ADS X-Road services

Version 2026

Customer: Land Board

Author: AS Datel

Euroopa Liit
Euroopa
Regionaalarengu Fond

Eesti
tuleviku heaks

Versions

Version	*Date*	*Author*	*Explanation*
V 2022	01.09.2022	AS Datel, Land Board	Created by RAAS-3 project
	30.12.2022	Land Board	Descriptions of closed services were removed
V 2023	06.02.2023	Land Board	Specifying rules for X-road queries
	20.06.2023	Land Board	Changes in ADSobjmuudatusedManus service
	03.10.2023	Land Board	ADS prelive update
	11.10.2023	Land Board	Clarification of terms
V 2024	11.04.2024	AS Datel	Description of new services added, closed services removed
V 2025	25.09.2025	Land and Spatial Development Board	Descriptions of closed services were removed. FTP changed to SFTP.
	14.11.2025	AS Datel	Document restructured and corrected to describe REST service versions
V 2026	28.01.2026	AS Datel	Added eTunnus and ehakTyyp to the descriptions.
	08.06.2026	AS Datel	Added v2 REST service version differences.
	10.06.2026	AS Datel	Removed not used ruumiAndmeteFormaat and added 2.1.12

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1 Introduction

This document is intended for reading by business and IT analysts engaged in the design of information systems. The description of X-Road services is an appendix to the ADS interfacing manual. More detailed information about the address data system and interfacing with ADS is available in the manual for interfacing with ADS. Related information can be found on the address data page on the Land and Spatial Development Board's Geoportal.

The latest versions of X-Road services must be used for interfacing. Previous versions of the services are planned to be closed in the future.

ADS's X-Road inquiry services are open to all consumers by default, i.e. there is no need to separately request the opening of the services from the Land and Spatial Development Board. Services that provide data to ADS are open, as an exception, only to key interfaces that provide data to ADS (e.g. Register of construction works).

To test the services, we recommend using X-Road development environment services. X-Road development environment services return data from ADS live database. Please note that, as a rule, the DEV environment is used for development work and is not intended to be used instead of LIVE or for mass requests. Services providing data to ADS cannot be tested in the X-Road development environment. For testing, you can also use the services of the X-Road test environment, which return data from the ADS prelive database. The prelive data was last synchronized with the live database on 31th of January 2025; there are generally no ongoing data updates in the prelive database, but some odd or larger changes may occur during development work or testing. In the X-Road test environment, i.e. against ADS prelive, you can also test services that provide data to ADS.

All spatial coordinates are returned in the L-Est coordinate system.

2 ADS X-Road services

Reviews of ADS X-Road services can be found in the X-Road services catalog by the subsystem 70003098/ads and 70003098/aks-ads.

Each member of the X-Road can download the service provider's 70003098/aks-ads WSDL through its security server subsystem using a SOAP getWsdl POST request. A query description and examples are available in the X-Road metadata protocol specification.

Previous ADS x-road services have been rewritten from SOAP services to REST API services.

When completing all services, the first 100 responses are issued, to receive the following responses, the request must be repeated by supplementing the input, e.g. with the last received log number, i.e. the log number acts as a bookmark. Different services may have a different information field in the role of a bookmark.

To update the data, it is recommended to contact the X-Road services in the early hours of the day, but not immediately after the date change, so as not to end up inheriting the data before the ADS system synchronization processes are completed. Since there are many data processing processes and they are dependent on each other in time sequence, it is difficult to recommend a specific time of day. Generally, however, by three o'clock in the morning, the processes could be finished, and the service servers are using the most recent dataset.

It is not allowed to make mass requests via X-Road. If there is a need to request mass data, please notify ads.abi@maaamet.ee so that we can offer an alternative solution if possible or agree on the terms and conditions for X-tee requests.To boot larger amounts of data, ADS extracts have been created and are available at:

a) from the ADS public application https://xgis.maaamet.ee/adsavalik/extracts,
see also additional information at the HELP link by clicking the ENG link beforehand;

b) From the SFTP server of the Maa-ja Ruumiamet sftp://public@aksfailid.maaruum.ee/public/ADS_valjavotted/ADS_valjavotted/, see „readme.pdf“ file; To access sftp.maaruum.ee you can use, for example, Filezilla or WinSCP.

c) Estonian open data portal https://avaandmed.eesti.ee/datasets/eesti-aadressiandmete-susteemi-infosusteem

Statements in the public application of ADS and on the SFTP server of the Land Administration have a different structure and at a different point in time (in the public application, they are updated with an interval of 30 days, statements are produced for the SFTP on the 1st of every month).

The vast majority of services operate on the data of the presentation environment located on the *Postgres* database. Presentation environment data is updated daily at night, so changes made on the current date will not be immediately visible through the services. The current or valid data state mentioned in this specification is considered to be the state of the last update of the presentation environment.

Some services, including all data modification services, connect to the *Oracles* database of the ADS production system. Unless the service description specifically refers to an *Oracle* base, the service reads data from the presentation environment.

Red text has required attributes. If there is an earlier version of the service, the places have changed on a pink background compared to the previous version.

2.1 Latest versions of X-Road services based on REST API service

This chapter describes the latest versions of all X-Road services that have been migrated to the REST API.

2.1.1 Querying the Current Status of Address Components (adskomponendid)

Path: **/ADSkomponendid/v2**

The service allows other systems to query the classification of valid address component classifiers.

The service is required for those address processors whose database requires a valid classification of address components to meet certain functional requirements.

The service is primarily intended for partial loading of the current status of the classifier into external systems. For a full download, it is recommended that you use the ADS public application, where a statement of the current state of the components is available. See: http://xgis.maaamet.ee/adsavalik/extracts

It is recommended to upload the changes after the production of the statement to the interface system with the component change service.

The service is also suitable for use if the external system does not store the classifier in its own environment but wants to get all the subordinate addresses of the specified parent component to be presented in normalized form.

Input

name	*data type*	*description*
ylemtase	number (min 1 max 8)	The level of the address component to which the related and more specific components are inherited.
ylemkood	string (4)	The code of the address component to which the related and more specific components are inherited.
mintase	integer (min 1 max 8)	The minimum level of components to be output as a result of the query, in a more precise order than the general one.

name	*data type*	*description*
maxtase	integer (min 1 max 8)	The maximum level of components to be output as a result of the query, arranged in a more precise direction than the general one.
Return Management		
alateskirjest	integer	The number of responses returned from multiple components found in the query. By default: 1.
maxarv	integer	Maximum number of items to return. Default system limit.
initObjektid	boolean	True - Return the ADS_OIDs that initialize the component. False - does not return a list. Default: false.
kompSynonyymid	boolean	True - returns component synonyms. False - does not return synonyms. Default: false.
kompEellased	boolean	True - returns component ancestors. False - does not return component sequence information. Default: false.

No input parameters are required. If there is no input, the whole classification should theoretically be output per 100 items (extracts are recommended if necessary).

Output

The components that meet the conditions specified in the input are returned in the order of level and code.

name	*data type*	*description*
tase	number	Address component level.
kood	string	Address component code.
nimetus	string	The name of the address component without the type word.
nimiliigiga	string	The name of the address component with a generic word.
ylemtase	number	The level of the parent component of the address component.
ylemkood	string	The code of the parent component of the address component.
tehniline	boolean	True if it is a technical component. Technical level 6 components are those for which the cadastral parcels are not required to have a place name. Not directly related to the technical identifier at the address. False = NULL
ads_oid	string	ADS_OID values for initiating objects. List elements separated by semicolons.
synonoyymid	string	Synonyms for a component that do not match the official name forms of the component. The list is separated by semicolons.
eellased	string	List of cancelled components of the same level that are potential ancestors of the component. The list is separated by semicolons.

2.1.2 Querying address component classification changes (adskompklassif)

Path: **/ADSkompklassif/v2**

With this service, those address handlers who prefer to keep the entire classification backed up in their environment can update the changed components.

The service provides information on changes to the address classification.

Events returned by the service:
I – Addition
U – change
D – Cancellation
R – Recovery
S - loss of connections

The log is returned in Log_id order and can be queried from the last log_id received. The list of ancestors and descendants is returned as of the moment of the query is performed.

Input

name	*data type*	*description*
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
objektiLiik	string (2)	Address object type code from the classifier. The type of address object that caused the change. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
minTase	integer (min 1 max 8)	The minimum level (from the more general to the more precise) at which changes will come in response.
maxTase	integer (min 1 max 8)	The maximum level (from a more general to a more specific direction) at which changes will be answered.
logId	integer	Records larger than the LogId value. Default: 0.
maxarv	integer	Maximum number of items to return. Default: The limit set by the system.
sSyndmused	boolean	True - also returns an S event. False - S events are ignored. Default: false.
Return Management		
initObjektid	boolean	True - Returns a list of ADS_OIDs initiating the component. False - does not return a list. Default: false.
kompSynonyymid	boolean	True - returns component synonyms. False - does not return synonyms. Default: false.

name	*data type*	*description*
kompJarglased	boolean	True - Returns the ancestors / descendants of components. False - does not return component sequence information. Default: false.

None of the input parameters are mandatory.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - component added, U (update) - component versioned, D (delete) - last version of the component was invalidated, R (restore) - component restored, S (lost connections) - no current object uses the address anymore, containing this component.
tase	number	Address component level.
kood	string	Address component code.
nimetus	string	The name of the address component without the generic/type word.
nimetusLiigiga	string	The name of the address component with a generic/type word.
ylemTase	number	The level of the parent component of the address component.
ylemKood	string	The code of the parent component of the address component.
vanaNimetus	string	The old name of the address component without a generic word when the component is modified.
vanaNimetusLiigiga	string	The old name of the address component with a generic/type word when the component is modified.
MuutjaAdsOID	string	The ADS_OID of the object that caused the change.
oiguslikAlus	string	Legal basis of the object that caused the change.
aluseKuup	date	Date of the legal basis of the object that caused the change.
tehniline	boolean	True if it is a technical component. Technical level 6 components are those for which the cadastral parcels are not required to have a place name. Not directly related to the technical identifier at the address. FALSE =NULL
poleSeotud	boolean	True if the component is invalid and not in use by any valid address.
adsOID	string	ADS_OID values for initiating objects. List elements separated by semicolons.
synonyymid	string	Synonyms for a component that do not match the official name forms of the component. The list is separated by semicolons.
eellased	string	List of cancelled components of the same level that are potential ancestors of the component. The list is separated by semicolons. Ancestors are returned as of the moment of the request, not as of the moment the log entry was created.

name	*data type*	*description*
jarglased	string	List of components of the same level that are possible descendants of the component. The list is separated by semicolons. Descendants are only possible for cancelled components. Descendants are returned as of the time of the request, not as of the time the log entry was created.

2.1.3 Querying Address Objects (adsobjotsing)

Path: **/ADSobjotsing/v1**

The service allows you to search the system for suitable address objects. The returned data can be controlled with separate input parameters.

If no conditions are met in the input and only the return control parameters are valued with the default values, the service returns the first 100 arbitrary address objects.

The service returns the current status of the found object(s), i.e. valid and pending address objects. By default, valid and pending address objects are returned, unless objects in other states have been separately ordered.

The service allows searching for object versions in all states. If the objects in the return are in a valid or pending state, then it is possible to return the data of the objects related to them. Each object can have more than 1 related objects. In the case of a building object, building parts can only be returned if the found object is in a valid or pending state. This is because outdated or cancelled object versions do not have information about related objects in ADS. Also, the building and building parts connections are not version-based. The same condition is related to the return of interfaced objects - they can also be returned only if the found object is in a valid or pending state.

Version differences

v2

In this version, *eTunnus* was added to the output data of object info and related objects.

Also *ehakTyyp* was added to input and output.

Input

name	*data type*	*description*
Object search terms		
origRegister	string (10)	Registry identifier of the origin of the object type. Can be used to select multiple address object types: • MIS – Land Information System (address object types MK, OV, AY, LO, CU) • KNR – Place name register (types of address object VK, LP) • EHR – Building register (address object types EE, ME, ER, MR)

name	*data type*	*description*
objektiLiik	string (2)	Address object type code from the classifier. The type of address object that caused the change. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string (10)	Object ID in the ADS system.
adobId	integer	Object version identifier in the ADS system. Based on the ADOB_ID in the input, only the version of the object with that adob_id value is searched. NB! For this input parameter, other search conditions in the input have no effect. Return control parameters except objektiOlekud have effect.
origId	string (20)	Identifier of the object in the register of origin.
adrId	integer	The version id of the address to search for, if known to the caller. The service only returns valid objects associated with the address. Other conditions apply if they are valued in the input, except for related AdsOid.
xKoord	double (min 6300000 max 6700000)	The x-coordinate of the point in the L-Est system that is a query condition.
yKoord	double (min 300000 max 800000	The y-coordinate of the point in the L-Est system that is a query condition.
ulatus	double	The square of the side of the area in meters in meters. Default: 0. The value is only taken into account if coordinates are available.
lahiAadress	string (1000)	Part of the nearby address in textual form. In certain cases, it may be necessary to specify a nearby address if the word contained in the nearby address matches the name of the EHAK object.
aadressTekst	string (1000)	Address or part thereof in textual form. Separate address parts with a comma, it is also recommended to use the features specifying the place name (city, district, street, street, rural municipality, county, county, town, etc.) e.g.: „Harju maakond, Tallinna linn, Kristiine linnaosa, Vindi tn“ or „Tartu maakond, Vana-Kuuste küla“
otsinguMeetod	integer min 1 max 2	Search method: Possible values: 1, 2 1: AND - Search for addresses that contain all the words in the entered text. 2: OR - Search for addresses that contain at least one of the words in the address text entered. Default: AND.
huviPunktiNimi	string	Search by the name of the POI associated with the feature. The attribute of the search precision is applied to the attribute, but the search method is not applied. The search is performed independently of the uppercase and lowercase letters.
otsinguTapsus	integer min 1 max 2	Search accuracy: Possible values: 1, 2. 1: EXACT - searches for addresses that contain words in the address text. 2: FROM START - Searches for addresses that contain words beginning with the address text. Default: EXACT. The CENTER and END values of the method are out of use because they did not work as expected.

name	***data type***	***description***
syno	boolean	Also search for synonyms. True - also searches for synonyms. False - searches only official texts. Default: false. Synonyms are searched only for otsinguTapsus =1 - EXACT, because if the value is FROM START, the addressText does not contain the full words to search for synonyms.
seotudAdsOid	string (10)	Based on the input ADS_OID, the complete family is issued in the response. The family consists only of current or valid (states O and K) objects. • If there is a cadastral parcel (CU) in the input, the answer is the cadastral parcel itself, as well as all the buildings directly related to it, as well as all the building parts of these buildings. • If there is a building in the input (EE or ME), the answer is the cadastral parcels directly related to the building (there may be several) and all the buildings on these parcels (including the building itself) and all parts of those buildings. • f there is a building part (ER or MR) in the input, the building to which the building part belongs is first identified. The response will issue cadastral parcels directly related to the building (there may be several) and all the buildings on these parcels and all parts of the buildings in those buildings (including the part of the building itself). NB! For this input parameter, the presence of other search conditions has no effect, except for the parameter objektiOlekud, which alone can narrow the return quantity. Return control parameters are effective.
ehakTyyp	string(1)	Based on this, EHAK address objects can be retrieved in the response. For other objects, this attribute has no effect. If it conflicts with the objectType data specified in the input, then no result will be obtained. Only one value can be selected. EHAK type classifier: • 0 - county • 1 – rural municipality • 3 - town • 4 - city as an administrative unit • 5 - city as a settlement unit • 6 - city district • 7 - small town • 8 – village **As of version v2.**
Return Management		
hulk	boolean	Only return the number of address objects. Default: false. True - The number of found objects is returned and the settings of the remaining return parameters are ignored False - found objects are returned and the following return parameters are taken into account.
andmeVektor	string (3)	Default: 000 A data vector is a string of three characters. In a separate position, the symbols indicate which data the service returns. The first position indicates the alphanumeric data of the object, the second the spatial data and the third the address data. Pos 1 = 0 - does not return alphanumeric data; Pos 1 = 1 - alphanumeric data; Pos 2 = 0 - no spatial data is returned; Pos 2 = 1 - spatial data; Pos 3 = 0 - address data is not returned separately; Pos 3 = 1 - returns addresses as separate entries.

name	*data type*	*description*
aadressKomp	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
EHRlisaandmed	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
objJarglased	boolean	True - Returns the ancestors / descendants of the object. False - does not return object sequence information. Default: false.
seotudObjektid	boolean	The parameter is only relevant for buildings and cadastral parcels (CU), as there are no connections to other objects. Only current objects (states O and K) that are directly related (priorities 1 and 2) are considered. • In the case of CU, buildings related to CU will be issued. • In the case of a building, the CUs related to the building and all other buildings on these CUs except the building itself are issued. True - Returns directly related objects. False - does not return related items. Default: false.
seotudHooneosad	boolean	True - a block of related building parts is added to the return. False - does not return related parts of the building. Default: false.
huviPunktid	boolean	True - Returns the names of points of interest (POIs) associated with the feature. False - does not return POI names associated with the feature. Default: false.
liidestujaObjektid	boolean	True - returns the objects of the Land Register (KR - Kinnistusraamat) and the Business Register (AR - Äriregister) related to the object. False - does not return objects from interfaced registers associated with the object. Default: false.
alatesOid	string (10)	ADS_OID from which the result is returned. Required to fix the beginning of the set and retrieved from the previous query if it did not return everything. By default, empty is returned from the first object found.
maxarv	integer	Max number of records to return. Default system limit.
objektiOlekud	string	Returns objects with desired states. Possible values: O – pending; K – valid; T – cancelled By default, objects in the K and O states are returned.

Output

name	*data type*	*description*
Result		
objektideArv	integer	Number of objects that match the query conditions (returned only if you wanted to include objects).
jargmineOid	string	The ADS_OID of the next object to be queried from. Returned if the request was returned as large as possible at a time and the user did not limit the number of entries.
Object (repeats according to the number of objects found, if objects were requested separately, will always be returned)		
adsOid	string	Object identifier in the ADS system (ADS_OID).

name	*data type*	*description*
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
aadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
objektiUrl	string	Link to view the data on the map.
aadrProbleeme	integer	Total number of current, non-current issues and comments related to the object. Issues marked as deleted will not be considered. Problems are considered based on ads_oid.
eellased	string	List of ADS_OID values for objects that are possible ancestors of the object. List with separated semicolons. Sorted by expiration date in descending order.
jarglased	string	List of ADS_OID values for objects that are possible descendants of the object. List with separated semicolons. Descendants are only possible for cancelled objects. Sorted by the time of validation of the first version in ascending order. Only valid and pending objects are returned.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**.
hooneOID	string	In the case of a building unit, the ADS system code of the building to which the building unit belongs.
olek	string	The state of the object: O – pending; K – valid; T – cancelled; V – historical (outdated version).
ehakTyyp	string(1)	Based on this, EHAK address objects can be retrieved in the response. For other objects, this attribute has no effect. If it conflicts with the objectType data specified in the input, then no result will be obtained. Only one value can be selected. EHAK type classifier: • 0 - county • 1 - rural municipality • 3 - town • 4 - city as an administrative unit • 5 - city as a settlement unit • 6 - city district • 7 - small town • 8 - village**As of version v2.** •
Alphanumeric data of the object (returned if the data vector 1.pos = 1)		
kehtiv	dateTime	Date and time the version data entered into force in the ADS.
kehtetu	dateTime	Date and time the version data expired in the ADS.
hooneKujuPindala	double	Area m2 calculated on the basis of the 2D shape of the building to one decimal place.

name	*data type*	*description*
hooneKorgusR	double	Building eaves height m based on ETAK data. **hooneKorgusR** is the height of the building eaves in meters with such accuracy as it is in the data of the Estonian Topography Data Collection (ETAK). In ETAK, the spatial shape of the building is digitized in a 3D environment with the height of the eaves. The value of the hooneKorgusR attribute is found as the averaged difference between the height values of the spatial shape of the building (the relative height is calculated for each corner point of the building) and the ground height model compiled on the basis of aerial laser scanning (ALS) data, which is rounded to whole meters. Quality is not checked; negative values are not shown. Negative values are not eliminated directly. Corner points with a relative height of -1<z<1 (i.e. close to the ground) are excluded from the averaging on residential and ancillary buildings.
hooneKorgusM	double	Maximum (ridge) height of the building m based on ETAK data. **hooneKorgusM** is the maximum (ridge) height of the building in meters with the accuracy as in the ETAK data. Automatically found in aerial laser scanning (ALS) data in areas with 15 or more elevation points per square meter. Attempts are made to exclude chimneys and antennas. The data is updated with each proper ALS result. As a rule, it takes place once a year in larger cities and their surroundings, and according to the receipt of ALS data, every few years also in smaller cities. The stereo mapper can check the data and correct it if necessary.
Spatial data of the object (returned if data vector 2.pos = 1)		
ruumikuju	the format specified in the input	The GeoJSON spatial shape is returned.
kujuModustusviis	char(1)	D - digitized; K - mapped; M - measured
objektiPunktX	double	X-coordinate of the reference point of the object in the L-Est system (northing).
objektiPunktY	double	Y-coordinate of the reference point of the object in the L-Est system (easting).
etakid	integer	ETAK_ID associated with the object.
Address. There are several elements for parallel addresses. (Returned only if the data condition of the data vector 3rd pos = 1)		
adrId	integer	Address Version ID.
koodAadress	string	Code address.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
sihtnumber	string	Zip code assigned to the address.
maPiirkond	string	Name of the informal region to which the address belongs.
maPiirkondAlias	string	Synonyms of the name of the informal region, i.e. alternative names.
aadressiPunkt X	Double (min 6300000 max 6700000)	The x-coordinate of the address representation point (The address point of the object, i.e. the connection point between the object and the address).
aadressiPunkt Y	Double (min 300000 max 800000)	Y-coordinate of the address representation point (The address point of the object, i.e. the connection point between the object and the address).
tehniline	boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.

name		*data type*	*description*
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
Additional EHR data (object uniquely associated with the object). The data is only available for buildings or parts of buildings from the EHR register. In the case of a complex building, the data is returned according to the basic code of the EHR building.			
nimetus		string	Name assigned to a building or part of a building in the EHR system.
pind		double	Area under the building in the case of a building, total area of the dwelling or non-residential space in the case of a part of the building.
kasutusotstarbed		string	List of uses for the building.
korrus		integer	Entrance floor for part of the building.
staatus		string	Object status in the EHR register.
andmedSeisuga		date	The date the EHR data in the ADS was updated.
Related objects (object related element). Contains the number of related objects.			
adsOid		string	The identifier of the associated object in the ADS system (ADS_OID).
adobId		integer	The version ID of the associated object in the ADS system.
objektiLiik		string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building

name	*data type*	*description*
origTunnus	string	The identifier of the related object in the original register.
aadress	string	The full text address of the associated object, including all parallel addresses in long optimized form.
unikaalne	boolean	The associated object has a unique address requirement (UN attribute).
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**.
olek	string	The state of the related object: O – ootel/pending; K – kehtiv/valid.
Building parts (element related to an object). In the case of CU (cadastral parcel - katastriüksus), the building parts of all the buildings located on the given CU. In the case of a building, parts of the building are located in the given building and in all other buildings located on the same CU. In the case of a part of a building, other parts of the building are located in the same building and all other parts of the building are located on the same CU.		
adsOid	string	Building part ADS system code.
adobId	integer	Version number of the building part in the ADS system.
objektiLiik	string (2)	Address object type code for building part from the classifier. • • ER - dwelling • • MR - non-residential space
origTunnus	string	Identification of the part of the building in the original register.
aadress	string	The full textual address of the part of the building that contains all the parallel addresses in a long-optimized form.
hooneOID	string	The ADS code of the building to which the building unit belongs.
olek	string	state of the building part O – ootel/pending; K – kehtiv/valid.
Points of interest (object-related element). Includes a list of related POIs. Duplicate names will be returned once.		
huviPunktiNimi	string	The name of the point of interest (POI) associated with the object.
Objects of interfaced registers (object related element). Contains references to objects in the Land Register (Kinnistusraamat) and the Business Register (Äriregister).		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.

2.1.4 Querying Addresses (adsaadrotsing)

Path: **/ADSaadrotsing/v1**

It is a search service that combines search capabilities based on both components and text.

The input to the service is words in the address that are placed at specific levels, if known, or not. In the latter case, words are searched throughout the address text.

The service is intended for searching the ADS system for addresses that meet the conditions in the input. You can also search for invalid addresses.

The returned data can be controlled with separate input parameters.

If no conditions are met in the input and only the return control parameters are valued with the default values, the service returns the first 100 arbitrary address objects.

Version differences

v2

In this version, *eTunnus* was added to the output data of object.

Input

name		***data type***	***description***
Object search terms			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
lahiAadress		string (1000)	The part of the nearby address (levels 4 - 8) in text form.
aadressTekst		string (1000)	Place address in text form. Suitable if the entire search input is only transmitted in one long text.
Sihtnumber		integer	The zip code of the address you are looking for.
maPiirkond		string	Name of the informal region to which the address belongs.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the point.

name	*data type*	*description*
punktY	double (min 300000 max 800000	The y-coordinate of the point.
ulatus	double	The radius of the area to be queried in meters based on the location of the point. Default: 0. The value is only taken into account if coordinates are available.
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building All types by default.
koodAadress	string	Code address or start. If the code address is not provided completely, a similar search is always performed, no need to add wildcards.
adrId	integer	The version id of the address to search for, if known to the caller. If the version is not valid, it is returned only if the parameter Valid is also true.
Return Management		
objekt	boolean	True - The data of the related address object is also returned. If the address is associated with multiple objects, the response contains an object data block multiple times. False - Data related to the object is not included in the response. Default: False.
aadressKomp	boolean	True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
alatesKoodist	string	Code address from which the result is returned. Required to fix the beginning of the set and retrieved from the previous query if it did not return everything. Blank by default, will be returned from the first entry found.
maxarv	integer	Max number of records to return. Default system limit.
kaKehtetud	boolean	Will the query also return cancelled and outdated address versions? Default: false.
kasNormaliseerida	boolean	True - the system tries to separate the words determining the EHAK levels from the aadressTekst input and searches the nearby address based on the rest. This option is suitable if the consumer does not know the exact EHAK levels and all input is presented only in a single text. False - aadressTekst in the text input are searched for in the full address. Default: false.
aadrJarglased	boolean	True - Returns the ancestors / descendants of addresses. False - does not return address sequence information. Default: false.
liidestujaObjektid	boolean	Only effective if items related to the address have also been ordered for return. True - returns the data of the Land Register (KR-Kinnistusraamat) and the Business Register (AR - Äriregister) related to the object. False - does not return data from interfaced registries associated with the object. Default: false.

name	*data type*	*description*
objektiOlekud	string	Effective only if objects related to the address have also been ordered for return. Returns objects with desired states. Possible values: O –pending; K – valid; T – cancelled; V – historical (outdated version). By default, objects in the K and O states are returned.

If the input is presented as components, the addresses where the entered words appear in the names of the components of the respective levels are searched. Case insensitive.

For example, if the name of level 2 is „Tartu“, the system will search for addresses where the name of „Tartu vald“ or „Tartu linn“ is level 2.

For example, if the name of level 5 is „jaama“, you will search for addresses where level 5 is named „Jaama tee“ or „Jaama tänav“ or „Jaama tn“ or „Jaama põik“, but you will not search for addresses where The name of the level is, for example, „Jaamaküla tee“. The word you enter must always appear exactly in the name.

For level 4 and level 5 components, synonyms are always searched for. This increases the likelihood that the correct address will be found for the commitment names as well. For example, you can search for a street with either „L. Koidula” or „Lydia Koidula”, the component is still found with the name form it is currently official in the ADS system.

If there is a level 7 or level 8 name, an exact search will be performed. For example, if you enter the name „2“ in level 7, addresses with the number 2 in level 7 will be searched for. Numbers „22“, „2a“ and „2/1“ are not found.

According to the same rules, a search is performed even if the search words are entered not as levels, but as a single string. In this case, too, addresses are searched that contain the words in exactly this form and translation. The order of the words does not matter. Synonyms are not included in this case, so only those addresses are found where all the words entered appear in the official address text.

Wildcards. If you still want to use not the exact words but the beginning of the words in the name of the component or in the search words in the address text, it is possible to mark the missing part of the word with an *. For example, if you search for „jaama*“, then in addition to the „Jaama tee“ component, you will also find „Jaamaküla tee“. You can also search for „**aia**“. In this case, the words „õuna*aia*“ and „*aia*maa „ are found, but the word „ s*aia*lille“ is also found, which may not have been the purpose of the search. When using wildcards, the word must be at least 3 letters long, otherwise the query will be considered too general, and an error will occur.

In addition, wildcards * and - can be used to specify a level.

* indicates that the corresponding level must be specified in the address; indicates that the corresponding level must be missing from the address. Wildcards must appear in the component name field; wildcards are not considered in the component code.

Output

name	*data type*	*description*
Result		
jargmineKood	string	The next code address from which to request the next set. Returned if the request was returned as large as possible at a time and the user did not limit the number of entries.
Address		

name		*data type*	*description*
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		string	Zip code assigned to the address.
maPiirkond		string	Name of the informal region to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the informal region, i.e. alternative names.
esinduspunktX		double (min 6300000 max 6700000)	The x-coordinate of the address representation point.
esinduspunktY		double (min 300000 max 800000	The y-coordinate of the address representation point.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
objArv		integer	Number of objects associated with the address.
olek		string	K – valid. V – old e.g. outdated version. T – cancelled.
eellased		string	A list of ADR_ID values of cancelled addresses that are possible ancestors of the address, or the ADR_ID of an outdated version of the address. Ancestors are given only for valid addresses. List separated by semicolons.

name	*data type*	*description*
jarglased	string	List of ADR_ID values for addresses that are possible descendants of the address. List with separated semicolons. Descendants are only possible if the address is cancelled (olek = T) or outdated (olek = V). The old e.g. outdated address (olek = V) always has exactly 1 descendant, but if it is already cancelled, it will not be returned (valid descendants of the cancelled address is returned if exists).
An object (if the object data was also ordered), if there are several objects, it occurs several times		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
objektiUrl	string	Link to view the data on the map.
ruumiKuju	the format specified in the input	The spatial GeoJSON shape is returned.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
olek	string	Object state: O – pending; K – valid; T – cancelled; V – historical (outdated version).
etakId	integer	Building identifier in the ETAK system.
aadress	string	Optimized full address text including all parallel addresses.
lahiAadress	string	Nearby address of the object including all parallel addresses.
Objects of interfaced registers (object related element). Contains references to interface objects in the Land Register and the Business Register.		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.

Returns eligible addresses in code address order.

The service does not perform spatial analysis, and if the input had the coordinates and range of a given point, the address point is searched based on a range of numerical values of the coordinates.

If the address is associated with multiple objects, it will appear in the response once with the association of multiple objects. Only objects in ordered states are included in the response. If the address is not associated with any object in the subscribed state, it is returned without an object association.

2.1.5 Querying object changes (adsobjmuudatused)

Path: **/ADSobjmuudatused/v1**

Through the service, the external information system can find out what changes have been made in the data of the address objects.

All additional data ordered - additional EHR data, predecessors / descendants, problems, related objects, related building parts, points of interest, interface objects - returns the service as of the moment of the request, not as of the moment the log entry was created.

The events to be logged are based directly on changes to the object's data:

- **Add** (I) - an object with the corresponding ADS_OID was added to the system.
- **Change** (U) - the data of the object with the corresponding ADS_OID changed. A new version (with a new value of adob_id) was created for the object.
  NB! If the adobId and oldAdobId values in the log entry are equal, the object version is corrected. No new version of the object has been created, but the referenced version has changed shape or legal basis. Minor topological changes and text changes to the legal basis do not result in a new version of the address object, but are overwritten in the existing version. The object address and UN ATTRIBUTE cannot be changed during the upgrade. The version correction log is also generated when the following additional attributes change: etakId, hooneosaKorrus, kujuMoodustusviis. A change to the rest of the additional features does not cause a version correction log.
- **Cancel** (D) - The last version of the item was cancelled. The object with the corresponding ADS_OID has been cancelled.
- **Restore** (R) - The cancelled item will be restored. A new version of the object will also be created.
- **Change of related objects** (H) - event of change of buildings. Cadastral parcel and the buildings located on them are considered to be interconnected objects. This event is issued when the first related object occurs in the object or the last one disappears. In case of event H, it is possible to determine whether the object has related objects or not on the basis of the information in the output „Related objects“. If this section „Related objects“ is empty, then the object no longer has related objects and vice versa. Exceptionally, there may be a situation in the ADS where the association information changes several times during the day, so multiple H-events may be logged. However, the output breakdown „Related objects“ is filled in at the time of the query. Thus, both events point to the same state of construction.
- **Associated Interface Object Change** (L) - The interface object associated with the address object has either been added, removed, or the interface object data has changed.
- **Change in additional EHR data** (E) - Additional data from the EHR register of a building or part of a building was created or changed.
- **Change of E-identity or habitability characteristic** (F) - the E-identity of a building or building part has changed in the current version. If the characteristic changed with the creation of a new version, then in addition to the I, U or R event, no additional F event will occur.

Version differences

v2

In this version, *fSyndmused* (F event ordering) was added to the input, and log entries returning *eTunnus* changes (F event) were added to the output.

Input

name	*data type*	*description*
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building All types by default.
logId	integer	Log entries larger than which Log ID value are searched. Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
hSyndmused	boolean	True - also returns an H event. False - H events are ignored. Default: false.
lSyndmused	boolean	True - also returns an L event. False - L events are ignored. Default: false.
eSyndmused	boolean	True - also returns an E event. False - E events are ignored. Default: false.
fSyndmused	boolean	*True – also returns the F event.* *False – does not count F events.* *Default: false.* **As of version v2.**
Return Management		
andmevektor	string (3)	Default: 000 A data vector is a string of three characters. In a separate position, the symbols indicate which data the service returns. The first position indicates the alphanumeric data of the object, the second the spatial data and the third the address data. Pos 1 = 0 - does not return alphanumeric data; Pos 1 = 1 - alphanumeric data; Pos 2 = 0 - no spatial data is returned; Pos 2 = 1 - spatial data; Pos 3 = 0 - address data is not returned separately; Pos 3 = 1 - returns addresses as separate entries.
aadressKomp	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
EHRlisaandmed	boolean	For an object from the True-EHR registry, it also returns some additional attributes. False - does not return additional attributes in the EHR. Default: false.
objJarglased	boolean	True - Returns the ancestors / descendants of the object. False - does not return object sequence information. Default: false.

name	*data type*	*description*
seotudObjektid	boolean	The parameter is only relevant for buildings and cadastral parcels (katastriüksus – KÜ), as there are no connections to other objects. Only valid objects – actual statuses (states O and K) that are directly related (priorities 1 and 2) are considered. • In the case of CU (cadastral parcel), buildings related to CU will be issued. • In the case of a building, the CUs related to the building and all other buildings on these CUs except the building itself are issued. True - Returns directly related objects. False - does not return related items. Default: false.
seotudHooneosad	boolean	True - a block of related building parts is added to the return. False - does not return related parts of the building. Default: false.
huviPunktid	boolean	True - Returns the names of points of interest (POIs) associated with the feature. False - does not return POI names associated with the feature. Default: false.
liidestujaObjektid	boolean	True - returns the data of the Land Register and the Business Register related to the object. False - does not return data from interfaced registries associated with the object. Default: false.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - object was added, U (update) - object was changed, D (delete) - object was deleted, R (restore) - object was restored. H - change of related objects. L - change of related interface objects. Modification of E - EHR supplementary data. F - change of eTunnus.
muutvektor	string (3)	The change vector is a string of three 0/1 characters. Separate positions indicate which data has changed from the previous version. The change vector has value only in the event of a change. Pos 1 - legal basis of the object Pos 2 - object shape Pos 3 - object addresses
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building

name	*data type*	*description*
ehakTyyp	string(1)	Based on this, EHAK address objects can be retrieved in the response. For other objects, this attribute has no effect. If it conflicts with the objectType data specified in the input, then no result will be obtained. Only one value can be selected. EHAK type classifier: • 0 - county • 1 - rural municipality • 3 - town • 4 - city as an administrative unit • 5 - city as a settlement unit • 6 - city district • 7 - small town • 8 - village
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
taisAadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
olek	string	The status of the object version that caused the event at the time of the query: K – the version is the latest, the object as a whole is current (status is valid); O – the version is the latest, the object as a whole is current (status is pending) V – Outdated, version not latest, object has been modified since this log message (another change log will follow soon); T – version is the last one, the object as a whole has been cancelled (if the status = T for the change or add log, it indicates that the cancel log will follow soon).
vanaAdobId	integer	When you change the id of a previous version of an object.
vanaTaisAadress	string	The full address of the previous version of the object.
vanaLahiAadress	string	Nearby address of the previous version of the object.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
eellased	string	List of ADS_OID values for objects that are possible ancestors of the object. List is separated with semicolons. Ancestors are returned at the time of the request, not at the time the log entry is created. Sorted by expiration date in descending order.
jarglased	string	List of ADS_OID values for objects that are possible descendants of the object. List is separated with semicolons. Descendants are only possible for cancelled objects. Descendants are returned at the time of the request, not at the time the log entry was created. Sorted by the time of validation of the first version in ascending order. Only valid and pending objects are returned.
hooneOID	string	In the case of a building unit, the ADS system code of the building to which the building unit belongs.
Alphanumeric data of the object (returned if the data vector 1.pos = 1)		
kehtiv	dateTime	Date and time the version data entered into force in the ADS.
kehtetu	dateTime	Date and time the version data expired in the ADS.

name		*data type*	*description*
hooneKujuPindala		double	Area m2 calculated on the basis of the 2D shape of the building to one decimal place.
eTunnus		boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
hooneKorgusR		double	Building eaves height m based on ETAK data.
hooneKorgusM		double	Maximum (ridge) height of the building m based on ETAK data.
muudatuseAlgataja		string	Completed for building parts only: X - X-Road service, K - ADS user or system.
Spatial data of the object (returned if the data vector 2.pos = 1).			
ruumiKuju		the format specified in the input	The GeoJSON format spatial shape is returned.
kujuMoodustusviis		char(1)	D - digitized; K - mapped; M - measured.
objektiPunktX		double (min 6300000 max 6700000)	X-coordinate of the reference point of the object in the L-Est system (northing).
objektiPunktY		double (min 300000 max 800000)	Y-coordinate of the reference point of the object in the L-Est system (easting).
etakId		integer	ETAK_ID associated with the object.
Address. There are several elements for parallel addresses. (Returned only if the data condition of the data vector 3rd pos = 1)			
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		string	Zip code assigned to the address.
maPiirkond		string	Name of the informal region to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the informal region, i.e. alternative names.
aadressiPunktX		double (min 6300000 max 6700000)	The x-coordinate of the address representation point (The address point of the object, i.e. the connection point between the object and the address).
aadressiPunktY		double (min 300000 max 800000)	Y-coordinate of the address representation point (The address point of the object, i.e. the connection point between the object and the address).
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
eelmineAdrId		integer	If this address replaces a previous address of the same object, the ID of that previous address. From version v2.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.

name		*data type*	*description*
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
Additional EHR data (object uniquely associated with the object). The data is only available for buildings or parts of buildings from the EHR register.			
nimetus		string	Name assigned to a building or part of a building in the EHR system.
pind		double	Area under the building in the case of a building, total area of the dwelling or non-residential space in the case of a part of the building.
kasutusotstarbed		string	List of uses for the building.
korrus		integer	Entrance floor for part of the building.
staatus		string	Object status in the EHR register.
andmedSeisuga		date	The date the EHR data in the ADS was updated.
Related objects (object related element). Contains the number of related objects			
adsOid		string	The identifier of the associated object in the ADS system (ADS_OID).
adobId		integer	The version ID of the associated object in the ADS system.
objektiLiik		string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
origTunnus		string	The identifier of the related object in the original register.
aadress		string	The full text address of the associated object, including all parallel addresses in long optimized form.
unikaalne		boolean	The associated object has a unique address requirement (UN attribute).

name	*data type*	*description*
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
Parts of a building (element related to an object). In the case of a building, the parts of the building (if any) are located in the building. In the case of a part of a building, other parts of the same building (if any) other than the part of the building itself.		
adsOid	string	Building part ADS system code.
adobId	integer	Version number of the building part in the ADS system.
objektiLiik	string (2)	Address object type code for building part from the classifier. • ER - dwelling • MR - non-residential space
origTunnus	string	Identification of the part of the building in the original register.
aadress	string	The full textual address of the part of the building that contains all the parallel addresses in a long-optimized form.
hooneOID	string	The ADS code of the building to which the building unit belongs.
Points of interest (object-related element). Includes a list of related POIs.		
huviPunktiNimi	string	The name of the point of interest.
Objects of interfaced registers (object related element). Contains references to interface objects in the Land Register and the Business Register.		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.

The result is returned in log_id order. If there are more changes in the given period than can be returned at once, the same query must be repeated, giving the input the result of the previous query of the last log_id value. All log entries are forwarded if the query response is empty.

2.1.6 Querying address changes (adsaadrmuudatused)

Path: **/ADSaadrmuudatused/v1**

Through the service, the external information system receives information on the addition, change and cancellation of addresses in the ADS system for a predetermined period of time. Log events are based directly on addresses:

- **Add** (I) - The address with the corresponding code address was added to the system
- **Change** (U) - The address with the corresponding code address has been changed. A new address record (with a new adr_id value) was created, but it consists of exactly the same components. The name of some components and thus the text address is changed.
- **Cancel** (D) - The last version of the address was cancelled.
- **Restore** (R) - The cancelled version of the address was re-validated.
- **Point Coordinate Change** (P) - The coordinates of an address representative point can change when an address is assigned to a new object or removed from an object, or when the shape or importance of an object associated with an address changes. In this situation, the coordinate values in the current address entry are simply replaced, the old state is not retained. The event marks such a change.

- **Loss of connections** (S) - this event is only possible for cancelled addresses. The cancelled address may be attached to another valid object. This event occurs when the last link between an address and a valid object is removed, in other words, when that address no longer remains the address of any valid object.
- **Postcode change** (N) - The event that occurs when a postcode is added, changed or removed from an address. Not related to address change event. The zip code changes at the address regardless of other events.
- **Unofficial Area Name Change** (A) - The event that occurs when an area name is added, changed, or removed from an address. Not related to address change event. The region name changes at the address independently of other events.
- **Change Priority Object** (O) - Adds, modifies, or removes the priority object reference to the address.
- **Change of technical identifier** (T) - event occurring when assigning / removing an identifier „technical" to an address.

The object that caused the change may be one that has never owned the address itself. For example, the invalidation of a settlement results in the invalidation of all addresses that contain the component initiated by that settlement. However, the add event can only occur by an object that owns the address. The change event can also be caused by an object that does not have the address itself. For example, changing a street name changes all addresses that contain a component initiated by that thoroughfare object.

The ancestors and descendants of the address will be forwarded at the time of the request. Sequence relationships change over time; they are added to the system as new addresses appear.

Also, the associated interface objects are returned as of the moment the request was made.

Version differences

v2

In this version, *eTunnus* was added to the related object data in the output.

Input

name	***data type***	***description***
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
logId	integer	Log entries larger than which Log ID value are searched. Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
pSyndmused	boolean	True - also returns an P event. False - P events are ignored. Default: false.
sSyndmused	boolean	True - also returns an S event. False - S events are ignored. Default: false.
nSyndmused	boolean	True - also returns N events. False - N events are ignored. Default: false.
aSyndmused	boolean	True - also returns event A. False - A events are ignored. Default: false.
oSyndmused	boolean	True - also returns an O event. False-O events are ignored. Default: false.

name	*data type*	*description*
tSyndmused	boolean	True - also returns a T event. False - T events are ignored. Default: false.
Return Management		
objekt	boolean	True - the data of the address object that caused the change is also returned. False - Data for the object that caused the change is not included in the response. Default: False.
seosed	boolean	True - Valid objects associated with the address at the time of the change are also returned False - Data for related objects will not be included in the response Default: false.
aadressKomp	boolean	True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
aadressJarglased	boolean	True - Returns the ancestors / descendants of addresses. False - does not return address sequence information. Default: false.
liidestujaObjektid	boolean	Effective only if objects (either the object that caused the change or the objects associated with the address) have also been ordered in the response. True - returns the objects of the Land Register (KR – Kinnistusraamat) and the Business Register (AR – Äriregister) related to the object. False - does not return objects from interfaced registers associated with the object Default: false.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - the address was added to the system, U (update) - the text of the address with the same components has changed, the address has been versioned, D (delete) - the address has been cancelled, R (restore) - The address was restored P - the coordinates of the representative point were changed, S - all connections lost, N - zip code change, A - informal area change, O - change of primary address of address, T - Add / remove attribute that the address is technical.
koodAadress	string	Code address.
adrId	integer	Address Version ID.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
sihtnumber	string	Zip code assigned to the address.
maPiirkond	string	Name of the unofficial area to which the address belongs

name	*data type*	*description*
maPiirkondAlias	string	Synonyms of the name of the informal region, i.e. alternative names.
tehniline	boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt	string	The ADS_OID value of the primary object at this address.
vanaAdrId	integer	If the previous version number is changed.
vanaTaisAadress	string	The previous full name if the address is changed.
vanaLahiAadress	string	If the previous nearby address is changed.
esindusPunktX	double (min 6300000 max 6700000)	X-coordinate of the address representation point.
esindusPunktY	double (min 300000 max 800000)	Y-coordinate of the address representation point.
eellased	string	A list of ADR_ID values of cancelled addresses that are possible ancestors of the address, or the ADR_ID of an outdated version of the address. Ancestors are given only for valid addresses. List separated by semicolons. Ancestors are returned at the time of the request, not at the time the log entry is created. Sorted by expiration date in descending order.
jarglased	string	List of ADR_ID values for addresses that are possible descendants of the address. List with separated semicolons. Descendants are only possible if the address is cancelled (olek = T) or outdated (olek = V). The old e.g. outdated address (olek = V) always has exactly 1 descendant, but if it is already cancelled, it will not be returned (valid descendant of the cancelled address is returned if exists). Descendants are returned at the time of the request, not at the time the log entry was created. Sorted by the time of validation of the first version in ascending order.
poleSeotud	boolean	True if the address is invalid and not associated with a valid object.
kehtiv	dateTime	Date and time the address version data entered into force in the ADS.
kehtetu	dateTime	Date and time the address version data expired in the ADS.
Object that caused the change (if the object data was also ordered)		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID) that caused the change.
adobId	integer	The version ID of the object in the ADS system that caused the change.
origTunnus	string	Object ID in the original register of the object that caused the change.
objektiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the reference point of the object that caused the change.

name	*data type*	*description*
objektiPunktY	double (min 300000 max 800000)	The y-coordinate of the reference point of the object that caused the change.
etakId	integer	Building identifier in the ETAK system of the object that caused the change.
olek	string	The state of the object: K – valid, O – pending, T – cancelled, V – historical (outdated version).
aadressiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the address point of the object that caused the change in the L-Est system.
aadressiPunktY	double (min 300000 max 800000)	The y-coordinate of the address point of the object that caused the change in the L-Est system.
Objects of interfaced registers (element related to the object that caused the change). Contains references to objects in the Land Register (KR- Kinnistusraamat) and the Business Register (Äriregister).		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.
Address association objects (if ordered), if there are several objects, they occur more than once.		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	The identifier of the associated object in the ADS system (ADS_OID).
adobId	integer	The version ID of the associated object in the ADS system.
origTunnus	string	The identifier of the related object in the original register.
unikaalne	boolean	The associated object has a unique address requirement (UN attribute).
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
etakId	integer	Building identifier in the ETAK system.
olek	string	The state of the object: K – valid, O – pending, T – cancelled, V – historical (outdated version).
aadressiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the address point of the object associated with the address in the L-Est system.
aadressiPunktY	double (min 300000 max 800000)	The y-coordinate of the address point of the object associated with the address in the L-Est system.

name		*data type*	*description*
Objects of interfaced registers (an element associated with a single associated object). Contains references to objects in the Land Register (KR) and the Business Register (AR)			
register		string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris		string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo		string	Special ownership number for apartment ownership or name of legal entity.
Address with components if components were ordered (components of address adr_id were logged, also for event D).			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
muudetudTase		integer	For event U and D, the number of the level from {1 - 8} that caused the address to be changed or cancelled.

The result is returned in log_id order. If there are more changes in the given period than can be returned at once, the same query must be repeated, giving the input the result of the previous query of the last log_id value. All log entries are forwarded if the query response is empty.

2.1.7 Querying object addresses changes (adsobjaadrmuudatused)

Path: **/ADSobjaadrmuudatused/v1**

Through the service, the external information system can find out what changes have been made in the addresses of the object in a given period of time.

This service returns a log that tracks the creation, change, and loss of an association between an object and an address. The events to be returned are:

- I (insert) – an address was added to the object (the previous version of the object did not have this address),
- U (update) – the object changed its associated address (the previous version of the object had an address with the same code address but a different ID),
- D (delete) – the association of the object with the address was deleted (the previous version of the object had an association, the new one no longer exists).
- K – change in the address point coordinate of the object.

In addition to the data of the object and address affected by the event, it is also possible to order the object sequence information and other data of objects related to the same address. This additional data is returned by the service at the time of the request, not at the time the log is generated.

Version differences

v2

In this version, *eTunnus* was added to the object and related object data, and *eelmineAdrId* was added to the address data in the output.

Input

name	***data type***	***description***
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building All types by default.
logId	integer	Log entries larger than which Log ID value are searched. Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
Return Management		
objJarglased	boolean	True - Returns the ancestors / descendants of the object. False - does not return object sequence information. Default: false.

name	*data type*	*description*
aadressKomp	boolean	True - Returns a new address with references to components. False - Returns addresses in text only with code address and ADR_ID. Default: false.
aadressiSeosObjektid	boolean	True - Returns the objects associated with the address that are currently valid. False - does not return association objects. Default: false.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - an association with the address was added to the object (the previous version of the object did not have this address); U (update) - the object changed the address associated with it (the previous version of the object had an address with the same code but different ID); D (delete) the association with the address was removed (the previous version of the object had an association, the new one no longer exists). K – change in the address point coordinate of the object.
Object data		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
objektiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the reference point of the object.
objektiPunktY	double (min 300000 max 800000)	The y-coordinate of the reference point of the object.
objektiSyndmus	string	I (insert) - the address was added to the new object, the object was also created during the event of adding this address (possible only in case of the log entry event I). D (delete) - The address was removed from the object due to the object being cancelled (only possible for log entry D event). U (update) - the object was changed or restored during the address addition or removal event (possible for log entry events I, U and D).

name	*data type*	*description*
eellased	string	List of ADS_OID values for objects that are possible ancestors of the object. List with separated semicolons. Ancestors are returned at the time of the request, not at the time the log entry is generated. . Sorted by expiration date in descending order.
jarglased	string	List of ADS_OID values for objects that are possible descendants of the object. List with separated semicolons. Descendants are only possible for cancelled objects. Descendants are returned at the time of the request, not at the time the log entry was created. Sorted by the time of validation of the first version in ascending order. Only valid and pending objects are returned.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
olek	string	Object status: K – valid, O – pending, T – cancelled, A – historical.
Address data		
koodAadress	string	Code address.
adrId	integer	Address Version ID.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
sihtnumber	string	Zip code assigned to the address.
maPiirkond	string	Name of the unofficial area to which the address belongs
maPiirkondAlias	string	Synonyms of the name of the unofficial area , i.e. alternative names.
tehniline	boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt	string	The ADS_OID value of the primary object at this address.
eelmineAdrId	string	If this address replaces a previous address of the same object, the ID of that previous address. From version v2.
vanaAdrId	integer	If the previous version number is changed.
vanaTaisAadress	string	The previous full name if the address is changed.
vanaLahiAadress	string	If the previous nearby address is changed.
aadressiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the address point of the object in the L-Est system.
aadressiPunktY	double (min 300000 max 800000)	The y-coordinate of the address point of the object in the L-Est system
etakId	integer	Building identifier in the ETAK system.
Address with components if components were ordered (components of address adr_id were logged, also for event D).		
adsTase1 kood	string	Code of the existing component.

name		*data type*	*description*
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
muudetudTase		integer	For event U and D, the number of the level from {1 - 8} that caused the address to be changed or cancelled.
Address association objects (if ordered), if there are several objects, they occur more than once. The association objects are returned as of the moment of the request, not as of the moment when the log was created.			
objektiLiik		string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid		string	The identifier of the associated object in the ADS system (ADS_OID).
adobId		integer	The version ID of the associated object in the ADS system.
origTunnus		string	The identifier of the related object in the original register.
unikaalne		boolean	The object has a unique address requirement (UN attribute).
eTunnus		boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
olek		string	Status of the object associated with the address: K - valid, O - pending.

Note: Address changes made during a change to an object have the same LogStamp value

The result is returned in log_id order. If there are more changes in the given period than can be returned at once, the same query must be repeated, giving the input the result of the previous query of the last log_id value. All log entries are forwarded if the query response is empty.

2.1.8 Querying the descendants of a cancelled object (adsobjjarglased)

Path: **/ADSobjjarglased/v4**

Through the service, interfaces with the ADS system can request objects that are the logical successor of a cancelled address object. Replacement objects may occur later in time, and therefore references to descendants may not be included in the object change log service.

Service input is cancelled ADOB_ID or ADS_OID.

Valid offspring objects (objects in valid and pending status) have been identified in the ADS system to return the service arranged in ascending order according to the time of validation of the first version of the successor. By default, only the general data of the object is returned. The consumer can order the return of the object data. In addition, you can control whether object addresses are returned with or without components.

Input

name	*data type*	*description*
Search terms		
adobId	integer	Version ID of the cancelled object. If the interface associates its object with adob_id, it can be used to query it. Not required if the association was created from ADS_OID.
adsOid	string (10)	Object ID in the ADS system. Ignored if adob_id is valued.
Return Management		
andmeVektor	string (3)	Controls the return of object descendants. Does not matter in the case of address descendants. Default: 000 A data vector is a string of three characters. In a separate position, the symbols indicate which data the service returns. The first position indicates the alphanumeric data of the object, the second the spatial data and the third the address data. Pos 1 = 0 - does not return alphanumeric data; Pos 1 = 1 - alphanumeric data; Pos 2 = 0 - no spatial data is returned; Pos 2 = 1 - spatial data; Pos 3 = 0 - address data is not returned separately; Pos 3 = 1 - returns addresses as separate entries.
aadressKomp	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text-only format with code address and adr_id. Default: false.
objektiOlekud	string	Returns objects in ordered states. Possible values: K – valid, O – pending, By default, objects in the K and O states are returned.

Output

name	*data type*	*description*
Object - the descendant of the object referenced in the input (multiple descendants have multiple elements).		
objektiLiik	string	Address object type code from the classifier: • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
taisAadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
eTunnus	boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
etakId	integer	Building identifier in the ETAK system.
olek	string	Object status (K - valid or O - pending)
Alphanumeric data of the object (returned if the data vector 1.pos = 1).		
kehtiv	dateTime	Date and time the version data entered into force in the ADS.
Spatial data of the object (returned if the data vector 2.pos = 1).		
ruumiKuju	the format specified in the input	The spatial shape is returned in GeoJSON format .
objektiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the reference point of the object in the L-Est system (northing).
objektiPunktY	double (min 300000 max 800000)	The y-coordinate of the reference point of the object in the L-Est system (easting).
Object address. There are several elements for parallel addresses. (Returned only if the data vector 3rd pos = 1 in the query condition).		
adrId	integer	Address Version ID.
koodAadress	string	Code address.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.

name		*data type*	*description*
sihtnumber		string	Zip code assigned to the address.
maPiirkond		string	Name of the unofficial area to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the unofficial area , i.e. alternative names.
aadressiPunktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, i.e. the connection point between the object and the address.
aadressiPunktY		double (min 300000 max 800000)	The y-coordinate of the address point of the object, i.e. the connection point between the object and the address.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.

Components are returned only if the input parameters AadressKomp=true.

If the input is the version ID of the object, but this particular version is not the last one, the query returns data based on the status of the latest version. If the latest version is cancelled, it may have descendants if ADS has identified them in the business rules. If no descendants are found in the ADS, or if the latest version of the object is not cancelled, the return is empty.

2.1.9 Querying the descendants of a cancelled address (adsaadrjarglased)

Path: **/ADSaadrjarglased/v1**

Through the service, interfaces with the ADS system can request addresses that are the logical successor to a cancelled address. Alternate addresses may occur later in time, and therefore references to descendants may not be included in the change of address log service.

The service input is the ADR_ID of the cancelled (OLEK = T) address. Descendants of outdated addresses cannot be inherited with this service. Valid descendant addresses have been identified in the ADS system to return the service. Descendants are returned in ascending order according to the time of validation of the address version. In addition to the address, the consumer can also order data on objects related to the address.

Input

name	***data type***	***description***
Search terms		
adrId	integer	Cancelled address id.
Return Management		
objekt	boolean	True - The data of the address objects related to the address is also returned. False - Data for related objects will not be included in the response. Default: false.
aadressKomp	boolean	True - Returns addresses with component references. False - returns addresses in text-only format with code address and adr_id. Default: false.

Output

name	***data type***	***description***
Address (multiple elements for multiple descendants).		
adrId	integer	Address (multiple elements for multiple descendants). Address version ID.
koodAadress	string	Code address.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
sihtnumber	string	Zip code assigned to the address.
maPiirkond	string	Name of the unofficial area to which the address belongs.
maPiirkondAlias	string	Synonyms of the name of the unofficial area , i.e. alternative names.
esindusPunktX	double (min 6300000 max 6700000)	The x-coordinate of the address representative point

name		*data type*	*description*
esindusPunktY		double (min 300000 max 800000)	The y-coordinate of the address representative point
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
Object associated with the address (if object data was also ordered). If there are multiple objects associated with the address, there are multiple items.			
objektiLiik		string	Address object type code from the classifier: • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid		string	Object identifier in the ADS system (ADS_OID).
adobId		integer	The version ID of the object in the ADS system.
origTunnus		string	Object ID in the original register.
unikaalne		boolean	The object has a unique address requirement (UN attribute).
eTunnus		boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined. **As of version v2.**
etakId		integer	Building identifier in the ETAK system.

name	*data type*	*description*
olek	string	Object status (K – valid, O – pending)
aadressiPunktX	double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, i.e. the connection point between the object and the address. in the L-Est system
aadressiPunktY	double (min 300000 max 800000)	The y-coordinate of the address point of the object, i.e. the connection point between the object and the address. in the L-Est system

2.1.10 Querying spatial address (adsruumiaadress)

Path: **/ADSruumiaadress/v1**

Through the service, it is possible to request spatial addresses corresponding to the shape from the ADS system. The input is either the spatial shape in gml format or the coordinates of the point in numbers. Spatial addresses with weights are returned.

Input

name	*data type*	*description*
Search terms		
ruumiKuju	GML	Spatial shape in GML 3.1.1 format.
punktX	double (min 6300000 max 6700000)	The x-coordinate of the point.
punktY	double (min 300000 max 800000	The y-coordinate of the point.
ainultSuurim	boolean	True - Returns only the spatial address with the highest percentage False - Returns all room addresses with a percentage> 0. Default: false.

If the spatial shape is present, the x and y coordinates of the input are ignored.

Output

name		*data type*	*description*
Spatial addresses			
aadress		string	Spatial address in textual form.
adsTase1	kood	string	Code of the existing component.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus_liigiga	string	Code of the existing component.
osakaal		decimal	Percentage of the spatial address to 2 decimal places.

2.1.11 Changes to points of interest (adspoimuudatused)

Path: **/ADSpoimuudatused/v1**

Through the service, the external information system can find out what changes have been made to the points of interest related to the address objects. The form of the name reviewed and, if necessary, edited in the ADS system shall be communicated to the public.

The service only returns U and D events.

Event U means that the POI has been reviewed and marked for distribution in the ADS. A U-event occurs both when an initial review of a new POI is performed and when a revised POI is changed.

Event D occurs when a POI is marked as non-distributable in the ADS or deleted completely. In both cases, this point of interest no longer exists for the public. The public should be aware that a point of interest that has been removed may be marked for redistribution.

Input

name	*data type*	*description*
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
adsOid	string (10)	The identifier of the address object in the ADS system to which the points of interest are searched.
logId	integer	Records larger than the LogId value.
maxarv	integer	Default: 0.

Output

name	*data type*	*description*
logId	integer	Log ID
logStamp	date	Log entry date without time
syndmus	string	U (update) - A POI was added to the ADS system, its data was changed, or a point of interest not being distributed was restored. No distinction is made between I and U events, as the consumer must treat them in the same way. D (delete) - The POI object has been cancelled; the return of the service contains an object not to be distributed. In case of cancellation, only POI_ID of the data of the object of interest can be returned in the service return, if the object was permanently deleted.
adsOid	string	Object ADS system code (object identifier in the ADS system).
origTunnus	string	Object ID in the original register.

name	*data type*	*description*
taisAadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
poiId	integer	Unique identifier of the POI.
poiNimi	string	Name assigned to the POI in the ADS system.
poiAlias	string	Alias assigned to point of interest in ADS.
poiYlemgrupp	integer	Constant classification code. The classification contains the following values: 10 - public administration 11 - education 12 - health 13 - free time 14 - Services 15 - transport 16 - environment Only the classification code is included in the data and this code is translated on the ADS side.
poiGrupp	string	The name that characterizes the POI type group.
poiAlamgrupp	string	The descriptive name of the subgroup of the POI type.
poiTyypnimi	string	The name that characterizes the POI type.
poiTyyp	integer	POI type code as a number.
poiX	double (min 6300000 max 6700000)	POI reference point X assigned in the ADS system.
poiY	double (min 300000 max 800000)	POI reference point Y assigned in the ADS system.
poiAndmeallikas	string	The name of the POI source register from which the data originally originated.
poiVID	string	POI identifier in the source register.
poiAndmeseisKp	date	The date the POI data status was last updated from the source register.

2.1.12 Interfacers' address change suggestion log (adsadrtagasisidemuudatused)

Service version: **ADSadrtagasisidemuudatused/v1**

This service is a recommended replacement for the previous service: Interface Address Suggestion Service (ADSadrTagasisideSoovitused.v2)

A new logging system has been created in the ADS system to monitor changes to interface objects. The new logging system logs the change event in the following cases:

- automatic addition of recommendations, incl. during submission (removal of recommendations does not create a log during submission);
- manual addition or removal of recommendations via the user interface, incl. the recommendation to remove all associations;
- addition or removal of recommendations via import;
- addition or removal of additional identifiers (SPV, MSL, HPV) on an object via the user interface or with additional identifier import.

The type of change event is not distinguished, i.e. the same log event is generated in all listed cases.

Events on one object are reduced on a daily basis. This means that multiple change events for the same object on the same day are not recorded. This is necessary to reduce excessive noise in the log, as typically more than 1 log-causing change occurs successively on an object (one recommendation is removed, another is added, an identifier is changed, etc.).

Since during the day only an additional identifier of an interface object (e.g. MSL, SPV add/remove) may be changed, the recommended address and object block may be empty in the recommendations service. In this case, the interfacer does not add/change/remove ADS associations on their side, only changes the additional identifier.

It is also possible that a recommendation was given to remove an association – then the interfacer must remove the incorrect existing ADS address and object association in their system. It may also happen that a log entry appears but nothing needs to be changed, e.g. if a user added a recommendation and then immediately removed it, a log entry is still created, but in the end nothing changed (no recommended objects or addresses, but additional identifiers are filled in the response based on current data).

Input

name	***data type***	***description***
Search terms		
muudetudAlates	date	The date from which (inclusive) the registered changes are to be found.
muudetudPaevad	integer	Number in range 1-10: how many days of changes are desired in the response. Default: 1 day. Maximum: 10.
register	string (10)	Registry type from the classifier. The classifier is as follows: RR - Population Register; AR - Business Register; KR - Land Register; EP - Eesti Post. Required.
logId	integer	The LogId value from which larger records are searched. Default: 0.
maxarv	integer	Max number of records to return. Maximum allowed value: 100.
Return management		
aadressKomp	boolean	True - returns the recommended address with references to components. False - returns addresses only in text form with code address and ADR_ID. Default: false.

Output

name		***data type***	***description***
logId		integer	Log entry ID.
logStamp		date	Date the log entry was created, without time.
register		string	Registry type from the classifier. RR - Population Register; AR - Business Register; KR - Land Register; EP - Eesti Post.
idRegistris		string	Interfacer object ID. In long form, i.e. with version identifier, if the interfacer submitted it that way.

name		*data type*	*description*
SeostPoleVaja		boolean	True - the submitted interface object does not require an association with the ADS system in terms of either address or object. False - the submitted object should match ADS data. Default: false.
MituSeostLubatud		boolean	True - the submitted interface object may have multiple associations with ADS objects. False - the submitted object should have an association with exactly 1 ADS object. Default: false.
probleemne		boolean	True - the interface object was determined to be problematic by the ADS system. False - the interface object is not problematic in the ADS system.
SeosedPoleKorrektsed		boolean	True - the submitted associations are incorrect and must be removed or replaced. ADS system cannot provide recommendations on what to replace them with, no recommended objects or addresses exist. False - no recommendation to remove associations. ADS system recommends replacements or everything is correct. Default: false.
Recommended objects (0 to n elements in the response).			
adsOid		string	Object identifier in the ADS system (ADS_OID).
adobId		integer	Object version identifier in the ADS system.
objektiLiik		string	Address object type code from the classifier. MK - county, OV - municipality, AY - settlement unit, LO - city district, VK - small place, LP - thoroughfare, CU - cadastral unit, EE - residential building, ME - non-residential building, ER - apartment, MR - non-residential premises.
origTunnus		string	Object identifier in the originating register.
aadress		string	Optimized full address text of the object, including all parallel addresses.
unikaalne		boolean	Object has unique address requirement (UN identifier).
eTunnus		boolean	Applies only to buildings and building units. True - the building or unit is suitable for habitation; false - not suitable for habitation. Null - identifier is undefined.
olek		char(1)	K - valid (objects in internal status O (pending) also appear with status K); T - cancelled.
Recommended address (0 to n elements in the response).			
adrId		integer	Address version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the informal region to which the address belongs.
tehniline		boolean	True = 1 meaning it is a technical address. False = empty meaning it is not a technical address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.

name		*data type*	*description*
	nimetus_liigiga	string	Component name with type name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without type name.
	nimetus_liigiga	string	Component name with type name.

2.2 Services that provide data based on REST API service

2.2.1 Submission of addresses of procedural objects (adsmenadresit)

Path: /ADSmenadresit/v2

Through the service, an external information system (EHR or Land Register) can submit address changes for those objects, which are usually changed only through the procedural system. The service connects to the ADS production system database Oracles. **The service is not intended for public use**.

The service can be used to submit data for 1 or more objects at a time. Presented with required addresses. There may also be new objects not previously registered in the ADS.

It is not possible to add an identifier to an object registered in the ADS system without an association with the origin register via this service. The identifier is mandatory for submission via this service and the existence of objects is checked through the identifier. ADS_OID is optional.

Input

If the service challenge is implemented in such a way that the official is always constant and not a real personal identification code, then this solution is not suitable (this is the case in EHR today). Secondly, it is not good to display personal identification numbers in an application. *MenetlejaNimi* is stored in the data as a variable name and is displayed in the ADS application. Therefore, it would be more expedient to provide the name of the person conducting the proceedings in the data of the service, as the service may in any case be used only by the person identified in the register of origin.

name	***data type***	***description***
Applicant (appears once in the service)		
esitajaKood	string (10)	Registry code of the organization maintaining the register. The organization must be pre-registered in the admin system of the Land and Spatial Development Board. The organization will be the processor of the procedure to be created through X-Road. Required.
menetlejaNimi	string(11)	Full name or personal identification code of the user processing the data. Required.
menetluseLiik	integer	1 - Edit (default). 2 - Improvement. The types of procedures corresponding to the values can be changed by ADS development.. By default: 1.
ainultKontroll	boolean	Default: false. In the case of a true value, the procedure is not enforced but the procedure is deleted after the checks have been performed.
menetlusNr	integer	If this parameter is met, a query for the status of the existing procedure is assumed. Object data is not required. The service returns the data of the referenced procedure.
Object (there can be more than one, at least 1 object is required, the maximum number is limited by the parameter. Default: 1000.)		

name		*data type*	*description*
objektiLiik		string (2)	Address object type code from the classifier. • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building When submitting a new object, the system changes the type ME to type EE, in other words, it ignores the submitted type and always creates a new building with type EE Required.
adsOid		string (10)	The ID of the existing object in the ADS system. Optional and cannot be used for new items. May be provided if there is a change to the object and the ADS_OID is known in the origin register.
orig_tunnus		string (20)	Identifier of the object in the reporting register. Required.
oiguslikAlus		string (500)	Legal basis for the creation or cancellation of a version of an object.
aluseKuupaev		date	Date of legal basis.
olek		char(1)	O – pending; K – valid; T – cancelled. Required.
~~tahis~~		~~string(200)~~	~~Symbol for part of the building, common name for the building. Mandatory for part of a building.~~
~~korrus~~		~~integer~~	~~Entrance floor for part of the building. Mandatory for part of a building.~~
ruumiKuju		GeoJSON	Object Spatial shape in GeJSON format. Mandatory at least as a point.
kujuModustusviis		char(1)	D - digitized; K - mapped; M - measured. Mandatory if room shape is provided. If A is presented, it is an error, but at the request of the subscriber, the service does not give an error, but silently changes the value from A → K.
hooneAdsOid		string (10)	Attribute required for part of a building only. Reference to the ADS_OID value of the building, if known. Optional and cannot be used for new items. May be provided if there is a change to the object and the ADS_OID is known in the origin register.
hooneOrigTunnus		string (20)	Mandatory attribute only for part of a building. Reference to the identification of the building of which it is a part.
Address (belongs to the object, there may be more than one parallel address.)			
adsTase1	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with a generic word.
adsTase2	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with a generic word.
adsTase3	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with a generic word.
adsTase4	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with the abbreviation of the generic word.
	Nimetus_liigiga	string (300)	The name of the component with a long generic word.
adsTase5	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with the abbreviation of the generic word.
	Nimetus_liigiga	string (300)	The name of the component with a long generic word.
adsTase6	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component.
	Pyhendusnimi	boolean	Default: false. True when it comes to devotional names.
	Kohanimi	boolean	Default: false. True when it comes to place names.
adsTase7	Kood	string (4)	Code of the existing component.

name		*data type*	*description*
	Nimetus	string (200)	The name or number of the component.
adsTase8	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name or number of the component.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object in the L-Est system.
punktY		double (min 300000 max 800000	Y-coordinate of the address point of the object in the L-Est system.

The system assumes that the service input always has a specified code at address levels 1 and 2.

Output

If object data was submitted to the procedure through the service (*Menetlus_nr* is empty in the input) and if ADSTulem shows success in the response, but *Joustatud* is empty, then the data was not actually enforced, but only marked as ready for enforcement. This is also mentioned in the returnable ADSTeade. In this case, the *Menetlus_nr* is always present in the return.

In such a situation, the supplying registry should memorize the procedure number and take into account that enforcement has not actually taken place. The original registry must not end its operation because the changes are not registered in the ADS, but must leave the process on hold. The original registry should now revert to the same service with the procedure *Menetlus_nr* if desired. No need to resubmit. This can be done as long as the *Joustatud* date is included in the one-time return of the service. At this point, the data can be considered valid in the ADS.

If the service was accessed with the value of menetlusNr and the service returns a failure indicator, it means that the procedure has not yet taken effect. The proceeding may still be pending review on the ADS administrator's desktop, or the enforcement readiness has been revoked. It is possible to distinguish which option it is by the content of ADSTeade. In the first case, the message is „ADS teade: leidub menetluse jõustamist takistavaid probleeme“, in the second case, the message is „ADS menetlus on tühistatud“. In the latter case, the data must still be corrected by the service user and submitted again..

If the result of the *ADSTulem* shows a failure, the data provided is not suitable for the ADS system and must be corrected and resubmitted. Even in the case of a negative result, the answer shows the procedure number, objects, addresses and problems that the service managed to cause. If nothing went wrong, the answer is empty. An error is indicated by an *ADSTeade* (message).

If successful, the service response contains the data of the address objects as registered in the ADS system.

name	*data type*	*description*
result (1 reply)		
tulem	string	1 - if successful; 0 - in case of error
teade	string	Text message of the service. Additional information in case of a positive answer, error message in case of a negative answer.
menetlusNr	biginteger	Number of the procedure created.
joustatud	datetime	Time of entry into force of the procedure with time. If not, the procedure has not been enforced.
Object (there may be more than one answer, missing if procedure failed).		

name		*data type*	*description*
objektiLiik		string (2)	Address object type code from the classifier. • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adobId		integer	The version ID of the object in the ADS system.
adsOid		string	Object identifier in the ADS system (ADS_OID).
origTunnus		string (20)	Identifier of the object in the reporting register.
oiguslikAlus		string (500)	Legal basis for the creation or cancellation of a version of an object.
aluseKuupaev		date	Date of legal basis.
olek		char(1)	O – ootel/pending; K – kehtiv/valid; T – tühistatud/cancelled.
~~tahis~~		~~string(200)~~	~~Symbol for part of the building, common name for the building.~~
~~korrus~~		~~integer~~	~~Entrance floor for part of the building.~~
ruumiKuju		GeoJSON	Object spatial shape in GeoJSON format.
kujuModustusviis		char(1)	D - digitized; K - mapped; M - measured.
hooneAdsOid		string (10)	Only for part of the building. Reference to the ADS_OID value of the building.
taisAadress		string	The optimized full address of the object, which includes all parallel addresses.
lahiAadress		string	The nearby address of the object that contains all parallel addresses.
Address (element associated with the object). There are several elements for parallel addresses. The same order of addresses as in the input is guaranteed.			
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, i.e. the connection point between the object and the address.
punktY		double (min 300000 max 800000)	The y-coordinate of the address point of the object, i.e. the connection point between the object and the address.
adsTase1	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase2	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase3	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name
	Nimetus_liigiga	string	Component name with species name.
adsTase4	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.

name		*data type*	*description*
	Nimetus_liigiga	string	Component name with species name.
adsTase5	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase6	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase7	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase8	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
Object issues that prevent enforcement (object-related element). Multiple elements in case of multiple problems. If enforcement is successful, there will be no problems.			
aadress		string	This is the full address that is causing the problem. May be missing if the problem is not directly related to the address.
veaKood		string	Error code based on classifier.
veaTekst		string	Textual description of the problem.
markus		string	Explanation added by the Special Procedures(erimenetleja) to the problem.

2.2.2 Search for a procedural object (adsmenobjotsing)

Path: /ADSmenobjotsing/v1

The service is intended for querying data on procedural objects registered in the ADS main register. The difference with an address object lookup service is that this service works on production system data, not presentation system data like all other services.

Returns the latest versions of pending, valid, and cancelled (ordered separately) items from the main system. In addition, it is possible to search for objects included in unenforced proceedings with a separate identifier. However, when searching for proceedings, it should be borne in mind that the data may be incomplete. For example, new addresses do not have a code address because they are only assigned when writing to the main register, and address levels may be missing codes. The object may also be missing a shape or address. A text-based address search uses the full-text index in the main register (searches for the content of all entered words in the address text), but not in the procedure (searches for the content of the entered fragment in the address in exactly the same form).

The X-Road services operating on the procedure system are not intended for public use. They are aimed at the original registers submitting data (EHR or Land Register), but also at those local governments that want to implement address management in their information system and transfer the data to the ADS system.

The services are aimed at those respondents who do not want to use the user interface of the ADS processing system, but want to make this interface themselves and exchange data with the ADS automatically. The service is not intended for performing analytical queries or extracts, but for loading data for a specific amount, one or more objects.

Input

name	*data type*	*description*
Search terms		
objektiLiigid	[string (2)] array	Address object type code from the classifier, multiple choices of all species. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string (10)	Object ID in the ADS system.
origTunnus	string (20)	Identifier of the object in the register of origin.
xKoord	double (min 6300000 max 6700000)	The x-coordinate of the point in the L-Est system that is a query condition.
yKoord	double (min 300000 max 800000)	The y-coordinate of the point in the L-Est system that is a query condition.
ulatus	integer	The square of the side of the area in meters in meters. Default: 0. The value is only taken into account if coordinates are available. The entry must be limited so that the room filter is not too large, the maximum number allowed is 1000.
aadressTekst	string (1000)	The address of the place or part of it in text form.
etakId	bigint	Identifier assigned to an object in the ETAK system.
otsiMenetlusest	boolean	By default; false. If true, non-enforced procedures are searched
otsiTyhistatud	boolean	True - also returns the latest version of cancelled objects False - cancelled will not be returned. Default: false.
Address by component. An accurate and case-sensitive search is performed on the basis of the components, i.e. the name of the component must be given in the exact form.		
adrTase1	string (300)	Name of the level 1 component.
adrTase2	string (300)	Name of the level 2 component.
adrTase3	string (300)	Name of the level 3 component.
adrTase4	string (300)	Name of the level 4 component.
adrTase5	string (300)	Name of the level 5 component.
adrTase6	string (300)	Name of the level 6 component.
adrTase7	string (300)	Name of the level 7 component.
adrTase8	string (300)	Name of the level 8 component.
adrTaseKood1	string (300)	Level 1 component code.

name	*data type*	*description*
adrTaseKood2	string (300)	Level 2 component code.
adrTaseKood3	string (300)	Level 3 component code.
adrTaseKood4	string (300)	Level 4 component code.
adrTaseKood5	string (300)	Level 5 component code.
adrTaseKood6	string (300)	Level 6 component code.
adrTaseKood7	string (300)	Level 7 component code.
adrTaseKood8	string (300)	Level 8 component code.
koodaadress	string(33)	Code address or its beginning.
Return Management		
tarkAndmed	boolean	True - Returns the alphanumeric part of the data. False - does not return. Default: false.
ruumiAndmed	boolean	True - returns part of the spatial data. False - does not return. Default: false.
aadressKomp	boolean	True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false
probleemid	boolean	True - Returns current (undone) issues related to the object. False - does not return problems. Default: false.
markused	boolean	True - Returns cancelled issues and comments related to the item. False - no returns. Default: false.
maxarv	integer	Max number of records to return. Default system limit.

Object types must be passed as an array of comma-separated strings; no commas are required. Parameters not specified by the user are transmitted with default values. Boolean values are transmitted in the form 1– true / 0 - false. The x and y points must be inverted so that the X value is 7 digits and the Y value is 6 digits.

Output

name	*data type*	*description*
Object (the result contains a set of objects)		
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS main system or procedure system, whichever originated.

name	*data type*	*description*
objektiLiik	string (2)	Address object type code from the classifier, multiple choices of all species. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
origTunnus	string (20)	Identifier of the object in the reporting register.
etakId	bigint	Identifier assigned to an object in the ETAK system.
olek	char(1)	O - pending; K - valid; T – cancelled.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
menetlusNr	biginteger	Procedure No if the request was made from the procedural system.
Alphanumeric data of the object (data group uniquely associated with the object). Will be returned when the corresponding data is ordered.		
oiguslikAlus	string (500)	Legal basis for the creation or cancellation of a version of an object.
oiguslikuAluseKp	date	Date of legal basis.
~~tahis~~	~~string(200)~~	~~Symbol for part of the building, common name for the building.~~
~~korrus~~	~~integer~~	~~Entrance floor for part of the building.~~
hooneAdsOid	string (10)	Only for part of the building. Reference to the ADS_OID value of the building.
Spatial data of the object (data group uniquely associated with the object). Will be returned when the corresponding data is ordered.		
ruumiKuju	the format specified in the input	The spatial shape is returned in GeoJSON format.
kujuMoodustusviis	char(1)	D - digitized; K - mapped; M - measured.
Address (an element that is multiple related to an object). There are several elements for parallel addresses. Will always be returned, but with components only if ordered.		
adrId	integer	The version ID of the address in the main register or in the procedural system, depending on which query was made.
koodAadress	string	Code address. Search may be missing.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
punktX	double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, i.e. the connection point between the object and the address.
punktY	double (min 300000 max 800000)	The y-coordinate of the address point of the object, i.e. the connection point between the object and the address.

name		*data type*	*description*
olek		Char(1)	Address status K – valid. V – old e.g. outdated version. T – cancelled.
adsTase1	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase2	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase3	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase4	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase5	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase6	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase7	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase8	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
Object problems and comments (object-related element). Multiple elements in case of multiple problems.			
aadress		string	The address you are having trouble with. May be missing if the problem is not directly with the address.
staatus		char(1)	P - current problem; M - non-current problem or remark.
veaKood		integer	Error code based on classifier.
veaTekst		string	Textual description of the problem.
markus		string	Explanation of the problem or justification for not updating. Just a note if there is no problem.

2.2.3 Saving address object data (adsobjsalv)

Path: **/ADSobjsalv/v1**

A universal service that allows you to store all types of address object data directly in the main system.

Data of exactly 1 object is presented through the service at a time. At the time of submission, the ADS system checks whether the object is added, changed, cancelled or a version corrected.

The service receives EHAK objects (types MK, OV, AY, LO) from the ADS system, as well as traffic areas (LP) and small places (VK) from the KNR application.

The Land cadastre will use the service to present topological changes in the shape of cadastral parcels as a version correction.

A revision could be submitted for any object. The same function is also used when changing the legal basis via the user interface. (The X-path is omitted, but the same function is applied in the background)

In the case of addition/change/restore, the service always receives the full dataset of the object: the object's initial attributes (including the legal basis), shape and array of addresses. All addresses must be submitted in normalized form, i.e. component names by level.

In the case of cancellation/revision, addresses are not included, they are not checked or changed.

In the case of revision, only the spatial shape is submitted, if it has been specified, or the legal basis with the date, if it needs correction. Data that does not require correction is not transmitted through the service.

Input

name		*data type*	*description*
Applicant			
EsitajaKood		string (10)	Registry code of the reporting organization. The organization must be pre-registered in the admin system of the Land Administration. Required
Object			
ObjektiLiik		string (2)	Address object type identifier from the classifier. Required
ADS_OID		string (10)	The identifier of an existing object in the ADS system. Not required and cannot exist on new objects. It can be submitted if there is a change to the object and the ADS_OID is known in the registry of origin.
Orig_tunnus		string (20)	Object identifier in the register providing the data. Required
Adob_id		integer	Version ID of the object in the ADS system. Completed only if a version correction of address object data is desired.
OiguslikAlus		string (500)	The legal basis for the creation of the version of the object. Reference to legislation. Mandatory for additions and changes and necessary for revisions if the legal basis is to be corrected.
KehtivuseAlgus		date	The date of the legal basis for the creation of the version. Mandatory with a legal basis.
SulgemiseAlus		string (500)	The reason for cancelling the object as a whole. Reference to legislation. Presented only when the object is cancelled.
KehtivuseLopp		date	Date of legal basis for cancelling. Must be a past date. Presented only when the object is cancelled.
Ruumikuju		GeoJSON	Spatial shape of the object in GeoJSON format. Mandatory in the case of additions and changes, and necessary in the case of a version correction, if the shape of the room is to be improved.
kujuMoodustusviis		char(1)	D – digitized; K – mapped; M – measured. Mandatory with room shape.
ehakTyyp		integer	EHAK settlement type identifier, the meaning of the numbers is as follows: 0 - county, 1 - rural municipality, 3 - town, 4 - city, 5 - city as settlement unit, 6 – city district, 7 – small town, 8 - village
Address (in case of parallel addresses, all his addresses are provided)			
adsTase1	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.

name		*data type*	*description*
adsTase2	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
adsTase3	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
adsTase4	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
adsTase5	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
adsTase6	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
adsTase7	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
adsTase8	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	Component name without species name.
	Nimetus_liigiga	string (300)	Component name with species name.
Punkt_x		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object in the L-Est system
Punkt_y		double (min 300000 max 800000	The y-coordinate of the address point of the object in the L-Est system
~~Tekst~~		~~string (1000)~~	~~The non-normalized part of the address in text form~~

In the case of a version correction, the addresses of the object do not need to be added to the service, because they cannot change anyway. Also, in case of cancellation, the addresses and shape of the cancelled object do not have to be in the service.

In the case of a version correction, only the spatial form, if specified, or the legal basis with the date, if it needs to be corrected, is provided. Data that does not need to be corrected will not be transmitted through the service.

Output

name	*data type*	*description*
result		
ADSTulem	string	1 - in case of success; 0 on error
ADSTeade	string	Service text message. If the answer is positive, additional information, if the answer is negative, an error message
Object (exists if save was successful)		
ADS_OID	string	Object ADS system code
Adob_id	integer	Version ID of the object in the ADS system
Aadress	string	The optimized full address of the object, including all parallel addresses

name	***data type***	***description***
Lahiaadress	string	The immediate address of the object, which contains all parallel addresses
Address (existing if save was successful). Parallel addresses have multiple elements		
ADR_ID	Int	The unique key of the address
Koodaadress	string	Code address
Taisaadress	string	Normalized address text
Lahiaadress	string	Normalized nearby address

2.3 Latest versions of X-Road services based on SOAP Services

2.3.1 Interfacers address change suggestion log (ADSadrTagasisideMuudatused.v1)

Service version: **ADSadrTagasisideMuudatused.v1**

This service is a recommended replacement for the previous service: Interface Address Suggestion Service (ADSadrTagasisideSoovitused.v2)

A new logging system has been created in the ADS system to monitor changes to interface objects. The new logging system logs the change event in the following cases:

- automatic addition of recommendations, incl. In cases during submission (removal of recommendations does not create a log during submission);
- Adding or removing recommendations manually through the user interface, including a recommendation to remove all links.
- Adding or removing suggestions through imports.
- when adding or removing additional identifiers (SPV, MSL, HPV) to an object via the user interface or by importing additional identifiers.

In the case of a change event, the type of change is not distinguished, i.e. the same log event occurs in all the cases listed.

Events that occur on one object are reduced by date. This means that multiple change events are not logged for the same object within the same date. This is necessary to reduce excessive noise in the log, because as a rule, a change is made to an object that causes more than 1 log in a row (1 suggestion is removed, another is added, a tag is changed, etc.).

Because only the additional ID of the interface object can be changed during the day (eg MSL, SPV added / removed), the block of the recommended address and object may be empty in the recommendations service. In this case, the interface does not add / change / remove ADS connections on its part, it only changes the additional identifiers.

It may also be recommended to remove the association - then the interface must remove the invalid ADS address and object association in its system. It is also possible that the log needs to be changed, but nothing needs to be changed, e.g. if the user added a suggestion and then removed the suggestion immediately, the log will still appear, but nothing has changed in the end (there are no suggested objects and addresses, but additional attributes are in response). based on up-to-date data).

Input

name	*data type*	*description*
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
register	string (10)	Register type from the classifier. Each register using the service will be assigned its own code, which it will provide upon submission. The classification is as follows: RR - Population register (Rahvastikuregister); AR - Business register (Äriregister); KR - Land register (Kinnistusraamat), EP - Eesti Post. Required

name	*data type*	*description*
logId	integer	Records larger than the LogId value Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
Return Management		
aadressKomp	boolean	True - Returns the recommended address with references to components. False - Returns addresses in text only with code address and ADR_ID. Default: false.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	date	Log entry date without time.
register	string	Type of register from the classifier. RR - Population Register; AR - Business register; KR - Land register, EP - Eesti Post.
idRegistris	string	Object ID in the interfaced register. In long form, i.e. with the version ID, if provided by the interface.
SeostPoleVaja	boolean	True - The interface object presented does not require a connection to the ADS system in terms of address or object. False - The object being played should be compatible with the ADS data Default: false.
MituSeostLubatud	boolean	True - The represented interface object can have multiple relationships to the ADS object False - the object to be played should have an association with exactly 1 ADS object Default: false.
HooneosaPoleVaja	boolean	True - specified address is not a problem. False - specified address is problematic. False even if the interface does not have a specification at any address.
probleemne	boolean	The True Interface object was recognized as a problem by the ADS system. The False interface object is not a problem in the ADS.
SeosedPoleKorrektsed	boolean	True - The links provided are incorrect and must be removed or replaced. What to replace - the ADS system cannot make recommendations on this; the suggested objects and addresses are missing. There is no recommendation to remove False links. The ADS system suggests replacements or everything is correct. Default: false.
Suggested objects (0 - n elements in the answer).		
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.

name		*data type*	*description*
objektiLiik		string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
origTunnus		string	Identifier of the object in the reporting register.
aadress		string	The optimized full address of the object, which includes all parallel addresses.
unikaalne		boolean	The feature has a unique address requirement (UN attribute).
eTunnus		boolean	Has value only for buildings and building parts. True - the building or building part is suitable for habitation; false - not suitable for habitation. Null - the attribute is undefined..
olek		char(1)	K - valid (also within the ADS system, objects in the O (standby) state are included to results with the state K); T - cancelled.
Suggested address (0 - n elements in response).			
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the unofficial area to which the address belongs.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.

name		*data type*	*description*
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.

2.4 Earlier versions of X-Road services

This chapter lists earlier versions of X-Road services that may still be available. The latest versions of services must be used (i.e. switch to them as soon as possible), earlier versions are planned to be closed in the future.

Descriptions may be out of date. The immediate predecessors of the current versions are described, and earlier ones are generally named.

These services are based on SOAP request technology.

2.4.1 Querying Address Objects (ADSobjotsing.v7)

Service version: ADSobjotsing.v6 - recommended to upgrade to ADSobjotsingV8.v1

The service allows you to search the system for address objects that meet the conditions. Separate parameters can be used to control the returned data.

If no conditions are met in the input and only the return control parameters are valued with the default values, the service returns the first 100 arbitrary address objects.

The service returns the current state of the found object(s) i.e. valid and pending address objects.

Input

name	*data type*	*description*
Object search terms		
origRegister	string (10)	Registry identifier of the origin of the object type. Can be used to select multiple address object types: • MIS – Land Information System (address object types MK, OV, AY, LO, CU) • KNR – Place name register (types of address object VK, LP) • EHR – Building register (address object types EE, ME, ER, MR)
objektiLiik	string (2)	Address object type code from the classifier. The type of address object that caused the change. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building

name	*data type*	*description*
adsOid	string (10)	Object ID in the ADS system.
origId	string (20)	Identifier of the object in the register of origin.
adrId	integer	The version id of the address to search for, if known to the caller. The service only returns valid objects associated with the address. Other conditions apply if they are valued in the input, except for related AdsOid.
xkoord	double (min 6300000 max 6700000)	The x-coordinate of the point in the L-Est system that is a query condition.
ykoord	double (min 300000 max 800000	The y-coordinate of the point in the L-Est system that is a query condition.
ulatus	double	The square of the side of the area in meters in meters. Default: 0. The value is only taken into account if coordinates are available.
lahiAadress	string (1000)	Part of the nearby address in textual form. In certain cases, it may be necessary to specify a nearby address if the word contained in the nearby address matches the name of the EHAK object.
aadressTekst	string (1000)	Address or part thereof in textual form. Separate address parts with a comma, it is also recommended to use the features specifying the place name (city, district, street, street, rural municipality, county, county, town, etc.) e.g.: „Harju maakond, Tallinna linn, Kristiine linnaosa, Vindi tn“ or „Tartu maakond, Vana-Kuuste küla“.
otsinguMeetod	integer min 1 max 2	Search method: Possible values: 1, 2 1: AND - Search for addresses that contain all the words in the entered text. 2: OR - Search for addresses that contain at least one of the words in the address text entered. Default: AND.
huviPunktiNimi	string	Search by the name of the POI associated with the feature. The attribute of the search precision is applied to the attribute, but the search method is not applied. The search is performed independently of the uppercase and lowercase letters.
otsinguTapsus	integer min 1 max 2	Search accuracy: Possible values: 1, 2. 1: EXACT - searches for addresses that contain words in the address text. 2: FROM START - Searches for addresses that contain words beginning with the address text. Default: EXACT. The CENTER and END values of the method are out of use because they did not work as expected.
syno	boolean	Also search for synonyms. True - also searches for synonyms. False - searches only official texts. Default: false. Synonyms are searched only for otsinguTapsus =1 - EXACT, because if the value is FROM START, the addressText does not contain the full words to search for synonyms.

name	*data type*	*description*
seotudAdsOid	string (10)	Based on the input ADS_OID, the complete family is issued in the response. The family consists only of current or valid (states O and K) objects. • If there is a cadastral parcel (CU) in the input, the answer is the cadastral parcel itself, as well as all the buildings directly related to it, as well as all the building parts of these buildings. • If there is a building in the input (EE or ME), the answer is the cadastral parcel directly related to the building (there may be several) and all the buildings on these parcels (including the building itself) and all parts of those buildings. • f there is a building part (ER or MR) in the input, the building to which the building part belongs is first identified. The response will issue cadastral parcels directly related to the building (there may be several) and all the buildings on these parcels and all parts of the buildings in those buildings (including the part of the building itself). NB! For this input parameter, the presence of other search conditions has no effect, except for the parameter ObjectType, which alone can narrow the return quantity. Return control parameters are effective.
Return Management		
hulk	boolean	Only return the number of address objects. Default: false. True - The number of found objects is returned and the settings of the remaining return parameters are ignored. False - found objects are returned and the following return parameters are taken into account.
andmeVektor	string (3)	Default: 000 A data vector is a string of three characters. In a separate position, the symbols indicate which data the service returns. The first position indicates the alphanumeric data of the object, the second the spatial data and the third the address data. Pos 1 = 0 - does not return alphanumeric data; Pos 1 = 1 - alphanumeric data; Pos 2 = 0 - no spatial data is returned; Pos 2 = 1 - spatial data; Pos 3 = 0 - address data is not returned separately; Pos 3 = 1 - returns addresses as separate entries.
aadressKomp	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
EHRlisaandmed	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
probleemid	boolean	True - also returns object problems and comments. False - does not return problems. Default: false.
objJarglased	boolean	True - Returns the ancestors / descendants of the object. False - does not return object sequence information. Default: false.

name	*data type*	*description*
seotudObjektid	boolean	The parameter is only relevant for buildings and cadastral parcels (CU), as there are no connections to other objects. Only current objects (states O and K) that are directly related (priorities 1 and 2) are considered. • In the case of CU, buildings related to CU will be issued. • In the case of a building, the CUs related to the building and all other buildings on these CUs except the building itself are issued. True - Returns directly related objects. False - does not return related items. Default: false.
seotudHooneosad	boolean	True - a block of related building parts is added to the return. False - does not return related parts of the building. Default: false.
huviPunktid	boolean	True - Returns the names of points of interest (POIs) associated with the feature. False - does not return POI names associated with the feature. Default: false.
liidestujaObjektid	boolean	True - returns the objects of the Land Register (KR - Kinnistusraamat) and the Business Register (AR - Äriregister) related to the object. False - does not return objects from interfaced registers associated with the object. Default: false.
alatesOid	string (10)	ADS_OID from which the result is returned. Required to fix the beginning of the set and retrieved from the previous query if it did not return everything. By default, empty is returned from the first object found.
maxarv	integer	Max number of records to return. Default system limit.
ruumiAndmeteFormaat	enum	WKT GML - gml 3.1.1 format (default) GeoJSON

Output

name	*data type*	*description*
Result		
objektideArv	integer	Number of objects that match the query conditions (returned only if you wanted to include objects).
jargmineOid	string	The ADS_OID of the next object to be queried from. Returned if the request was returned as large as possible at a time and the user did not limit the number of entries.
Object (repeats according to the number of objects found, if objects were requested separately, will always be returned)		
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
aadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
objektiUrl	string	Link to view the data on the map.
aadrProbleeme	integer	Total number of current, non-current issues and comments related to the object. Issues marked as deleted will not be considered. Problems are considered based on ads_oid.

name	*data type*	*description*
eellased	string	List of ADS_OID values for objects that are possible ancestors of the object. List with separated semicolons.
jarglased	string	List of ADS_OID values for objects that are possible descendants of the object. List with separated semicolons. Descendants are only possible for cancelled objects.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
hooneOID	string	In the case of a building unit, the ADS system code of the building to which the building unit belongs.
Alphanumeric data of the object (returned if the data vector 1.pos = 1)		
tekkimiseAlus	string	Legal basis for the version.
kehtivAlates	date	The effective date of the legal basis.
esitatud	dateTime	The effective date of the version data in the ADS system with the time.
hooneKujuPindala	double	Area m2 calculated on the basis of the 2D shape of the building to one decimal place.
hooneKorgusR	double	Building eaves height m based on ETAK data. **hooneKorgusR** is the height of the building eaves in meters with such accuracy as it is in the data of the Estonian Topography Data Collection (ETAK). In ETAK, the spatial shape of the building is digitized in a 3D environment with the height of the eaves. The value of the buildingHeightR attribute is found as the averaged difference between the height values of the spatial shape of the building (the relative height is calculated for each corner point of the building) and the ground height model compiled on the basis of aerial laser scanning (ALS) data, which is rounded to whole meters. Quality is not checked; negative values are not shown. Negative values are not eliminated directly. Corner points with a relative height of -1<z<1 (i.e. close to the ground) are excluded from the averaging on residential and ancillary buildings.
hooneKorgusM	double	Maximum (ridge) height of the building m based on ETAK data. **hooneKorgusM** is the maximum (ridge) height of the building in meters with the accuracy as in the ETAK data. Automatically found in aerial laser scanning (ALS) data in areas with 15 or more elevation points per square meter. Attempts are made to exclude chimneys and antennas. The data is updated with each proper ALS result. As a rule, it takes place once a year in larger cities and their surroundings, and according to the receipt of ALS data, every few years also in smaller cities. The stereo mapper can check the data and correct it if necessary.
hooneosaKorrus	double	Entrance floor of the building part from EHR data, if known.
Spatial data of the object (returned if data vector 2.pos = 1)		
ruumiKuju	the format specified in the input	The spatial shape is returned according to the format specified in the service input.
kujuMoodustusviis	char(1)	D - digitized; K - mapped; M – measured.
tsentroidX	double (min 6300000 max 6700000)	X-coordinate of the reference point of the object in the L-Est system (northing).
tsentroidY	double (min 300000 max 800000)	Y-coordinate of the reference point of the object in the L-Est system (easting).
etakid	integer	ETAK_ID associated with the object.
Address. There are several elements for parallel addresses. (Returned only if the data condition of the data vector 3rd pos = 1)		

name		*data type*	*description*
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the unofficial area to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the informal region, i.e. alternative names.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, i.e. the connection point between the object and the address.
punktY		double (min 300000 max 800000)	The y-coordinate of the address point of the object, i.e. the connection point between the object and the address.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
Additional EHR data (object uniquely associated with the object). The data is only available for buildings or parts of buildings from the EHR register.			
nimetus		string	Name assigned to a building or part of a building in the EHR system.
pind		double	Area under the building in the case of a building, total area of the dwelling or non-residential space in the case of a part of the building.
kasutusotstarbed		string	List of uses for the building.

name	*data type*	*description*
korrus	integer	Entrance floor for part of the building.
staatus	string	Object status in the EHR register.
andmedSeisuga	date	The date the EHR data in the ADS was updated.
Object problems and comments (element related to the object). Multiple elements in case of multiple problems. Problems are considered ADS_OID basis.		
aadress	string	The address you are having trouble with. May be missing if the problem is not directly with the address.
staatus	char(1)	P - current problem; M - non-current problem or remark.
veaKood	integer	Error code based on classifier.
veaTekst	string	Textual description of the problem.
markus	string	Explanation of the problem or reason for not updating it. Just a note if there's no problem.
Related objects (object related element). Contains the number of related objects.		
adsOid	string	The identifier of the associated object in the ADS system (ADS_OID).
adobId	integer	The version ID of the associated object in the ADS system.
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
origTunnus	string	The identifier of the related object in the original register.
aadress	string	The full text address of the associated object, including all parallel addresses in long optimized form.
unikaalne	boolean	The associated object has a unique address requirement (UN attribute).
Building parts (element related to an object). In the case of CU (cadastral parcel - katastriüksus), the building parts of all the buildings located on the given CU. In the case of a building, parts of the building are located in the given building and in all other buildings located on the same CU. In the case of a part of a building, other parts of the building are located in the same building and all other parts of the building are located on the same CU.		
adsOid	string	Building part ADS system code.
adobId	integer	Version number of the building part in the ADS system.
objektiLiik	string (2)	Address object type code for building part from the classifier. • • ER - dwelling • • MR - non-residential space
origTunnus	string	Identification of the part of the building in the original register.
aadress	string	The full textual address of the part of the building that contains all the parallel addresses in a long optimized form.
hooneOID	string	The ADS code of the building to which the building unit belongs.

name	*data type*	*description*
Points of interest (object-related element). Contains the names of related POIs.		
huviPunktiNimi	string	The name of the point of interest (POI) associated with the feature.
Objects of interfaced registers (object related element). Contains references to objects in the Land Register (Kinnistusraamat) and the Business Register (Äriregister).		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.

Components are returned only if in the input parameter AadressKomp=true.

Address objects that meet the conditions specified in the input are searched for and returned in the order of ADS_OID.

Parameters not specified by the user are transmitted with default values except MaxArv. If not specified, the procedure will pass zero. Boolean values are passed to the procedure in the form 1 - true / 0 - false. Points x and y must be inverted at the moment of rotation.

2.4.2 Querying Addresses (ADSaadrotsing.v4)

Service version: **ADSaadrotsing.v4**

It is a search service that combines search capabilities based on both components and text.

The input to the service is words in the address that are placed at specific levels, if known, or not. In the latter case, words are searched throughout the address text.

The service is intended for searching the ADS system for addresses that meet the conditions in the input. You can also search for invalid addresses.

The returned data can be controlled with separate input parameters.

If no conditions are met in the input and only the return control parameters are valued with the default values, the service returns the first 100 arbitrary address objects.

Input

name		*data type*	*description*
Object search terms			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase4	kood	string	Code of the existing component.

name		*data type*	*description*
	nimetus	string	Component name without species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
lahiAadress		string (1000)	The part of the nearby address (levels 4 - 8) in text form.
aadressTekst		string (1000)	Place address in text form. Suitable if the entire search input is only transmitted in one long text.
Sihtnumber		integer	The zip code of the address you are looking for.
maapiirkond		string	Name of the informal region to which the address belongs.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the point.
punktY		double (min 300000 max 800000	The y-coordinate of the point.
Ulatus		double	The radius of the area to be queried in meters based on the location of the point. Default: 0. The value is only taken into account if coordinates are available.
objektiLiik		string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building All types by default.
koodAadress		string	Code address or start. If the code address is not provided completely, a similar search is always performed, no need to add wildcards.
adrId		integer	The version id of the address to search for, if known to the caller. If the version is not valid, it is returned only if the parameter Valid is also true.
Return Management			
objekt		boolean	True - The data of the related address object is also returned. If the address is associated with multiple objects, the response contains an object data block multiple times. False - Data related to the object is not included in the response. Default: False.
aadressKomp		boolean	True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
alatesKoodist		string	Code address from which the result is returned. Required to fix the beginning of the set and retrieved from the previous query if it did not return everything. Blank by default, will be returned from the first entry found.
maxarv		integer	Max number of records to return. Default system limit.

name	*data type*	*description*
kaKehtetud	boolean	Will the query also return cancelled and outdated address versions? Default: false.
kasNormaliseerida	boolean	True - the system tries to separate the words determining the EHAK levels from the aadressTekst input and searches the nearby address based on the rest. This option is suitable if the consumer does not know the exact EHAK levels and all input is presented only in a single text. False - aadressTekst in the text input are searched for in the full address. Default: false.
aadrJarglased	boolean	True - Returns the ancestors / descendants of addresses. False - does not return address sequence information. Default: false.
liidestujaObjektid	boolean	Only effective if items related to the address have also been ordered for return. True - returns the data of the Land Register (KR-Kinnistusraamat) and the Business Register (AR - Äriregister) related to the object. False - does not return data from interfaced registries associated with the object. Default: false.
ruumiAndmeteFormaat	enum	WKT GML - gml 3.1.1 format (default) GeoJSON

If the input is presented as components, the addresses where the entered words appear in the names of the components of the respective levels are searched. Case insensitive.

For example, if the name of level 2 is „Tartu“, the system will search for addresses where the name of „Tartu vald“ or „Tartu linn“ is level 2.

For example, if the name of level 5 is „jaama“, you will search for addresses where level 5 is named „Jaama tee“ or „Jaama tänav“ or „Jaama tn“ or „Jaama põik“, but you will not search for addresses where The name of the level is, for example, „Jaamaküla tee“. The word you enter must always appear exactly in the name.

For level 4 and level 5 components, synonyms are always searched for. This increases the likelihood that the correct address will be found for the commitment names as well. For example, you can search for a street with either „L. Koidula” or „Lydia Koidula”, the component is still found with the name form it is currently official in the ADS system.

If there is a level 7 or level 8 name, an exact search will be performed. For example, if you enter the name „2“ in level 7, addresses with the number 2 in level 7 will be searched for. Numbers „22“, „2a“ and „2/1“ are not found.

According to the same rules, a search is performed even if the search words are entered not as levels, but as a single string. In this case, too, addresses are searched that contain the words in exactly this form and translation. The order of the words does not matter. Synonyms are not included in this case, so only those addresses are found where all the words entered appear in the official address text.

Wildcards. If you still want to use not the exact words but the beginning of the words in the name of the component or in the search words in the address text, it is possible to mark the missing part of the word with an *. For example, if you search for „station *“, then in addition to the „Station road“ component, you will also find „Station road“. You can also search for „**aia**“. In this case, the words „õuna*aia*“ and „*aia*maa „ are found, but the word „ s*aia*lille“ is also found, which may not have been the purpose of the search. When using wildcards, the word must be at least 3 letters long, otherwise the query will be considered too general and an error will occur.

In addition, wildcards * and - can be used to specify a level.

* indicates that the corresponding level must be specified in the address; indicates that the corresponding level must be missing from the address. Wildcards must appear in the component name field; wildcards are not considered in the component code.

Output

name		*data type*	*description*
Result			
jargmineKood		string	The next code address from which to request the next set. Returned if the request was returned as large as possible at a time and the user did not limit the number of entries.
Address			
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the informal region to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the informal region, i.e. alternative names.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address representation point.
punktY		double (min 300000 max 800000	Y-coordinate of the address representation point.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.

name		*data type*	*description*
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
objArv		integer	Number of objects associated with the address.
olek		string	K – valid. V – old e.g. outdated version. T – cancelled.
eellased		string	A list of ADR_ID values of cancelled addresses that are possible ancestors of the address, or the ADR_ID of an outdated version of the address. Ancestors are given only for valid addresses. List separated by semicolons.
jarglased		string	List of ADR_ID values for addresses that are possible descendants of the address. List with separated semicolons. Descendants are only possible if the address is cancelled (olek = T) or outdated (olek = V). The old e.g. outdated address (olek = V) always has exactly 1 descendant, but if it is already cancelled, it will not be returned (valid decendant of the cancelled address is returned if exists).
An object (if the object data was also ordered), if there are several objects, it occurs several times			
objektiLiik		string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid		string	Object identifier in the ADS system (ADS_OID).
adobId		integer	The version ID of the object in the ADS system.
origTunnus		string	Object ID in the original register.
objektiUrl		string	Link to view the data on the map.
ruumiKuju		the format specified in the input	The spatial shape is returned according to the format specified in the service input.
unikaalne		boolean	The object has a unique address requirement (UN attribute).
Objects of interfaced registers (object related element). Contains references to interface objects in the Land Register and the Business Register.			
register		string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris		string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo		string	Special ownership number for apartment ownership or name of legal entity.

Returns eligible addresses in code address order.

The service does not perform spatial analysis, and if the input had the coordinates and range of a given point, the address point is searched based on a range of numerical values of the coordinates.

If the address is associated with multiple objects, it will appear in the response once with the association of multiple objects. Only valid objects will be returned. If invalid addresses and object data were also requested as a result of the query, only connections of valid objects will be added. If the obsolete or cancelled address is no longer associated with any valid object, it will be returned without the object being associated.

2.4.3 Querying object changes (ADSobjmuudatused.v6)

Service version: **ADSobjmuudatused.v6**

Through the service, the external information system can find out what changes have been made in the data of the address objects.

All additional data ordered - additional EHR data, predecessors / descendants, problems, related objects, related building parts, points of interest, interface objects - returns the service as of the moment of the request, not as of the moment the log entry was created.

The events to be logged are based directly on changes to the object's data:

- **Add** (I) - an object with the corresponding ADS_OID was added to the system.
- **Change** (U) - the data of the object with the corresponding ADS_OID changed. A new version (with a new value of adob_id) was created for the object.
  NB! If the adobId and oldAdobId values in the log entry are equal, the object version is corrected. No new version of the object has been created, but the referenced version has changed shape or legal basis. Minor topological changes and text changes to the legal basis do not result in a new version of the address object, but are overwritten in the existing version. The object address and UN ATTRIBUTE cannot be changed during the upgrade. The version correction log is also generated when the following additional attributes change: etakId, hooneosaKorrus, kujuMoodustusviis. A change to the rest of the additional features does not cause a version correction log.
- **Cancel** (D) - The last version of the item was cancelled. The object with the corresponding ADS_OID has been cancelled.
- **Restore** (R) - The cancelled item will be restored. A new version of the object will also be created.
- **Change of related objects** (H) - event of change of buildings. Cadastral parcels and the buildings located on them are considered to be interconnected objects. This event is issued when the first related object occurs in the object or the last one disappears. In case of event H, it is possible to determine whether the object has related objects or not on the basis of the information in the output „Related objects“. If this section „Related objects“ is empty, then the object no longer has related objects and vice versa.
  Exceptionally, there may be a situation in the ADS where the association information changes several times during the day, so multiple H-events may be logged. However, the output breakdown „Related objects“ is filled in at the time of the query. Thus, both events point to the same state of construction.
- **Associated Interface Object Change** (L) - The interface object associated with the address object has either been added, removed, or the interface object data has changed.
- **Change in additional EHR data** (E) - Additional data from the EHR register of a building or part of a building was created or changed.

This version of **the service no longer returns B-events** (change of POI names). A separate service **ADSpoimuudatused** has been created for changes related to POIs. They will no longer be added to the address objects, but the old events will still remain in the system. Old B-events can be read with earlier versions of the service while they are still in use.

Input

name	*data type*	*description*
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudatudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building All types by default.
logId	integer	Log entries larger than which Log ID value are searched. Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
hSyndmused	boolean	True - also returns an H event. False - H events are ignored. Default: false.
lSyndmused	boolean	True - also returns an L event. False - L events are ignored. Default: false.
eSyndmused	boolean	True - also returns an E event. False - E events are ignored. Default: false.
Return Management		
andmevektor	string (3)	Default: 000 A data vector is a string of three characters. In a separate position, the symbols indicate which data the service returns. The first position indicates the alphanumeric data of the object, the second the spatial data and the third the address data. Pos 1 = 0 - does not return alphanumeric data; Pos 1 = 1 - alphanumeric data; Pos 2 = 0 - no spatial data is returned; Pos 2 = 1 - spatial data; Pos 3 = 0 - address data is not returned separately; Pos 3 = 1 - returns addresses as separate entries.
aadressKomp	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
EHRlisaandmed	boolean	For an object from the True-EHR registry, it also returns some additional attributes. False - does not return additional attributes in the EHR. Default: false.
objJarglased	boolean	True - Returns the ancestors / descendants of the object. False - does not return object sequence information. Default: false.
probleemid	boolean	True - also returns object problems and comments. False - does not return problems. Default: false.

name	*data type*	*description*
seotudObjektid	boolean	The parameter is only relevant for buildings and cadastral parcels (katastriüksus – KÜ), as there are no connections to other objects. Only valid objects – actual statuses (states O and K) that are directly related (priorities 1 and 2) are considered. • In the case of CU (cadastral parcel), buildings related to CU will be issued. • In the case of a building, the CUs related to the building and all other buildings on these CUs except the building itself are issued. True - Returns directly related objects. False - does not return related items. Default: false.
seotudHooneosad	boolean	True - a block of related building parts is added to the return. False - does not return related parts of the building. Default: false.
huviPunktid	boolean	True - Returns the names of points of interest (POIs) associated with the feature. False - does not return POI names associated with the feature. Default: false.
liidestujaObjektid	boolean	True - returns the data of the Land Register and the Business Register related to the object. False - does not return data from interfaced registries associated with the object. Default: false.
ruumiAndmeteFormaat	enum	WKT GML - gml 3.1.1 format (default) GeoJSON

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - object was added, U (update) - object was changed, D (delete) - object was deleted, R (restore) - object was restored. H - change of related objects. L - change of related interface objects. Modification of E - EHR supplementary data.
muutvektor	string (3)	The change vector is a string of three 0/1 characters. Separate positions indicate which data has changed from the previous version. The change vector has value only in the event of a change. Pos 1 - legal basis of the object Pos 2 - object shape Pos 3 - object addresses
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).

name	*data type*	*description*
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
taisAadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
olek	string	The status of the object version that caused the event at the time of the query: K - the version is the latest, the object as a whole is current (in the K or O state); V - Outdated, version not latest, object has been modified since this log message (another change log will follow soon); T - version is the last one, the object as a whole has been cancelled (if the status = T for the change or add log, it indicates that the cancel log will follow soon).
vanaAdobId	integer	When you change the id of a previous version of an object.
vanaTaisAadress	string	The full address of the previous version of the object.
vanaLahiAadress	string	Nearby address of the previous version of the object.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
eellased	string	List of ADS_OID values for objects that are possible ancestors of the object. List with separated semicolons. Ancestors are returned at the time of the request, not at the time the log entry is created.
jarglased	string	List of ADS_OID values for objects that are possible descendants of the object. List with separated semicolons. Descendants are only possible for cancelled objects. Descendants are returned at the time of the request, not at the time the log entry was created.
hooneOID	string	In the case of a building unit, the ADS system code of the building to which the building unit belongs.
Alphanumeric data of the object (returned if the data vector 1.pos = 1)		
tekkimiseAlus	string	Legal basis for the version.
kehtivAlates	date	The effective date of the legal basis.
esitatud	dateTime	Date and time the version data entered into force in the ADS.
sulgemiseAlus	string	Legal basis for version closure.
kehtivKuni	date	The date of the legal basis for version closure.
hooneKujuPindala	double	Area m2 calculated on the basis of the 2D shape of the building to one decimal place.
hooneKorgusR	double	Building eaves height m based on ETAK data.
hooneKorgusM	double	Maximum (ridge) height of the building m based on ETAK data.
hooneosaKorrus	double	Entrance floor of the building part from EHR data, if known.
muudatuseAlgataja	string	Completed for building parts only: X - X-Road service, K - ADS user or system.
Spatial data of the object (returned if the data vector 2.pos = 1).		

name		*data type*	*description*
ruumiKuju		the format specified in the input	The spatial shape is returned according to the format specified in the service input.
kujuMoodustusviis		char(1)	D - digitized; K - mapped; M - measured.
tsentroidX		double (min 6300000 max 6700000)	X-coordinate of the reference point of the object in the L-Est system (northing).
tsentroidY		double (min 300000 max 800000)	Y-coordinate of the reference point of the object in the L-Est system (easting).
etakId		integer	ETAK_ID associated with the object.
Address. There are several elements for parallel addresses. (Returned only if the data condition of the data vector 3rd pos = 1)			
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the informal region to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the informal region, i.e. alternative names.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address representation point (The address point of the object, i.e. the connection point between the object and the address).
punktY		double (min 300000 max 800000)	Y-coordinate of the address representation point (The address point of the object, i.e. the connection point between the object and the address).
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.

name		*data type*	*description*
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
Additional EHR data (object uniquely associated with the object). The data is only available for buildings or parts of buildings from the EHR register.			
nimetus		string	Name assigned to a building or part of a building in the EHR system.
pind		double	Area under the building in the case of a building, total area of the dwelling or non-residential space in the case of a part of the building.
kasutusotstarbed		string	List of uses for the building.
korrus		integer	Entrance floor for part of the building.
staatus		string	Object status in the EHR register.
andmedSeisuga		date	The date the EHR data in the ADS was updated.
Object problems and comments (element related to the object). Multiple elements in case of multiple problems. Problems are considered ADS_OID basis.			
aadress		string	The address you are having trouble with. May be missing if the problem is not directly with the address.
staatus		char(1)	P - current problem; M - non-current problem or remark.
veaKood		integer	Error code based on classifier.
veaTekst		string	Textual description of the problem.
markus		string	Explanation of the problem or reason for not updating it. Just a note if there's no problem.
Related objects (object related element). Contains the number of related objects			
adsOid		string	The identifier of the associated object in the ADS system (ADS_OID).
adobId		integer	The version ID of the associated object in the ADS system.
objektiLiik		string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
origTunnus		string	The identifier of the related object in the original register.
aadress		string	The full text address of the associated object, including all parallel addresses in long optimized form.
unikaalne		boolean	The associated object has a unique address requirement (UN attribute).
Parts of a building (element related to an object). In the case of a building, the parts of the building (if any) are located in the building. In the case of a part of a building, other parts of the same building (if any) other than the part of the building itself.			
adsOid		string	Building part ADS system code.

name	*data type*	*description*
adobId	integer	Version number of the building part in the ADS system.
objektiLiik	string (2)	Address object type code for building part from the classifier. • ER - dwelling • MR - non-residential space
origTunnus	string	Identification of the part of the building in the original register.
aadress	string	The full textual address of the part of the building that contains all the parallel addresses in a long optimized form.
hooneOID	string	The ADS code of the building to which the building unit belongs.
Points of interest (object-related element). Includes a list of related POIs.		
huviPunktiNimi	string	The name of the point of interest.
Objects of interfaced registers (object related element). Contains references to interface objects in the Land Register and the Business Register.		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.

The result is returned in log_id order. If there are more changes in the given period than can be returned at once, the same query must be repeated, giving the input the result of the previous query of the last log_id value. All log entries are forwarded if the query response is empty.

2.4.4 Querying address changes (ADSaadrmuudatused.v6)

Service version: **ADSaadrmuudatused.v6**

Through the service, the external information system receives information on the addition, change and cancellation of addresses in the ADS system for a predetermined period of time. Log events are based directly on addresses:

- **Add** (I) - The address with the corresponding code address was added to the system
- **Change** (U) - The address with the corresponding code address has been changed. A new address record (with a new adr_id value) was created, but it consists of exactly the same components. The name of some components and thus the text address is changed.
- **Cancel** (D) - The last version of the address was cancelled.
- **Restore** (R) - The cancelled version of the address was re-validated.
- **Point Coordinate Change** (P) - The coordinates of an address representative point can change when an address is assigned to a new object or removed from an object, or when the shape or importance of an object associated with an address changes. In this situation, the coordinate values in the current address entry are simply replaced, the old state is not retained. The event marks such a change.
- **Loss of connections** (S) - this event is only possible for cancelled addresses. The cancelled address may be attached to another valid object. This event occurs when the last link between an address and a valid object is removed, in other words, when that address no longer remains the address of any valid object.
- **Postcode change** (N) - The event that occurs when a postcode is added, changed or removed from an address. Not related to address change event. The zip code changes at the address regardless of other events.

- **Unofficial Area Name Change** (A) - The event that occurs when an area name is added, changed, or removed from an address. Not related to address change event. The region name changes at the address independently of other events.
- **Change Priority Object** (O) - Adds, modifies, or removes the priority object reference to the address.
- **Change of technical identifier** (T) - event occurring when assigning / removing an identifier „technical" to an address.

The object that caused the change may be one that has never owned the address itself. For example, the invalidation of a settlement results in the invalidation of all addresses that contain the component initiated by that settlement. However, the add event can only occur by an object that owns the address. The change event can also be caused by an object that does not have the address itself. For example, changing a street name changes all addresses that contain a component initiated by that thouroughfare object.

The ancestors and descendants of the address will be forwarded at the time of the request. Sequence relationships change over time; they are added to the system as new addresses appear.

Also, the associated interface objects are returned as of the moment the request was made.

Input

name	*data type*	*description*
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudatudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
logId	integer	Log entries larger than which Log ID value are searched. Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
pSyndmused	boolean	True - also returns an P event. False - P events are ignored. Default: false.
sSyndmused	boolean	True - also returns an S event. False - S events are ignored. Default: false.
nSyndmused	boolean	True - also returns N events. False - N events are ignored. Default: false.
aSyndmused	boolean	True - also returns event A. False - A events are ignored. Default: false.
oSyndmused	boolean	True - also returns an O event. False-O events are ignored. Default: false.
tSyndmused	boolean	True - also returns a T event. False - T events are ignored. Default: false.
Return Management		
objekt	boolean	True - the data of the address object that caused the change is also returned. False - Data for the object that caused the change is not included in the response. Default: False.
seosed	boolean	True - Valid objects associated with the address at the time of the change are also returned False - Data for related objects will not be included in the response Default: false.

name	*data type*	*description*
aadressKomp	boolean	True - Returns addresses with component references. False - returns addresses in text only with the code and address identifier. Default: false.
aadressJarglased	boolean	True - Returns the ancestors / descendants of addresses. False - does not return address sequence information. Default: false.
liidestujaObjektid	boolean	Effective only if objects (either the object that caused the change or the objects associated with the address) have also been ordered in the response. True - returns the objects of the Land Register (KR – Kinnistusraamat) and the Business Register (AR – Äriregister) related to the object. False - does not return objects from interfaced registers associated with the object Default: false.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - the address was added to the system, U (update) - the text of the address with the same components has changed, the address has been versioned, D (delete) - the address has been cancelled, R (restore) - The address was restored P - the coordinates of the representative point were changed, S - all connections lost, N - zip code change, A - informal area change, O - change of primary address of address, T - Add / remove attribute that the address is technical.
koodAadress	string	Code address.
adrId	integer	Address Version ID.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.
sihtnumber	integer	Zip code assigned to the address.
maPiirkond	string	Name of the unofficial area to which the address belongs
maPiirkondAlias	string	Synonyms of the name of the informal region, i.e. alternative names.
tehniline	boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt	string	The ADS_OID value of the primary object at this address.
vanaAdrId	integer	If the previous version number is changed.
vanaTaisAadress	string	The previous full name change if the address is changed.
vanaLahiAadress	string	If the previous nearby address is changed.

name	*data type*	*description*
esindusPunktX	double (min 6300000 max 6700000)	X-coordinate of the address representation point.
esindusPunktY	double (min 300000 max 800000)	Y-coordinate of the address representation point.
eellased	string	A list of ADR_ID values of cancelled addresses that are possible ancestors of the address, or the ADR_ID of an outdated version of the address. Ancestors are given only for valid addresses. List separated by semicolons. Ancestors are returned at the time of the request, not at the time the log entry is created.
jarglased	string	List of ADR_ID values for addresses that are possible descendants of the address. List with separated semicolons. Descendants are only possible if the address is cancelled (olek = T) or outdated (olek = V). The old e.g. outdated address (olek = V) always has exactly 1 descendant, but if it is already cancelled, it will not be returned (valid decendant of the cancelled address is returned if exists). Descendants are returned at the time of the request, not at the time the log entry was created.
poleSeotud	boolean	True if the address is invalid and not associated with a valid object.
Object that caused the change (if the object data was also ordered)		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system
origTunnus	string	Object ID in the original register
punktX	double (min 6300000 max 6700000)	The x-coordinate of the reference point of the object.
punktY	double (min 300000 max 800000)	The y-coordinate of the reference point of the object.
Objects of interfaced registers (element related to the object that caused the change). Contains references to objects in the Land Register (KR- Kinnistusraamat) and the Business Register (Äriregister).		
register	string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris	string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo	string	Special ownership number for apartment ownership or name of legal entity.
Address association objects (if ordered), if there are several objects, they occur more than once.		

name		*data type*	*description*
objektiLiik		string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid		string	The identifier of the associated object in the ADS system (ADS_OID).
adobId		integer	The version ID of the associated object in the ADS system.
origTunnus		string	The identifier of the related object in the original register.
unikaalne		boolean	The associated object has a unique address requirement (UN attribute).
Objects of interfaced registers (an element associated with a single associated object). Contains references to objects in the Land Register (KR) and the Business Register (AR)			
register		string	KR - Land Register (Kinnistusraamat). AR - Business Register (Äriregister).
idRegistris		string	Object ID in the interfaced register: either the apartment ownership number or the registry code of the Business register, respectively.
lisainfo		string	Special ownership number for apartment ownership or name of legal entity.
Address with components if components were ordered (components of address adr_id were logged, also for event D).			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
muudetudTase		integer	For event U and D, the number of the level from {1 - 8} that caused the address to be changed or cancelled.

The result is returned in log_id order. If there are more changes in the given period than can be returned at once, the same query must be repeated, giving the input the result of the previous query of the last log_id value. All log entries are forwarded if the query response is empty.

2.4.5 Querying object addresses changes (ADSobjaadrmuudatused.v4)

Service version: **ADSobjaadrmuudatused.v4**

Through the service, the external information system can find out what changes have been made in the addresses of the object in a given period of time.

This service returns a log that tracks the creation, change, and loss of an association between an object and an address. The events to be returned are:

- I (insert) - an address was added to the object (the previous version of the object did not have this address),
- U (update) - the object changed its associated address (the previous version of the object had an address with the same code address but a different ID),
- D (delete) - the association of the object with the address was deleted (the previous version of the object had an association, the new one no longer exists).

In addition to the data of the object and address affected by the event, it is also possible to order the object sequence information and other data of objects related to the same address. This additional data is returned by the service at the time of the request, not at the time the log is generated.

Input

name	***data type***	***description***
Search terms		
muudetudAlates	date	The date from which (incl.) The registered changes are to be found.
muudetudPaevad	integer	A number between 1 and 10 multi-day changes to the response are requested. Default: 1 day.
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building All types by default.
logId	integer	Log entries larger than which Log ID value are searched. Default: 0.
maxarv	integer	Max number of records to return. Default system limit.
Return Management		
objJarglased	boolean	True - Returns the ancestors / descendants of the object. False - does not return object sequence information. Default: false.

name	*data type*	*description*
aadressKomp	boolean	True - Returns a new address with references to components. False - Returns addresses in text only with code address and ADR_ID. Default: false.
aadressiSeosObjektid	boolean	True - Returns the objects associated with the address that are currently valid. False - does not return association objects. Default: false.

Output

name	*data type*	*description*
logId	integer	Log ID.
logStamp	dateTime	Time of creation of the log entry, time of making the change.
syndmus	string	I (insert) - an association with the address was added to the object (the previous version of the object did not have this address); U (update) - the object changed the address associated with it (the previous version of the object had an address with the same code but different ID); D (delete) the association with the address was removed (the previous version of the object had an association, the new one no longer exists).
Object data		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
punktX	double (min 6300000 max 6700000)	The x-coordinate of the reference point of the object.
punktY	double (min 300000 max 800000)	The y-coordinate of the reference point of the object.
objektiSyndmus	string	I (insert) - the address was added to the new object, the object was also created during the event of adding this address (possible only in case of the log entry event I). D (delete) - The address was removed from the object due to the object being cancelled (only possible for log entry D event). U (update) - the object was changed or restored during the address addition or removal event (possible for log entry events I, U and D).

name		*data type*	*description*
eellased		string	List of ADS_OID values for objects that are possible ancestors of the object. List with separated semicolons. Ancestors are returned at the time of the request, not at the time the log entry is generated.
jarglased		string	List of ADS_OID values for objects that are possible descendants of the object. List with separated semicolons. Descendants are only possible for cancelled objects. Descendants are returned at the time of the request, not at the time the log entry was created.
unikaalne		boolean	The object has a unique address requirement (UN attribute).
Address data			
koodAadress		string	Code address.
adrId		integer	Address Version ID.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the unofficial area to which the address belongs
maPiirkondAlias		string	Synonyms of the name of the unofficial area , i.e. alternative names.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
vanaAdrId		integer	If the previous version number is changed.
vanaTaisAadress		string	The previous full name change if the address is changed.
vanaLahiAadress		string	If the previous nearby address is changed.
Address with components if components were ordered (components of address adr_id were logged, also for event D).			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.

name		*data type*	*description*
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
muudetudTase		integer	For event U and D, the number of the level from {1 - 8} that caused the address to be changed or cancelled.
Address association objects (if ordered), if there are several objects, they occur more than once. The association objects are returned as of the moment of the request, not as of the moment when the log was created.			
objektiLiik		string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid		string	The identifier of the associated object in the ADS system (ADS_OID).
adobId		integer	The version ID of the associated object in the ADS system.
origTunnus		string	The identifier of the related object in the original register.
unikaalne		boolean	The object has a unique address requirement (UN attribute).

Note: Address changes made during a change to an object have the same LogStamp value

The result is returned in log_id order. If there are more changes in the given period than can be returned at once, the same query must be repeated, giving the input the result of the previous query of the last log_id value. All log entries are forwarded if the query response is empty.

2.4.6 Querying the descendants of a cancelled object (ADSobjjarglased.v3)

Service version: **ADSobjjarglased.v3**

Through the service, interfaces with the ADS system can request objects that are the logical successor of a cancelled address object. Replacement objects may occur later in time, and therefore references to descendants may not be included in the object change log service.

Service input is cancelled ADOB_ID or ADS_OID.

Valid offspring objects have been identified in the ADS system to return the service. By default, only the general data of the object is returned. The consumer can order the return of the object data. In addition, you can control whether object addresses are returned with or without components.

Input

name	*data type*	*description*
Search terms		

name	*data type*	*description*
adobId	integer	Version ID of the cancelled object. If the interface associates its object with adob_id, it can be used to query it. Not required if the association was created from ADS_OID.
adsOid	string (10)	Object ID in the ADS system. Ignored if adob_id is valued.
Return Management		
andmeVektor	string (3)	Controls the return of object descendants. Does not matter in the case of address descendants. Default: 000 A data vector is a string of three characters. In a separate position, the symbols indicate which data the service returns. The first position indicates the alphanumeric data of the object, the second the spatial data and the third the address data. Pos 1 = 0 - does not return alphanumeric data; Pos 1 = 1 - alphanumeric data; Pos 2 = 0 - no spatial data is returned; Pos 2 = 1 - spatial data; Pos 3 = 0 - address data is not returned separately; Pos 3 = 1 - returns addresses as separate entries.
aadressKomp	boolean	The parameter is only taken into account if position 3 in the data vector is 1. True - Returns addresses with component references. False - returns addresses in text-only format with code address and adr_id. Default: false.
ruumiAndmeteFormaat	enum	WKT GML - gml 3.1.1 format (default) GeoJSON

Output

name	*data type*	*description*
Object - the descendant of the object referenced in the input (multiple descendants have multiple elements).		
objektiLiik	string	Address object type code from the classifier: • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
taisAadress	string	The full text address of the object, including all parallel addresses in long optimized form.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
unikaalne	boolean	The object has a unique address requirement (UN attribute).

name		*data type*	*description*
Alphanumeric data of the object (returned if the data vector 1.pos = 1).			
oiguslikAlus		string	Legal basis for the version.
kehtivuseAlgus		date	The effective date of the legal basis.
esitatud		dateTime	Date and time the version data entered into force in the ADS.
Spatial data of the object (returned if the data vector 2.pos = 1).			
ruumiKuju		the format specified in the input	The spatial shape is returned according to the format specified in the service input.
punktX		double (min 6300000 max 6700000)	X-coordinate of the reference point of the object in the L-Est system (northing).
punktY		double (min 300000 max 800000)	Y-coordinate of the reference point of the object in the L-Est system (easting).
Object address. There are several elements for parallel addresses. (Returned only if the data vector 3rd pos = 1 in the query condition).			
adrId		integer	Address Version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the unofficial area to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the unofficial area , ie alternative names.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, ie the connection point between the object and the address.
punktY		double (min 300000 max 800000)	The y-coordinate of the address point of the object, ie the connection point between the object and the address.
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.

name		*data type*	*description*
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.

Components are returned only if the input parameters AadressKomp=true.

If the input is the version ID of the object, but this particular version is not the last one, the query returns data based on the status of the latest version. If the latest version is cancelled, it may have descendants if ADS has identified them in the business rules. If no descendants are found in the ADS, or if the latest version of the object is not cancelled, the return is empty.

2.4.7 Querying the descendants of a cancelled address (ADSaadrjarglased.v3)

Service version: **ADSaadrjarglased.v3**

Through the service, interfaces with the ADS system can request addresses that are the logical successor to a cancelled address. Alternate addresses may occur later in time, and therefore references to descendants may not be included in the change of address log service.

The service input is the ADR_ID of the cancelled (OLEK = T) address. Descendants of outdated addresses cannot be inherited with this service. Valid descendant addresses have been identified in the ADS system to return the service. In addition to the address, the consumer can also order data on objects related to the address.

Input

name	*data type*	*description*
Search terms		
adrId	integer	Cancelled address id.
Return Management		
objekt	boolean	True - The data of the address objects related to the address is also returned. False - Data for related objects will not be included in the response. Default: false.
aadressKomp	boolean	True - Returns addresses with component references. False - returns addresses in text-only format with code address and adr_id. Default: false.

Output

name		*data type*	*description*
Address (multiple elements for multiple descendants).			
adrId		integer	Address (multiple elements for multiple descendants). Address version ID.
koodAadress		string	Code address.
taisAadress		string	Normalized address text.
lahiAadress		string	Normalized nearby address.
sihtnumber		integer	Zip code assigned to the address.
maPiirkond		string	Name of the unofficial area to which the address belongs.
maPiirkondAlias		string	Synonyms of the name of the unofficial area , i.e. alternative names.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address representative point
punktY		double (min 300000 max 800000)	The y-coordinate of the address representative point
tehniline		boolean	True = 1 - this is a technical address. False = NULL - this is not a technical address.
primaarseimObjekt		string	The ADS_OID value of the primary object at this address.
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
Object associated with the address (if object data was also ordered). If there are multiple objects associated with the address, there are multiple items.			

name	*data type*	*description*
objektiLiik	string	Address object type code from the classifier: • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
unikaalne	boolean	The object has a unique address requirement (UN attribute).

2.4.8 Submission of addresses of procedural objects (ADSmenadresit.v1)

Service version: **ADSmenadresit.v1**

Through the service, an external information system (EHR or Land Register) can submit address changes for those objects, which are usually changed only through the procedural system. The service connects to the ADS production system database Oracles. **The service is not intended for public use**.

The service can be used to submit data for 1 or more objects at a time. Presented with required addresses. There may also be new objects not previously registered in the ADS.

It is not possible to add an identifier to an object registered in the ADS system without an association with the origin register via this service. The identifier is mandatory for submission via this service and the existence of objects is checked through the identifier. ADS_OID is optional.

Input

The values in the service input *EsitajaKood* and *Menetleja_nimi* can also be read from the service soap envelope (institution and official). However, if the service challenge is implemented in such a way that the official is always constant and not a real personal identification code, then this solution is not suitable (this is the case in EHR today). Secondly, it is not good to display personal identification numbers in an application. *Menetleja_nimi* is stored in the data as a variable name and is displayed in the ADS application. Therefore, it would be more expedient to provide the name of the person conducting the proceedings in the data of the service, as the service may in any case be used only by the person identified in the register of origin.

name	*data type*	*description*
Artist (appears once in the service)		
esitajaKood	string (10)	Registry code of the organization maintaining the register. The organization must be pre-registered in the admin system of the Land and Spatial Development Board. The organization will be the processor of the procedure to be created through X-Road. Required.

name		*data type*	*description*
menetlejaNimi		string(11)	Full name or personal identification code of the user processing the data. Required.
menetluseLiik		integer	1 - Edit (default). 2 - Improvement. The procedure types corresponding to the values can be set in the system parameters. By default: 1.
ainultKontroll		boolean	Default: false. In the case of a true value, the procedure is not enforced but the procedure is deleted after the checks have been performed.
menetlusNr		integer	If this parameter is met, a query for the status of the existing procedure is assumed. Object data is not required. The service returns the data of the referenced procedure.
Object (there can be more than one, at least 1 object is required, the maximum number is limited by the parameter. Default: 1000.)			
objektiLiik		string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building Required.
adsOid		string (10)	The ID of the existing object in the ADS system. Optional and cannot be used for new items. May be provided if there is a change to the object and the ADS_OID is known in the origin register.
orig_tunnus		string (20)	Identifier of the object in the reporting register. Required.
oiguslikAlus		string (500)	Legal basis for the creation or cancellation of a version of an object.
aluseKuupaev		date	Date of legal basis.
olek		char(1)	O – pending; K – valid; T – cancelled. Required.
tahis		string(200)	Symbol for part of the building, common name for the building. Mandatory for part of a building.
korrus		integer	Entrance floor for part of the building. Mandatory for part of a building.
ruumiKuju		GML	Object Spatial shape in GML 3.1.1 format. Mandatory at least as a point.
kujuMoodustusviis		char(1)	D - digitized; K - mapped; M - measured. Mandatory if room shape is provided.
hooneAdsOid		string (10)	Attribute required for part of a building only. Reference to the ADS_OID value of the building, if known. Optional and cannot be used for new items. May be provided if there is a change to the object and the ADS_OID is known in the origin register.
hooneOrigTunnus		string (20)	Mandatory attribute only for part of a building. Reference to the identification of the building of which it is a part.
Address (belongs to the object, there may be more than one parallel address.)			
adsTase1	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with a generic word.
adsTase2	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with a generic word.
adsTase3	Kood	string (4)	Code of the existing component.

name		*data type*	*description*
	Nimetus	string (200)	The name of the component with a generic word.
adsTase4	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with the abbreviation of the generic word.
	Nimetus_liigiga	string (300)	The name of the component with a long generic word.
adsTase5	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component with the abbreviation of the generic word.
	Nimetus_liigiga	string (300)	The name of the component with a long generic word.
adsTase6	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name of the component.
	Pyhendusnimi	boolean	Default: false. True when it comes to devotional names.
	Kohanimi	boolean	Default: false. True when it comes to place names.
adsTase7	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name or number of the component.
adsTase8	Kood	string (4)	Code of the existing component.
	Nimetus	string (200)	The name or number of the component.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object in the L-Est system.
punktY		double (min 300000 max 800000	The y-coordinate of the address point of the object in the L-Est system.

Output

If object data was submitted to the procedure through the service (*Menetlus_nr* is empty in the input) and if ADSTulem shows success in the response, but *Joustatud* is empty, then the data was not actually enforced, but only marked as ready for enforcement. This is also mentioned in the returnable ADSTeade. In this case, the *Menetlus_nr* is always present in the return.

In such a situation, the supplying registry should memorize the procedure number and take into account that enforcement has not actually taken place. The original registry must not end its operation because the changes are not registered in the ADS, but must leave the process on hold. The original registry should now revert to the same service with the procedure *Menetlus_nr* if desired. No need to resubmit. This can be done as long as the *Joustatud* date is included in the one-time return of the service. At this point, the data can be considered valid in the ADS.

If the service was accessed with the value of Menetlus_nr and the service returns a failure indicator, it means that the procedure has not yet taken effect. The proceeding may still be pending review on the ADS administrator's desktop, or the enforcement readiness has been revoked. It is possible to distinguish which option it is by the content of ADSTeade. In the first case, the message is ADS teade: leidub menetluse jõustamist takistavaid probleeme“, in the second case, the message is „ADS menetlus on tühistatud“. In the latter case, the data must still be corrected by the service user and submitted again.

If the result of the *ADSTulem* shows a failure, the data provided is not suitable for the ADS system and must be corrected and resubmitted. Even in the case of a negative result, the answer shows the procedure number, objects, addresses and problems that the service managed to cause. If nothing went wrong, the answer is empty. An error is indicated by an *ADSTeade* (message).

If successful, the service response contains the data of the address objects as registered in the ADS system.

name	*data type*	*description*
result (1 reply)		

name	*data type*	*description*
tulem	string	1 - if successful; 0 - in case of error
teade	string	Text message of the service. Additional information in case of a positive answer, error message in case of a negative answer.
menetlusNr	biginteger	Number of the procedure created.
joustatud	datetime	Time of entry into force of the procedure with time. If not, the procedure has not been enforced.
Object (there may be more than one answer, missing if procedure failed).		
objektiLiik	string (2)	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adobId	integer	The version ID of the object in the ADS system.
adsOid	string	Object identifier in the ADS system (ADS_OID).
origTunnus	string (20)	Identifier of the object in the reporting register.
oiguslikAlus	string (500)	Legal basis for the creation or cancellation of a version of an object.
aluseKuupaev	date	Date of legal basis.
olek	char(1)	O – pending; K – valid; T – cancelled.
tahis	string(200)	Symbol for part of the building, common name for the building.
korrus	integer	Entrance floor for part of the building.
ruumiKuju	GML	Object spatial shape in GML 3.1.1 format.
kujuMoodustusviis	char(1)	D - digitized; K - mapped; M - measured.
hooneAdsOid	string (10)	Only for part of the building. Reference to the ADS_OID value of the building.
taisAadress	string	The optimized full address of the object, which includes all parallel addresses.
lahiAadress	string	The nearby address of the object that contains all parallel addresses.
Address (element associated with the object). There are several elements for parallel addresses. The same order of addresses as in the input is guaranteed.		
adrId	integer	Address Version ID.
koodAadress	string	Code address.
taisAadress	string	Normalized address text.
lahiAadress	string	Normalized nearby address.

name		*data type*	*description*
punktX		double (min 6300000 max 6700000)	The x-coordinate of the address point of the object, ie the connection point between the object and the address.
punktY		double (min 300000 max 800000)	The y-coordinate of the address point of the object, ie the connection point between the object and the address.
adsTase1	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase2	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase3	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name
	Nimetus_liigiga	string	Component name with species name.
adsTase4	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase5	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase6	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase7	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
adsTase8	Kood	string	Code of the existing component.
	Nimetus	string	Component name without species name.
	Nimetus_liigiga	string	Component name with species name.
Object issues that prevent enforcement (object-related element). Multiple elements in case of multiple problems. If enforcement is successful, there will be no problems.			
aadress		string	This is the full address that is causing the problem. May be missing if the problem is not directly related to the address.
veaKood		integer	Error code based on classifier.
veaTekst		string	Textual description of the problem.
markus		string	Explanation added by the Special Procedures(erimenetleja) to the problem.

2.4.9 Log-Id values query service (logiInfo.v2)

Service version: **logiInfo.v2**

Attachment-based log services always require a log_id value or bookmark to read from. Also for regular log services, it is strongly recommended to use the log_id value as input to ensure that all log entries are read.

The value of the log_id of the last processed log entry should be saved as a bookmark by each consumer. Consumers who do not have a bookmark with them today must be able to reset it.

A query service has been created for this, through which the bookmark can be found by date. This version of the log service only returns information about the following log services in the ADS database:

- ADSkompklassif
- ADSobjmuudatused
- ADSaadrmuudatused
- ADSobjaadrmuudatused

Input

name	*data type*	*description*
muudetudAlates	date	The date from which (incl.) The registered changes are to be found

Input parameter is required. Technical error with empty input.

Output

name	*data type*	*description*
The amount of logging services		
teenuseNimi	string	The name of the x-road log service. • ADSkompklassif • ADSobjmuudatused • ADSaadrmuudatused • ADSobjaadrmuudatused
logId	integer	LogId starting from which logs need to be read, i.e. the logId value that should be input to the service with or without attachments.

2.5 Closed X-road services

The following services will operate until March 2025.

2.5.1 Normalizing the address text (ADSnormal.v2)

Service version: **ADSnormal.v2.** The previous version of the service, ADSnormal.v1, did not contain address coordinates.

The service input is an unnormalized or partially normalized address. The service tries to divide the non-normalized part into components. It does not create new components, but uses existing ones. Makes suggestions for the addition of new components if the service user is also a provider of ADS data.

Returns the address in maximally normalized form. If normalization did not complete, the unnormalized part of the text is also returned.

Input

name		*data type*	*description*
Aadress			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
tekst		string	The unnormalized part of the address text

name	*data type*	*description*
objektiLiik	string	The type of object whose address is being attempted to be normalized. Required to identify initiating levels. Address object type code from the classifier: • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building

The input is assumed to be the addresses of 1 object.

The service input must be non-normalized address text. Based on this text, the service may produce more than 1 address. In this case, the object has parallel addresses.

The beginning of the address can also be presented in a partially normalized form (for example, EHAK levels in a normalized form, the part of the nearby address is not normalized). In this case, the service assumes that the normalized part applies equally to all parallel addresses, if any.

If you want to normalize an address that is not associated with a specific address object (for example, a person's contact address), the object type is not specified in the input. The object type is also not specified if the service user does not want to start submitting data to the ADS. Specifying an object type means that the normalizer allows you to add components and does not return an error if they are missing from the system.

Output

name		*data type*	*description*
Object			
taisAadress		string	The normalized full text address of the object, containing all parallel addresses in a long, unoptimized form.
optiAadress		string	The normalized and optimized full address of an object that contains all parallel addresses where the repetitive components are unique.
lahiAadress		string	The normalized nearby address of the object as a string.
Address (multiple elements for parallel addresses).			
adsTase1	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase2	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase3	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase4	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase5	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.

name		*data type*	*description*
	nimetus_liigiga	string	Component name with species name.
adsTase6	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase7	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
adsTase8	kood	string	Code of the existing component.
	nimetus	string	Component name without species name.
	nimetus_liigiga	string	Component name with species name.
tekst		string	The unnormalized part of the address text
adrID		integer	If the normalization was complete and it is an existing address (registered in the system), then the version id of that address.
koodaadress		string	If the normalization was complete and it is an existing address (registered in the system), its code address.
punktX		double (min 6300000 max 6700000)	If the normalization was complete and it is an existing address (registered in the system), then the x-coordinate of the representative point of this address.
punktY		double (min 300000 max 800000	If the normalization was successful and it is an existing address (registered in the system), then the y-coordinate of the representative point of this address.

The input and output have the same structure. Existing components should be referenced in the input either by code only (in which case the system finds a valid name format itself) or by code and name (in which case the system checks that the name is valid for the component) or by name only (in which case the system recognizes a valid component). If valid components cannot be detected, the service returns an error.

The non-normalized part produces new components from the last level presented in normalized form. If the normalizer finds that the name could be added to the level, the return contains the name of the corresponding level without a code. If an existing valid component is found in the classifier, both the code and the name are filled in.

NB! The addresses of objects that initiate levels 1-5 (EHAK, small place, thoroughfare) cannot be normalized.

This service connects to the Oracles database in the ADS production environment.

2.5.2 Interfacers addresses feedback service (ADSadrTagasiside.v3)

Service version: **ADSadrTagasiside.v3**

Through the service, registries connected to the ADS system, which are not themselves address designators but only consumers, can provide feedback on addresses registered in their own system, which may or may not be associated with an ADS address.

Receiving feedback is important to improve the data quality of the ADS. Based on the information received through the service, local governments can find out which addresses are related to, for example, the residences of residents in the population register and what problems the registers consuming the addresses have with ADS data.

In the case of an associated address, the addresses adr_id and ads_oid, if any, are reported as feedback. In the case of an unbound address, text that may be partially normalized. Normalized parts can be presented as ADS component codes (for example, EHAK codes are known to many consumers) or in text.

For example, if a consumer has an address that definitely includes a street name, but the ADS does not have a street with that name, that street can be represented as a Level 5 component name and a House number at Level 7, instead of a non-normalized street and house number.

If the consumer does not keep the addresses in his system in a structured form, but in plain text, he may also provide them in this way. The task of the local government is to ensure that the corresponding address is assigned or that feedback is given to the data submitter that such an address is not and cannot be determined, so this address must be reconciled with the data in the ADS in the consumer register.

Input

name		*data type*	*description*
Object / address (multiple elements for multiple addresses).			
register		string (10)	Register type from the classifier. Each register using the service will be assigned its own code, which it will provide upon submission. The classification is as follows: RR - Population register (Rahvastikuregister); AR - Business register (Äriregister); KR - Land register (Kinnistusraamat), EP - Eesti Post. Required
idRegistris		string (50)	The identifier of the object that has the address. It must be unique within the reporting register. Required
tyhistatud		boolean	True - the submitted object has been cancelled or deleted in the register submitting the data False - the submitted object is valid. Default: false.
SeostPoleVaja		boolean	True - interface object being submitted does not require a connection to the ADS in terms of address or object False - submitted object should be compatible with the ADS data. Default: false
HooneosaPoleVaja		boolean	Identifier provided mainly by the Business Register, but can be used by all interfaces. The identifier is only taken into account if the address is also specified. True - the address with the specification is not problematic (the part of the building missing from the ADS does not correspond to the specification, but the specification refers to something else, e.g. a mailbox). False - specified address is problematic. Default: false.
EriomandiNr		string	Identifier provided by KR. Cannot be submitted for other registers.
rrSeoseTyyp		classifier	Identifier provided by RR. Cannot be submitted for other registers. E - place of residence; L - additional address; EL - residence / additional address.
markus		string(1000)	Explanatory description of the interface object.
adrId		integer	The version number of the address associated with the ADS in the ADS. Associated addresses know this identifier.
adsTase1	kood	string	ADS component code.
	nimetus	string	Component name with species name.
adsTase2	kood	string	ADS component code.
	nimetus	string	Component name with species name.
adsTase3	kood	string	ADS component code.
	nimetus	string	Component name with species name.
adsTase4	kood	string	ADS component code.
	nimetus	string	Component name with species name or abbreviation.
adsTase5	kood	string	ADS component code.
	nimetus	string	Component name with species name or abbreviation.
adsTase6	kood	string	ADS component code.

name		*data type*	*description*
	nimetus	string	The name of the component.
adsTase7	kood	string	ADS component code.
	nimetus	string	The name of the component.
adsTase8	kood	string	ADS component code.
	nimetus	string	The name of the component.
punktX		double (min 6300000 max 6700000)	The x-coordinate of the reference point of the object in the L-Est system.
punktY		double (min 300000 max 800000	The y-coordinate of the reference point of the object in the L-Est system.
aadrTekst		string (1000)	The non-normalized part of the text.
sihtnumber		string	Postal code of Eesti Post belonging to the address.
tapsustus		string	Specification added to the address of the interface (eg number of missing business premises, mailbox, building, floor, etc.).
Associated address objects (can have multiple associations). If there is no object association, the element is not added.			
adobId		integer	The version ID of the object in the ADS system. No need to submit, only ads_oid can be submitted. It depends on which one the interface has.
adsOid		string	Object identifier in the ADS system (ADS_OID). If the interface uses only the adob_id value and provides it as feedback, it is not necessary to provide ads_oid. Ignored if adob_id exists.

The data of 1 interface object at a time must be provided in the input. If the interface has associated its object with several ADS addresses / objects, the data group Object / Address appears in the input several times.

If an ADS-related address is provided, only the value of adr_id is sufficient, the rest (levels, etc.) is left blank.

If an address not associated with the ADS is provided, starting with a normalized form, provide either the component code or the name - both are not required. If there is a code, it is preferable. If a code is provided, this code must be present in the ADS system, otherwise an error will be provided. The code can also be cancelled, in which case there is no error. If a component name is provided, it does not have to appear in the ADS system. Playback is successful even if there is no corresponding component in the ADS at that level.

The part of the text that is not divided into levels must be provided in the text. For example, if the EHAK part is presented by level, these EHAK level names should not be included in the non-normalized text.

Address objects associated with an interface object must be presented as a separate element. There may be several of them. If there is no object connection, the element is not added.

If the data is submitted by the Business Register (AR), special treatment takes place in the id_registris when processing the value. If the value of the ID_REGISTRIS object of the AR register contains an underscore, the system treats the part before the underscore as the registry code and stores it in its pure form as the value of ID_REGISTRIS. The part following the underscore is considered a version ID by the system and is stored in the VERSID_REGISTRIS data field. If the value of the AR register object ID_REGISTRIS does not contain underscores or contains more than 1 underscore, the system does not perform further processing and saves the value unchanged.

Output

name	*data type*	*description*
Result		

name	*data type*	*description*
tulem	string	1 - if successful; 0 - in case of error
teade	string	No message if the answer is positive, an error message is given if the answer is negative
probleemne	boolean	The True Interface object was recognized as a problem by the ADS system. The False interface object is not a problem in the ADS.
Feedback on the address provided. Because multiple addresses can be submitted, there can be multiple elements (according to the order in which they are presented).		
idRegistris	string	Object ID in the interfaced register. In long form, i.e. with the version ID, if provided by the interface.
adrId	integer	adr_id given as input. Empty if an unnormalized address was forwarded.
asendavAdrId	integer	If an unnormalized address was provided and its normalization was successful, its normalized address is adr_id. Empty if a normalized address was provided or if the ADS cannot provide a replacement.
asendavKoodaadress	string	If an unnormalized address was provided and its normalization was successful, the code address of that normalized address.
asendavTaisaadress	string	If an unnormalized address was provided and it was successfully normalized, the full address of that normalized address.
Address objects associated with a replacement address. All objects associated with the corresponding address (ADR_ID) are listed here, i.e. the element can occur more than once.		
objektiLiik	string	Address object type code from the classifier. • MK – county • OV – municipality • AY – settlement unit • LO – city district • VK – address area • LP – thoroughfare • CU – cadastral parcel • EE – residential building • ME – non-residential building • ER – dwelling • MR – other part of the building
adsOid	string	Object identifier in the ADS system (ADS_OID).
adobId	integer	The version ID of the object in the ADS system.
origTunnus	string	Object ID in the original register.
unikaalne	boolean	The object has a unique address requirement (UN attribute).
Problems found by the ADS system on the interface object. Are important if the object is problematic. Informative if the object is not problematic. There may be several messages.		

name	*data type*	*description*
probleem	string	Problem description. Examples of possible problems (EST): • Esitatud ADS aadress on vananenud - The submitted ADS address is out of date, • Esitatud ADS aadress on tühistatud, - The submitted ADS address has been cancelled, • Esitatud aadressitekst normaliseerub - The displayed address text is normalized, • Esitatud ADS objekt on vananenud - The submitted ADS object is out of date, • Esitatud ADS objekt on tühistatud - The submitted ADS object has been cancelled, •Esitatud ADS objekt ei sobi kokku esitatud ADS aadressiga - The submitted ADS object does not match the submitted ADS address, • Esitatud ADS objekt ei sobi kokku esitatud aadressiteksti alusel normaliseeruva aadressiga - The submitted ADS object does not match the address that normalizes based on the submitted address text, Etc....

If the Business Register (AR) provided a value with the version ID in the *id_registris*, then in the service response this value is also included with the version ID.

If the ADS system detects problems with the data provided by the interface, this does not mean that the submission has failed. The ADS system stores the data provided by the interface in exactly the form it provided. All the added information is only a proposal from the ADS to the interface to improve its data quality.

If the interface takes this suggestion into account and changes its data, the changed status should be resubmitted to the ADS by the interface. In this way, ADS learns that the interface has in fact taken the suggestions into account.

2.5.3 Querying address component classification changes as a file (ADSkompklassifManus.v1)

Service version: **ADSkompklassifManus.v1**

The service is necessary to receive all changes made in one day at once. It is possible to use the LogId value query service in advance to find out the appropriate logId value, see „**Tõrge! Ei leia viiteallikat. Tõrge! Ei leia viiteallikat.**”.

Input

name	*data type*	*description*
logId	integer	Log entries larger than which Log ID value are searched.

Input parameter is required. Technical error with empty input.

Output

name	*data type*	*description*
kirjeteArv	integer	The number of entries in the log file to be returned. 0 - If the file is not returned.
puudumisePohjus	text	Textual justification for missing file.(EST)

The service returns the found log file as an attachment to the service.

The log file contains the maximum **ADSkompklassif** return. The file contains:

- all events, including S events.
- ADS_OID values of the objects initiating the component as a list
- component synonyms
- A list of components that precede the component
- List of component successor components (only possible for cancelled components)

The file structure or XSD corresponds to the response structure of the **ADSkomppklassif.v2** service, see 0.

The service returns a previously prepared log file that contains the log entries immediately following the input logId value. The log file is generated immediately after the logs are published, so as a rule there is 1 log file for 1 day of changes, but the log file may also contain earlier and / or later changes.

If no output has been produced for the corresponding log, the return is empty. If the consumer asks for log entries that are too early for which files have not yet been generated, the return is also empty.

If the service does not return the file, there is a textual justification for missing it. The missing value for the *puudumisePohjus* is performed as follows:

- if the min_log_id found by the additional query is empty, then the text: „Logifailide tootmist pole veel alustatud“ (Log file production has not started yet)
- if logId <min_log_id, then the text: „Liiga väike logId, selle tekkimise ajal faile veel ei toodetud“ (LogId too small, no files were generated at the time it was generated)
- if logId> max_log_id, then the text: „Liiga väike logId, selle tekkimise ajal faile veel ei toodetud“ (LogId too large, no file has been generated yet)
- otherwise text: „Tundmatu põhjus“ (Unknown reason)

An unknown reason should never arise, in this case, it is worth investigating the reason from the data provider.

2.5.4 Querying object changes as file (ADSobjmuudatusedManus.v1)

Service version: **ADSobjmuudatusedManus.v1**

The service is necessary to receive all changes made in one day at once. It is possible to use the LogId value query service in advance to find out the appropriate logId value, see „**Tõrge! Ei leia viiteallikat. Tõrge! Ei leia viiteallikat.**".

Input

name	*data type*	*description*
logId	integer	Log entries larger than which Log ID value are searched.

Input parameter is required. Technical error with empty input.

Output

name	*data type*	*description*
kirjeteArv	integer	The number of entries in the log file to be returned. 0 - If the file is not returned.
puudumisePohjus	text	Textual justification for missing file.(EST)

The service returns the found log file as an attachment to the service.

The log file contains the maximum **ADSobjmuudatusedV7** return. The file contains:

- all events**, except E and L events (these events are removed since 29.05.2023).**
- alphanumeric data of the object
- spatial data of the object
- object addresses with components
- Additional EHR data
- object problems and remarks
- related objects
- parts of buildings
- points of interest
- objects of interfaced registers
- ADS_OID values of the objects of the object ancestor as a list
- ADS_OID values of object descendants as a list (only possible for a cancelled object)

The structure of the file or XSD corresponds to the response structure of the **ADSobjmuudatusedV7.v1** service, see 2.1.5.

The service returns a previously prepared log file that contains the log entries immediately following the input logId value. The log file is generated immediately after the logs are published, so as a rule there is 1 log file for 1 day of changes, but the log file may also contain earlier and / or later changes.

If no output has been produced for the corresponding log, the return is empty. If the consumer asks for log entries that are too early for which files have not yet been generated, the return is also empty.

If the service does not return the file, there is a textual justification for missing it. The missing value for the *puudumisePohjus* is performed as follows:

- if the min_log_id found by the additional query is empty, then the text: „Logifailide tootmist pole veel alustatud" (Log file production has not started yet)
- if logId <min_log_id, then the text: „Liiga väike logId, selle tekkimise ajal faile veel ei toodetud" (LogId too small, no files were generated at the time it was generated)
- if logId> max_log_id, then the text: „Liiga väike logId, selle tekkimise ajal faile veel ei toodetud" (LogId too large, no file has been generated yet)
- otherwise text: „Tundmatu põhjus" (Unknown reason)

An unknown reason should never arise, in this case, it is worth investigating the reason from the data provider.

2.5.5 Querying address changes as file (ADSaadrmuudatusedManus.v1)

Service version: **ADSaadrmuudatusedManus.v1**

The service is necessary to receive all changes made in one day at once. It is possible to use the LogId value query service in advance to find out the appropriate logId value, see „**Tõrge! Ei leia viiteallikat. Tõrge! Ei leia viiteallikat.**".

Input

name	*data type*	*description*
logId	integer	Log entries larger than which Log ID value are searched.

Input parameter is required. Technical error with empty input.

Output

name	*data type*	*description*
kirjeteArv	integer	The number of entries in the log file to be returned. 0 - If the file is not returned.
puudumisePohjus	text	Textual justification for missing file.(EST)

The service returns the found log file as an attachment to the service.

The log file contains the maximum **ADSaadrmuudatusedV7** return. The file contains:

- all events
- the details of the object that caused the change of address, together with the associated interface objects
- address association objects with their associated interface objects
- address with components
- ADR_ID values for the address of the address ancestor as a list
- ADR_ID values for addresses that are descendants of the address as a list (only possible if the address is cancelled)

The structure of the file, or XSD, corresponds to the response structure of the ADSaadrmuudatusedV7.v1 service, see 2.1.6.

The service returns a previously prepared log file that contains the log entries immediately following the input logId value. The log file is generated immediately after the logs are published, so as a rule there is 1 log file for 1 day of changes, but the log file may also contain earlier and / or later changes.

If no output has been produced for the corresponding log, the return is empty. If the consumer asks for log entries that are too early for which files have not yet been generated, the return is also empty.

If the service does not return the file, there is a textual justification for missing it. The missing value for the *puudumisePohjus* is performed as follows:

- if the min_log_id found by the additional query is empty, then the text: „Logifailide tootmist pole veel alustatud“ (Log file production has not started yet)
- if logId <min_log_id, then the text: „Liiga väike logId, selle tekkimise ajal faile veel ei toodetud“ (LogId too small, no files were generated at the time it was generated)
- if logId> max_log_id, then the text: „Liiga väike logId, selle tekkimise ajal faile veel ei toodetud“ (LogId too large, no file has been generated yet)
- otherwise text: „Tundmatu põhjus“ (Unknown reason)

An unknown reason should never arise, in this case, it is worth investigating the reason from the data provider.