ArcGIS Data Appliance: World Gazetteer

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What is ArcGIS Data Appliance: World Gazetteer

ArcGIS Data Appliance: World Gazetteer is a places locator that allows you to geocode various types of places around the world. The World Gazetteer locator is composed solely of open-source content, primarily from GeoNames. The GeoNames database itself contains over 27 million geographical names and consists of over 12 million unique features with roughly 4.8 million populated places and 15 million alternate names. The gazetteer references a dataset including countries, states and provinces, administrative areas (for example, counties), cities, landmarks, water bodies, and more.

The World Gazetteer provides a content solution that works with ArcGIS Enterprise. It is included (shipped separately) with ArcGIS Data Appliance 2024 with World Standard, World Advanced, North America Standard, and North America Advanced product options. It can also be licensed as a stand-alone option.

📄 **Note:**
This feature is not included with the World Basic product option.

The World Gazetteer help includes the following topics:

- World Gazetteer content

- World Gazetteer service description

- System requirements

- Publish the World Gazetteer

- Use the World Gazetteer

- Reference information including terms of use and support

World Gazetteer content

World Gazetteer is delivered on the ArcGIS Data Appliance: World Gazetteer USB flash drive.

Note:
World Gazetteer ships separately.

This version includes the following:

- World_Gazetteer\worldgazetteer folder contains the following three files:
  - ESRI_World_Gazetteer.sd
  - worldgazetteer.loc
  - worldgazetteer.loz
- Documentation file (data_appliance_world_gazetteer.pdf) that includes system requirements and instructions for publishing World Gazetteer, using World Gazetteer, and more.

World Gazetteer

Geocode world places including countries, states and provinces, administrative areas, cities, landmarks, water bodies, and more with World Gazetteer.

Service Name: ESRI_World_Gazetteer

Description

The World Gazetteer locator is composed solely of open-source content, primarily from GeoNames. The GeoNames database contains over 27 million geographical names and consists of over 12 million unique features with roughly 4.8 million populated places and 15 million alternate names. The gazetteer references a dataset including countries, states and provinces, administrative areas (for example, counties), cities, landmarks, water bodies, and more.

The locator accepts a single-line place-name input (for example, Paris; Paris, France; or Washington, DC) and returns candidates sorted by match score and rank as follows:

- Match Score (output field Score)—Beginning with a full match of 100 and proceeding down to the minimum match score

- Rank (output field Rank)—Beginning with a rank of 1 for most-prominent places and proceeding up to 99 for less-prominent places

Directory size

3.98 GB

Coordinate system

The data used in the service is in geographic coordinate system (GCS) WGS84.

Attribution

Sources: Esri, GeoNames

Output fields

- `Status`: Indicates whether a batch geocode request results in a match, tie, or unmatch.

- `Score`: A number from 1 to 100 indicating the accuracy of the address match. A score of 100 represents a perfect match, while lower scores represent decreasing match accuracy. Score is always returned by default.

- `Match_type`: A code showing how an address was matched. You can group the results based on this attribute to show how the addresses were matched, or use the grouping to select records for rematching (default).

- `Match_addr`: The complete address returned for the geocode request.

- `LongLabel`: A longer version of Match_addr containing additional administrative information.

- `ShortLabel`: A shortened version of Match_addr.

- `Addr_type`: The match level for a geocode request. The value is always equal to POI or locality for the World Gazetteer.

- `Type`: The feature type for results returned by a search. As an example, for Starbucks, Type = Coffee Shop.

- `PlaceName`: The formal name of a geocode match candidate, for example, Paris or Starbucks.

- `Place_Addr`: The full street address of a place, including street, city, and region, for example, 275 Columbus Ave, New York, New York.

- `FullPlaceName`: A placeholder field to potentially store a more complete name in the future. For now, it is equal to PlaceName.

- `StAddr`: The street address of a place, without city and region, for example, 275 Columbus Ave.

- `Phone`: The primary phone number of a place. As an example, for Knott's Berry Farm, Phone = (714)220-5200.

- `URL`: The URL of the primary website for a place. As an example, for University of Georgia, URL = http://www.uga.edu/.

- `Rank`: A numerical text value indicating the importance of a result relative to other results with the same name. For example, there are cities in France and Texas named Paris. Paris, France, has a greater population than Paris, Texas, so it has a higher rank. Rank is used to sort results for ambiguous queries such as Lincoln in which no additional information (state) is available. Rank values are based on population or feature type. Note that Rank is not used with all features, so some responses will contain a blank Rank value.

- `AddBldg`: The name of a building, for example, Empire State Building.

- `AddNum`: The alphanumeric value that represents the portion of an address typically known as a house number or building number, for example, in the address 380 New York Street, AddNum = 380.

- `AddNumFrom`: A value representing the beginning number of a street address range. It is relative to the direction of feature digitization and is not always the smallest number in the range.

- `AddNumTo`: A value representing the ending number of a street address range. It is relative to the direction of feature digitization and is not always the largest number in the range.

- `AddRange`: The full house number range for the street segment that an address lies on, in the format AddNumFrom-AddNumTo. For instance, the AddRange value for street address 123 Main St may be 101-199.

- `Side`: The side of the street where an address resides relative to the direction of feature digitization. This value is not relative to the direction of travel along the street. Possible values are R (right) and L (left).

- `StPreDir`: Address element defining the direction of a street and occurs before the primary street name, for example, North in North Main Street.

- `StPreType`: An address element defining the leading type of a street, for example, the Spanish term Avenida in Avenida Central or the French term Rue in Rue Lapin.

- `StName`: An address element defining the primary name of a street, for example, Main in North Main Street.

- `StType`: An address element defining the trailing type of a street, for example, Street in Main Street.

- `StDir`: An address element defining the direction of a street that occurs after the primary street name, for example, North in Main Street North.

- `BldgType`: The classification of a building subunit. Examples are building, hangar, and tower.

- `BldgName`: The name or number of a building subunit, for example, A in building A.

- `LevelType`: The classification of a floor subunit. Examples are floor, level, department, and wing.

- `LevelName`: The name or number of a floor subunit, for example, 3 in level 3.

- `UnitType`: The classification of a unit subunit. Examples are unit, apartment, flat, office, and suite.

- `UnitName`: The name or number of a unit subunit, for example, 2B in apartment 2B.

- `SubAddr`: The full subunit value for a candidate with Addr_type = Subaddress that includes <subunit type> + <subunit name>. For instance, the subaddress candidate is an apartment unit, SubAddr = UnitType + UnitName. For example, Apt 4B.

- `StAddr`: The street address of a place without city and region, for example, 275 Columbus Ave.

- `Block`: The name of the block-level administrative division for a candidate. Block is the smallest administrative area for a country. It can be described as a subdivision of sector or neighborhood or a named city block. It's not commonly used.

- `Sector`: The name of the sector-level administrative division for a candidate. Sector is a subdivision of neighborhood or district, or it can represent a collection of blocks. It's not commonly used.

- `Neighborhood`: The smallest administrative area for a country, typically a neighborhood or other subsection of a city.

- `District`: The name of the district-level administrative division for a candidate. It can be a subdivision of a city.

- `City`: The next smallest administrative area for a country, typically a city or municipality.

- `MetroArea`: The name of the metropolitan-area-level administrative division for a candidate. It's an urban area consisting of a large city and the smaller cities surrounding it. It can potentially intersect multiple subregions or regions. An example is Kolkata Metropolitan Area in India.

- `Subregion`: The next largest administrative area for a country, typically a county or region.

- `Region`: The largest administrative area for a country, typically a state or province.

- `RegionAbbr`: An abbreviated region name. The RegionAbbr value for California is CA.

- `Territory`: The name of the territory-level administrative division for a candidate. It's a subdivision of country. It's not commonly used. The Sudeste macroregion of Brazil, which encompasses the states of Espírito Santo, Minas Gerais, Rio de Janeiro, and São Paulo, is an example.

- `Zone`: A city block or a subdivision within a locality, such as subblock (gaiku chiban) in Japan. It's only used in Japan at this time.

- `Postal`: An alphanumeric address element defining the primary postal code, for example, V7M 2B4 for a Canadian postal code and 92374 for a USA postal code.

- `PostalExt`: An alphanumeric address element defining the postal code extension, for example, 8100 in USA postal code 92373-8110.

- `Country`: A three-digit ISO 3166-1 code for a country, for example, Canada = CAN. A list of supported countries and codes is available under Geocode coverage in the ArcGIS REST API help.

- `LangCode`: A three-digit MARC language code representing the language of the address, for example, ENG = English. A list of all possible codes is available at https://www.loc.gov/marc/languages/language_code.html.

- `Distance`: The physical distance in meters from a candidate to a specified location. The `Distance` output value is calculated for each candidate when the **Location** input parameter is passed in a request using the Find or

findAddressCandidates methods. If the **Location** parameter is not passed in a request, the value of `Distance` is zero.

- `X`: The primary x-coordinate of an address returned by World Gazetteer, in spatial reference WGS84 (WKID 4326).

- `Y`: The primary y-coordinate of an address returned by World Gazetteer, in spatial reference WGS84 (WKID 4326).

- `DisplayX`: Not applicable for World Gazetteer.

- `DisplayY`: Not applicable for World Gazetteer.

- `Xmin`: The minimum x-coordinate for the display extent of a feature returned by World Gazetteer. The `Xmin`, `Xmax`, `Ymin`, and `Ymax` values can be combined to set the map extent for displaying a geocode result. The extent coordinates use the WGS84 spatial reference.

- `Xmax`: The maximum x-coordinate for the display extent of a feature returned by World Gazetteer. The `Xmin`, `Xmax`, `Ymin`, and `Ymax` values can be combined to set the map extent for displaying a geocode result. The extent coordinates use the WGS84 spatial reference.

- `Ymin`: The minimum y-coordinate for the display extent of a feature returned by World Gazetteer. The `Xmin`, `Xmax`, `Ymin`, and `Ymax` values can be combined to set the map extent for displaying a geocode result. The extent coordinates use the WGS84 spatial reference.

- `Ymax`: The maximum y-coordinate for the display extent of a feature returned by World Gazetteer. The `Xmin`, `Xmax`, `Ymin`, and `Ymax` values can be combined to set the map extent for displaying a geocode result. The extent coordinates use the WGS84 spatial reference.

- `ExInfo`: A collection of strings from the input that could not be matched to any part of an address.

System requirements

World Gazetteer system requirements

The following software components and prerequisites are required before you deploy World Gazetteer:

- An ArcGIS Enterprise 10.9.1, 11.0, or 11.1 deployment meeting the base ArcGIS Enterprise deployment specifications along with any ArcGIS Server or geocoding-related patches for the version of ArcGIS that you are running. Links to the patches are available on the ArcGIS Enterprise website.

ArcGIS Desktop 10.9.1 or later and ArcGIS Pro Basic, Standard, or Advanced 3.0 or later are supported as clients.

Setup

Publish the World Gazetteer

The data resources required for deploying World Gazetteer are included on the ArcGIS Data Appliance: World Gazetteer USB flash drive, which is available with most ArcGIS Data Appliance 2024 product options.

📒 **Note:**
This feature is not included with the World Basic product option.

The `World_Gazetteer\worldgazetteer` folder contains the following three files:

- ESRI_World_Gazetteer.sd
- worldgazetteer.loc
- worldgazetteer.loz

The following instructions are available to assist you in deploying World Gazetteer on your system:

- For information about supported environments, see System requirements.
- To use World Gazetteer, you need to deploy it using ArcGIS Server Manager.

The steps below describe the deployment process for ArcGIS Server 10.9.1 or later.

Copy the worldgazetteer folder to ArcGIS Server

Copy the worldgazetteer folder from the ArcGIS Data Appliance: World Gazetteer USB flash drive `World_Gazetteer` folder to your ArcGIS server, for example, `C:\locators\worldgazetteer`. You can use Windows copy and paste tools or another copy utility.

Publish World Gazetteer on ArcGIS

Using ArcGIS Server Manager, you can publish the World Gazetteer service definition file (`.sd`) as a service.

📒 **Note:**
The service definition file, `ESRI_World_Gazetteer.sd`, is created with the data path `C:\locators\worldgazetteer`. If your data is stored in a different location, you need to use ArcGIS Pro 3.0 or later to publish a geocode service.

1. Start ArcGIS Server Manager and sign in.
2. Click **Services** > **Manage Services** > **Publish Service**.
3. Browse to the **locators** > **worldgazetteer** folder on your GIS server, for example, `C:\locators\worldgazetteer`.
4. Select **ESRI_World_Gazetteer.sd** and click **Next**.
5. On the **Specify properties** dialog box, ensure that **Name** is ESRI_World_Gazetteer and **Type** is Geocode Service. Leave **Folder** set to **Existing**, and check **Start service immediately**. Click **Next**.
6. Click **Publish** to publish the service definition as a service.

The published service screen appears for the ESRI_World_Gazetteer geocode service indicating **Status: Started**. The new geocode service appears in the list of available services.

For more information about ArcGIS Server and `.sd` files, see Publish service definition files.

Use

Use the World Gazetteer

After you add the World Gazetteer service to your ArcGIS Server, it is ready to use.

ArcGIS Pro

For information about how to use World Gazetteer in ArcGIS Pro, see An overview of the Geocoding toolbox in the ArcGIS Pro help under **Tool Reference** > **Tools** > **Geocoding toolbox**.

ArcGIS Server

For information about using the locator with ArcGIS Server, see Geocode services and locators in the ArcGIS Server (Windows) help under **Manage Services** > **Types of services**.

ArcGIS APIs and SDKs

ArcGIS API for Flex, ArcGIS API for JavaScript, ArcGIS API for Silverlight, ArcGIS REST API, and ArcGIS Runtime SDK for Windows Mobile users can take advantage of World Gazetteer in applications. Details for implementing a geocoding service are available in the ArcGIS Developer documentation.

Terms of use

Terms of use for ArcGIS Data Appliance: World Gazetteer

ArcGIS Data Appliance: World Gazetteer should only be served up from ArcGIS Server and Portal for ArcGIS (10.9.1, 11.0, or 11.1). ArcGIS Data Appliance: World Gazetteer cannot be transferred to or used with non-Esri technology.

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Support

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Support

Support for ArcGIS Data Appliance: World Gazetteer is provided by the Esri technical support team.

Use the following contact options:

- United States users—Contact Esri Technical Support using one of the following options. Hours are Monday through Friday, 5:00 a.m. to 5:00 p.m. (Pacific time), excluding Esri holidays:
  - Phone: 888-377-4575

  - Web page: http://support.esri.com/contact-tech-support

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