is hidden)	Similar to the previous option, but by default the map is hidden. There is a separate button for displaying and hiding the map
Address search bar without a map	Only the address search box is displayed. In this mode only address-based search is enabled.
Only map for displaying the location	Only the map is displayed and addresses cannot be searched through the user interface. This mode is meant for displaying specific addresses pre-set during the creation of the In-ADS widget. It is possible for the user to make a selection from among the addresses displayed on the map.

Additionally, the ID value of a DIV element, into which the In-ADS widget will be placed, must be set.

There are also optional choices whether to display a scale bar, whether you want the component to select a language and a measuring tool on the map or not.

For the use of the In-ADS widget in full screen mode (e.g. in mobile version) the box “Show Full Screen” must be checked.

To customize the search bar, you can choose to navigate the results list with the arrows and the enter key, select the default state of the search bar, close the list of results after making a selection, and fill in the search box with the selected address. You can also choose to position the search bar relative to the map, either below or above the map.

3.2 Object types and priorities

A radio button allows to choose between the address-based and object-based searches.

The screenshot displays a search configuration interface with the following elements:

- Two radio buttons at the top:
 - General address search
 - Select object types (object-based search)
- A rounded rectangular box containing a list of object types, each with an unchecked checkbox:
 - Classification of Estonian administrative units and settlements (EHAK)
 - Territorial address unit
 - Cadastral unit
 - Traffic surface
 - Building
 - Buildings with UN attribute
- Below this box, another rounded rectangular box contains two more unchecked checkboxes:
 - Select apartment
 - Allow adding new apartments

Object types:

- General address search – all object types are searched for and found addresses are returned (if multiple objects are related to a single address, the one with the highest priority is displayed in conformity with priority rules)
- Select object types (object-based search) – object types to be searched for can be selected. The search result returns all found objects matching the searched address, the sequence of objects is based on priority rules.

If also building is selected, it will be possible to restrict the search in a way that only buildings with the uniqueness requirement of an address are searched for. Buildings requiring a unique address are e.g. residential buildings, schools, commercial buildings, accommodation buildings, hospitals, etc.; buildings not requiring a unique address are e.g. sheds and other outbuildings in which people are not expected to reside on a daily basis.

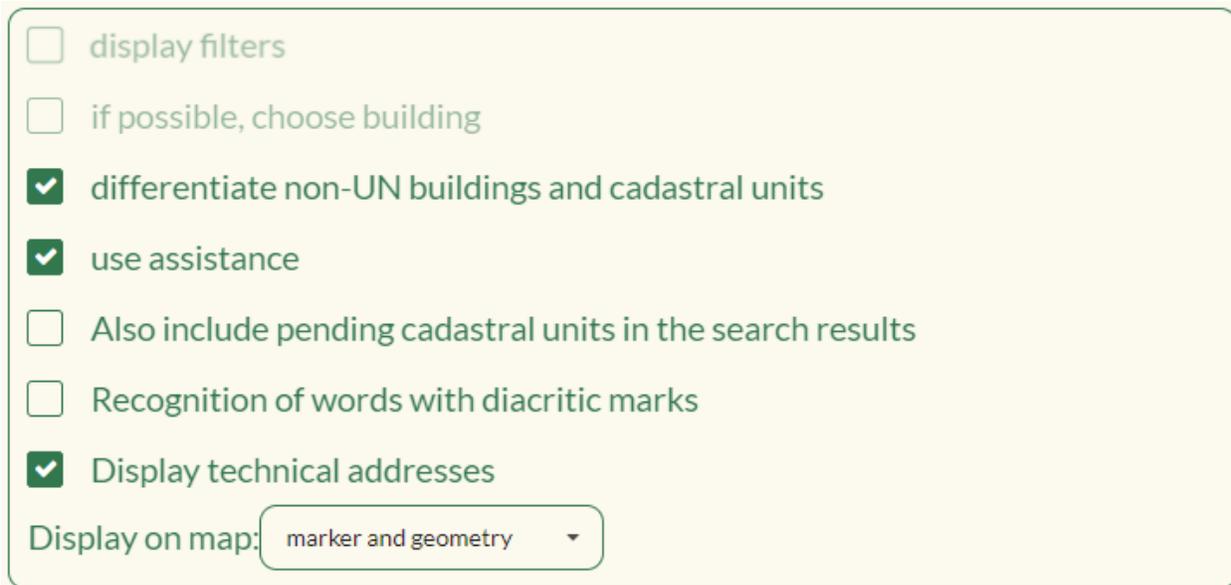
In the search for buildings also apartments can be included. Users can be allowed to enter also new apartments, but these are not saved anywhere being only of an informative value to the external system. **NB!** Any information about apartments missing in ADS (new apartments), or about data contradicting to the reality or otherwise problematic should be sent to ads.abi@maaamet.ee.

POI objects KNR objects

- Public administration
- Education
- Healthcare
- Free time
- Services
- Transport
- Environment

Only city districts, city blocks, small islands and rural municipalities

It is possible to determine whether and which POIs and KNRs are involved in the search. By checking the corresponding boxes, it is possible to filter the search results by POI and KNR type group. You can also narrow your search to locations, quarters, small islands, and sub-districts.



display filters

if possible, choose building

differentiate non-UN buildings and cadastral units

use assistance

Also include pending cadastral units in the search results

Recognition of words with diacritic marks

Display technical addresses

Display on map:

If object-based search is selected, it is possible to choose whether to display additional filters to the user. If the "Show filters" checkbox is selected, a button will appear next to the search box for the user to open a filter block where the user can specify which species to search (only the object types marked in the code generator are displayed). You can also limit the search with the EHAK filter or draw a circle on the map from which objects to search. Filters are applied even when the filter block is closed.

In addition, the user can select the following options by selecting the checkboxes: The "select a building if possible" option shows the buildings in the cadastral unit by clicking on the cadastral unit in the list of answers. If the user selects the cadastral unit in which the buildings are located, the user will be shown a selection with all the buildings located in that cadastral unit and will have to select one of them before the event option can be selected. If the option "Show non-UN buildings and cadastral units differently" is selected, non-UN buildings and cadastral units will be shown in a different shade of gray. With the "use assistants" option, the user can choose whether to use assistants to find search results (eg historical addresses, location names, POI names). If the use of assistants is turned off, only valid place addresses will be searched (all search terms must appear in the place address). Tn-street, etc. The most common substitutions of synonyms are made in this case as well. The option "show only cadastral units registered in the ADS but not yet in the cadastre" means that cadastral units registered in the ADS but not yet in the cadastre will be included in the answers. All new cadastral units are first registered in the

ADS and receive an ADS-OID. Until they are registered in the cadastre, they are without a cadastral identification number. With this option, you can also search for such cadastral units not yet registered in the cadastre in In-ADS. If you select the option "Replace accents (so-called punctuation)", for example, the Viru valjak matches in the search box entry are offered in Viru väljak. If the "Display technical addresses" option is selected, the technical addresses will also be included in the response. Technical addresses are the addresses of undeveloped cadastral units where a number or a technical generic word appears. Above all, these are undeveloped cadastral units serving roads, tracks and other similar technical objects.

Priority rules define which object has preference in address-based search or in what sequence objects are displayed in object-based search.

On the same page, you can choose whether or not to search from historical addresses as well. If you also want to search from historical addresses, you must specify the year from which the addresses will be searched.

3.3 Map layers

3.3.1 Selection of base layers

If the selected mode of operation includes also a map, it will be possible to choose the background maps to be added to the widget. If more than one layer is selected, it will also be possible to set the default base layer.

3.3.2 Selection of map layers

In addition to the background map, other map layers can be added to the map, e.g. addresses or cadastral parcels (these map layers are always displayed on the map and the user cannot turn them on/off).

3.3.3 Additional WMS layers

Besides the background map and the Land Board's maps, additional WMS layers of third parties can also be displayed on the map. To be able to do that, the URL of WMS service with the VERSION and LAYERS parameters must be inserted. For example:

http://kaart.maaamet.ee/wms/aadressid?version=1.1.1&layers=ads_hoone.ads_hoone_aadr

Multiple WMS layers can be added.

Additionally specified WMS layers will be displayed on top of the map in the order of adding and they cannot be managed further.

3.4 EHAK filter

EHAK filter allows to limit search results to county, local government or settlement level. In this case objects are searched for only from the selected EHAK area and the map is by default opened in the selected EHAK area.

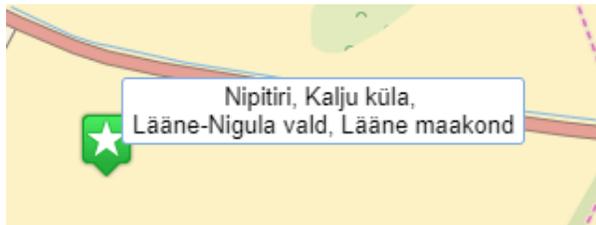
3.5 Marking the location on the map

Provided that "Only map for displaying the location" mode of operation has been chosen, it is possible to visualise the location on the map together with tooltips.

To add a location to the map, the desired address has to be entered into the search bar and a choice made from the list, or an appropriate location clicked on the map. After the choice has been made, a textbox with the found addresses will be displayed next to the map and a marker with a label will be shown on the map. The label text can be changed by entering an appropriate name into the box. Instead of label the text can be displayed also in tooltip or in both. If both is selected, then using symbol | in text the text before | is displayed in label and the text after | is displayed in tooltip. Several locations can be added to the map by repeating the above actions. Tooltips can be deleted by clicking the button "Delete" next to the text box or the button "Delete objects" at the end of the list. "Zoom to" button will zoom the map to the extent of selected objects.



Label in the picture – text displayed next to the marked location.



Tooltip in the picture – text is displayed, when hovering on the marked location.

The chosen location will also serve as the initial view of the generated in-ADS widget. To change the initial view, it is necessary to navigate on this page to a desired location.

3.6 Generated code for In-ADS widget

The code that was generated according to previous choices will be presented on the last page.

The code to be added to the header of HTML page (*JavaScript* of the In-ADS widget):

Header of HTML page:

```
<script type="text/javascript" src="https://datel.dev/inaaddress/js/inaaddress.min.js"></script>
```



And *JavaScript* part of the In-ADS widget. For example:

JavaScript part of In-ADS widget:

```
var inAaddress = new InAaddress({"container":"InAaddressDiv","mode":1,"ihist":"1993","help":true,"defaultBaseLayer":"ALUSKAART","baseLayers":["ALUSKAART"],"wms": [],"apartment":0,"lang":"en"});
```



The example of HTML-page that uses the generated code is also provided:

Example HTML page:

```

<!DOCTYPE HTML>
<html>
<head>
<title>In-ADS komponent</title>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1">
<script type="text/javascript" src="https://datel.dev/inaadress/js/inaadress.min.js"></script>
</head>
<body>
<div id="InAddressDiv" style="width: 600px; height: 450px"></div>
<script>
var inAddress = new InAddress({"container":"InAddressDiv","mode":1,"ihist":"1993","help":true,"defaultBaseLayer":"ALUSKAART","baseLayers":["ALUSKAART"],"WMS":
[],"apartment":0,"lang":"en"});
</script>
</body>
</html>

```

You can copy the code by clicking on the copy icon on the right side of the window.

The height and width of DIV element can be used for setting the width, and in case a map is included, also the height of the widget. The default width of the widget is 100% and the default height for the widget with a map is 450 px.

By default, the widget is in the same language as code generator page, but it can be changed by changing the value of *lang* parameter in the code. For Estonian language the value is “et”, for English “en” and for Russian “ru”.

When the widget is used with a card, if the component or card is hidden in it by default (*style = "display:none"*), the *updateSize* function must be called up to make it visible. The same function must be called if the in-ads container is resized programmatically.

In-ADS can be used also over HTTPS :
<https://inaadress.maaamet.ee/inaadress>).

Since the In-ADS component makes get requests to the gazetteer service, then if the page on which the component is located uses the Content-Security-Policy header, requests to the address inaadress.maaamet.ee must also be allowed.

If you want to use the In-ADS component with your own design, you just have to overwrite the component styles on your page.

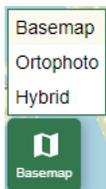
4. In-ADS widget

4.1 Map

Depending on the configuration, the widget consists either of a map with a search field, only a map, only a search field or a search field and a button with which it is possible to show/hide the map.

The map component consists of a map window. The layers displayed on the map cannot be managed by the user. The components to be displayed on the map are as following:

1. Selection list of base layers (a predefined choice of base maps). In addition to using the mouse, it is possible to move around in the list by using *Up* and *Down arrows* and confirming the choice with *Enter*.



2. Navigation buttons for zooming the map in and out. Zooming in/out can be done also by using the mouse wheel.



3. Information button -



By turning on the information button and clicking on an object on the map, the user can see a more detailed information about the object. Information will be displayed according to the preselected object types. When search by address was selected, a list of all objects found in this location will be returned. When certain object types were selected, the result displays objects only from these types. The window can be closed by using the *Esc* key.

By clicking on the map it is possible to choose the address (providing the mode of operation includes a map). For that it is necessary to navigate to the desired location and click on the searched object. If there is only one object in the selected location, the address of this object will be displayed in the address

search bar and an orange marker will be displayed on the place of click. If there are several objects of the same type in the selected location, the user will be asked to choose the object. After making the selection and confirming it, the address of the selected object will be displayed in the address search bar.

In the scales between 1:4000 and 1:40000 the returned selection of objects includes cadastral parcels, EHAK, territorial units and traffic spaces. In larger scales also buildings are included. If only certain types of objects are predefined, only these will be suggested to the user.

4.2 Address search



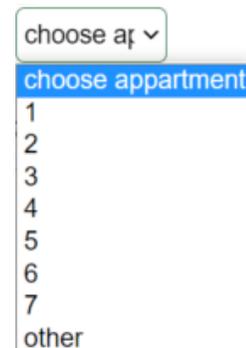
By entering an address into the search box, a selection of found addresses will be returned. You can also enter POI name (for example “Maa-amet”) or postal code and at least 2 characters (for example „10621 Mustamäe tee 51“). It is also possible to search addresses by including district or place name from other sources (for example „Koidu 26 Kassisaba“). If only addresses are searched, then the list of results contains always at maximum 10 addresses. If the searched address is not among the found addresses, the search must be specified further. In case the number of found addresses is 5 or less, the found addresses will directly be displayed on the map that will be zoomed to the proper extent (provided the mode of operation includes a map). In this case there is an orange marker in front of each address, which shows where the given address is located on the map. With the object-based search (the types of objects to be searched from were predefined) the search result displays also the object type (KÜ – cadastral parcel, HÜ – EHAK, LP –traffic surface, VK – territorial unit, H – building). If also POI or KNR objects are searched, then in each result section maximum of 5 objects are returned and if the total number of results in all sections is 5 or less, then the result will be displayed and placed on the map immediately.

In addition to mouse, also the keys *tab* and *shift+tab* can be used for moving up and down in the list of displayed addresses by confirming the choice with *Enter*.

When the user does not know the address or cannot find it for whatever reason, it is always possible to choose the address on the map (providing the mode of operation includes a map). For that it is necessary to navigate to the desired location and click on the searched object. If there is only one object in the selected location, the address of this object will be displayed in the address search bar and an orange marker will be displayed on the place of click. If there are several objects of the same type in the selected location, the user will be asked to choose the object. After making the selection and confirming it, the address of the selected object will be displayed in the address search bar. In the scales larger than 1:5000 only EHAK, territorial unit and traffic space objects are suggested. In scales smaller than 1:5000 cadastral parcels, buildings, streets and traffic spaces are displayed. If only certain types of objects are predefined, only these will be suggested to the user.

4.2.1 Apartment search

If settings enable also searching by apartments, there are two options how to do it. If the entered address includes the apartment number (separated by hyphen), e.g. Sõle 5-40, the returned results will show addresses together with apartment numbers. When only the address of a building is entered, then, after making a choice from the address list, a separate list with apartment numbers will appear from which the user can choose the desired apartment. Also the *Up* and *Down* keys can be used for moving around in the list and the choice can be confirmed with the *Enter* key.



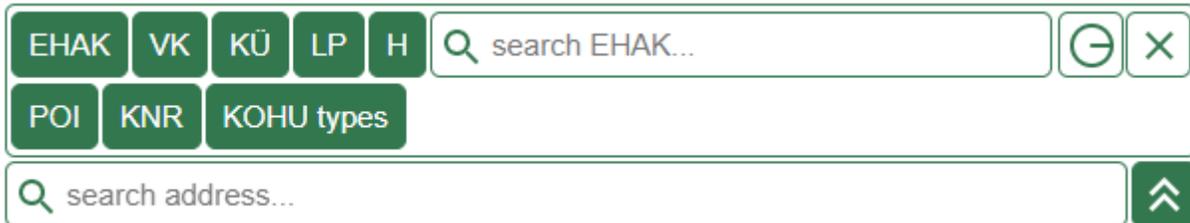
In case the settings of the In-ADS widget enable also adding of new apartments, the list includes an option “other”. By choosing it, a new dialogue box will be opened into which the user can enter the apartment number. Non-residential apartments have their own designation (MR). The number of an apartment, which does not exist in ADS, can also be entered into the search bar together with the address.

4.2.2 Historic addresses

When the user searches by historic addresses (e.g. Lomonosovi 21), the search results will still display the valid addresses, but the historic part of the address

is shown in brackets in capital letters (e.g. (M. LOMONOSSOVI TÄNAV 21) Gonsiori tn 21, Kesklinna linnaosa, Tallinn, Harju maakond).

4.2.3 Filters



In the case of an object-based search, it is possible to display additional filters in the In-ADS component. There you can specify which object types to search for (only those types that are allowed in the component settings are displayed). It is also possible to limit the search result with the EHAK filter by entering a name in the EHAK search box and selecting the corresponding EHAK object from the list. In addition, it is possible to draw a circle on the map, in which case objects are searched only from the drawn area. The drawn area and the EHAK filter can be canceled by pressing the clear button next to the filters. You can also delete a circle drawn on the map by pressing the redraw button. Filters are applied even when the filter block is closed.