



# IPinfo Database Product Schemas

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This document describes the database schemas of [IPinfo's IP Address Database Products](#).

## Overview

The database products [IPinfo.io](#) has to offer are -

Database Product	Description
IP Geolocation	IP address geolocation information
IP to Company	Companies associated with IP addresses
ASN	IP ranges and ASN information
Privacy Detection	VPN, proxies, Tor, relays, and hosting detection
Hosted Domains	Reverse IP / Hosted Domains lookup
Abuse Contact	Abuse contact information from IP addresses
WHOIS	Contextualized & processed WHOIS Database

All of these products are available as **CSV, JSON and MMDB** file type.

## Summary of the Databases

### IP Geolocation

Geolocation information from IP addresses.

Field Name	Example	Notes
start_ip	1.253.242.0	Starting IP address of an IP address range
end_ip	1.253.242.255	Ending IP address of an IP address range
join_key	1.253.0.0	Special variable to facilitate join operation
city	Yangsan	City of the location
region	Gyeongsangnam-do	Region of the location
country	KR	ISO 3166 country code
latitude	35.34199	Latitude value of the location
longitude	129.03358	Longitude value of the location
postal_code	50593	Postal code of the location
timezone	Asia/Seoul	Local time zone of the location

[🔗 IP Geolocation Database](#)

## IP to Company

Get firmographics data and identify the company behind the IP address and network traffic.

Field Name	Example	Notes
start_ip	107.136.106.168	Starting IP address of an IP address range
end_ip	107.136.106.175	Ending IP address of an IP address range
join_key	107.136.0.0	Specialized variable to facilitate join operation
name	ZSPEC FLOW-180709174314	Name of the company
domain	zspec.com	Domain of the company
type	business	Type of business. e.g. Business, ISP, Hosting or Education
asn	AS7018	ASN associated with the company
as_name	AT&T Services, Inc.	Name of the ASN
as_domain	att.com	Domain name of the ASN
as_type	isp	ASN Type: ISP, Hosting, Business or Education
country	US	ISO 3166 country code

*Disclaimer: This database includes IP address and ASN information of large scale organizations.*

[🔗 IP to Company Database](#)

## ASN

Get ASN data from ASN or an IP address.

Field Name	Example	Notes
start_ip	125.113.0.0	Starting IP address of the ASN IP address block
end_ip	125.113.255.255	Ending IP address of the ASN IP address block
join_key	125.113.0.0	Special variable to facilitate join operation
asn	AS4134	Autonomous System Number (ASN)
domain	chinatelecom.com.cn	Domain name of the AS
name	CHINANET-BACKBONE	Name of the ASN
type	isp	ASN Type: ISP, Hosting, Education or Business
country	CN	ISO 3166 country code

[🔗 ASN Database](#)

## IP to Mobile Carrier

Lookup Mobile Carrier data such as – Carrier Name, MCC and MNC from IP addresses.

Field Name	Example	Notes
start_ip	5.208.203.0	Starting IP address of an IP address range
end_ip	5.208.203.255	Ending IP address of an IP address range
join_key	5.208.0.0	Special variable to facilitate join operation.
name	Mobile Communication Company of Iran PLC	Name of the mobile carrier
country	IR	ISO 3166 country code
mcc	432	Mobile Country Code (MCC) of the carrier
mnc	11	Mobile Network Code (MNC) of the carrier

[🔗 IP to Mobile Carrier Database](#)

## Privacy Detection

**Demystify anonymous IP addresses. Get privacy detection information such as VPN, Tor, proxies, relays, and hosting information from IP addresses.**

Field Name	Example	Notes
start_ip	115.9.76.79	Starting IP address of an IP address range
end_ip	115.9.76.79	Ending IP address of an IP address range
join_key	115.9.0.0	Special variable to facilitate join operation
hosting		Indicates a hosting IP address most of the time based on a datacenter. Indicative of bots, scrapers or malicious activities
proxy		Similar to VPN mainly used by businesses
tor		IP address originated from the Onion router
vpn	True	Virtual Private Network (VPN) service IP address
relay		Traffic relays often provided by CDN companies
service		Name of the privacy service provider

 [Privacy Detection Database](#)

## Hosted Domains

**Hosted Domains database enables you to do reverse IP lookups. Get the full list of domain(s) hosted on a single IP address.**

Field Name	Example	Notes
ip	135.125.236.225	IP address for reverse IP lookup
total	3	Number of domains registered to the IP address
domains	farmanaut.com,pharmanaut.be, farmanaut.be	Name of the domain(s) under the IP address

 [Hosted Domains Database](#)

## Abuse Contact

**Get the abuse contact information of every ISP on the internet.**

Field Name	Example	Notes
start_ip	119.93.20.248	Starting IP address of an IP address block
end_ip	119.93.20.255	Ending IP address of an IP address block
join_key	119.93.0.0	Special variable to facilitate join operation
name	Nilo Agir	Name of the abuse contact
email	abuse@pldt.net	Organizational email of the abuse contact
address	Philippine Long Distance Telephone Company, 6/...	Organizational address of the abuse contact
country	PH	ISO 3166 country code
phone	+632-584-1045	Organizational phone number of the abuse contact

 [IP Abuse Contact Database](#)

## WHOIS

IPinfo WHOIS database is contextual, robust and consistent database of various types of WHOIS data.

### R WHOIS

Parsed and normalized data we have collected from 400 WHOIS servers. We also provide additional fields to provide context to the data.

Field Name	Example	Notes
range	50.28.18.195	IP Address range/netblock
id	NETBLK-GRADOCEROPUB.50.28.18.195/32	Raw netblock identifier from WHOIS
name	Grado Cero Publicidad S.A. de C.V.	Name of netblock
descr	GRADOCEROPUB-50.28.18.195	Description
host	rwhois.liquidweb.com:4321	Host information
country	MX	ISO 3166 country code
email	webmaster@gradocero.com	Contact email information
abuse	abuse@sourcedns.com	Abuse email information
domain	gradocero.com	Domain associated with the netblock
country.1	MX	Secondary country information
city	Naucalpan de Juarez	City information
street	Calle Andes #46	Street information
postal	53125	Postal Code information
updated	2021-01-26 00:00:00	Update date in the WHOIS registry
imported	2021-01-27 04:44:47.206483	Imported date in the WHOIS registry

### RIR WHOIS

RIR WHOIS data is created by parsing IP WHOIS data from the regional Internet Registries. Aside from normalizing and structuring the data from different RIR, we include additional contexts and insights.

Field Name	Example	Notes
range	45.142.160.224-45.142.161.255	IP Address range/netblock
id	PL-DOMYNET-NETWORK	Raw netblock identifier from WHOIS
name	DomyNet Sp. z o.o.	Name of netblock
country	PL	ISO 3166 country code
status	ASSIGNED PA	Range assignment type (see RIPE's documentation for details)
tech	PK9274-RIPE	ID for technical contact of WHOIS record
maintainer	MNT-PL-DOMYNET-1	ID for contact authorized to update WHOIS record for netblock
admin	PK9274-RIPE	ID for administrative contact of netblock
source	ripe	RIR associated with record (RIPE, ARIN, etc.)
whois_domain	domynet.pl	Domain name (from WHOIS entry)
updated	2020-01-09	Last updated date (taken from WHOIS entry)
org	ORG-DSZO39-RIPE	ID or name of organization responsible for netblock
rdns_domain	domynet.pl	Domain associated with IP range (only available if a majority of IPs within range share a common reverse DNS domain)
domain	domynet.pl	Domain associated with netblock (based on our data sets)
geoloc	52.2260524 20.9941955	Latitude/longitude coordinates indicating where users of network are located
org_address	ul. Lindleya 16/301 02-013 Warszawa POLAND	Address of the associated organization

Field Name	Example	Notes
asn	AS208348	Autonomous system number for organization that routes traffic for IP (based on BGP routing data)
as_name	DomyNet Sp. z o.o.	Name of AS (based on our data sets and data processing)
as_domain	domynet.pl	Domain of AS (based on our data sets and data processing)
as_type	isp	ISP, business, or hosting (based on around 20 different features and our custom training set)

Other WHOIS database includes: WHOIS ASN, WHOIS MNT, WHOIS NET, WHOIS ORG, WHOIS POC etc.

[🔗 IP WHOIS Database](#)

## Relevant Articles

### Guides

- [Ingesting IPinfo geolocation data with PostgreSQL 13](#)
- [Introducing a Simpler Way to get IP address Data in Snowflake](#)
- [Our downloadable IP WHOIS data sets are live!](#)
- [Data downloads vs API, or both?](#)

### For more information:

visit: [github.com/ipinfo/sample-database](https://github.com/ipinfo/sample-database) or reach out to us at [ipinfo.io/contact](https://ipinfo.io/contact).

## About IPinfo

Founded in 2013, IPinfo prides itself on being the most reliable, accurate, and in-depth source of IP address data available anywhere. We process terabytes of data to produce our custom IP geolocation, company, carrier, VPN detection, hosted domains, and IP type data sets. Our API handles over 40 billion requests a month for 100,000 businesses and developers.

