Domain Name Basics
Registries and Registrars

Tobias Sattler
tobiassattler.com

What are Registries?

A Registry **maintains** all administrative data of the domain and generates a zone file that contains the addresses of the name servers for each name.

They are running one or more **Top-Level Domain** (TLD)

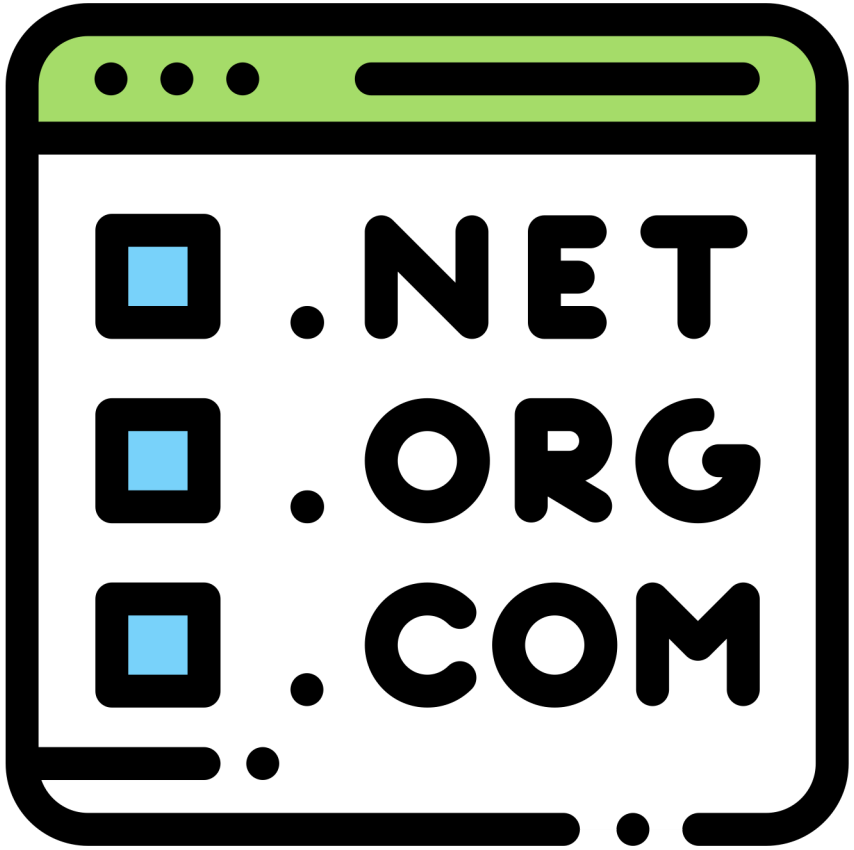
- Verisign (.com, .net, .name, .cc and .tv)
- DENIC (.de)

Some are also providing their backend technology to others

- Afilias (.org, .global, .vegas, ...)
- CentralNic (.xyz, .site, .online, ...)

How are Registries working? #1

A Registry **operates** the **delegation** of **domains** under their TLD and allows Registrars and sometime Registrants directly to register them for a defined period (usually one year).

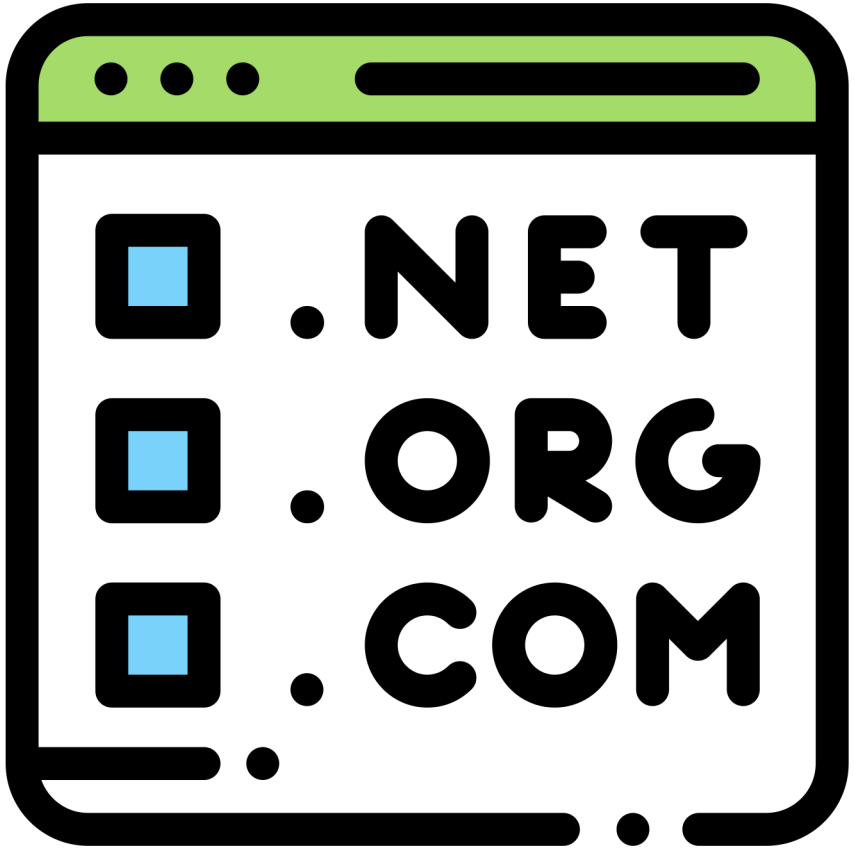


Registrations are conducted under various methods

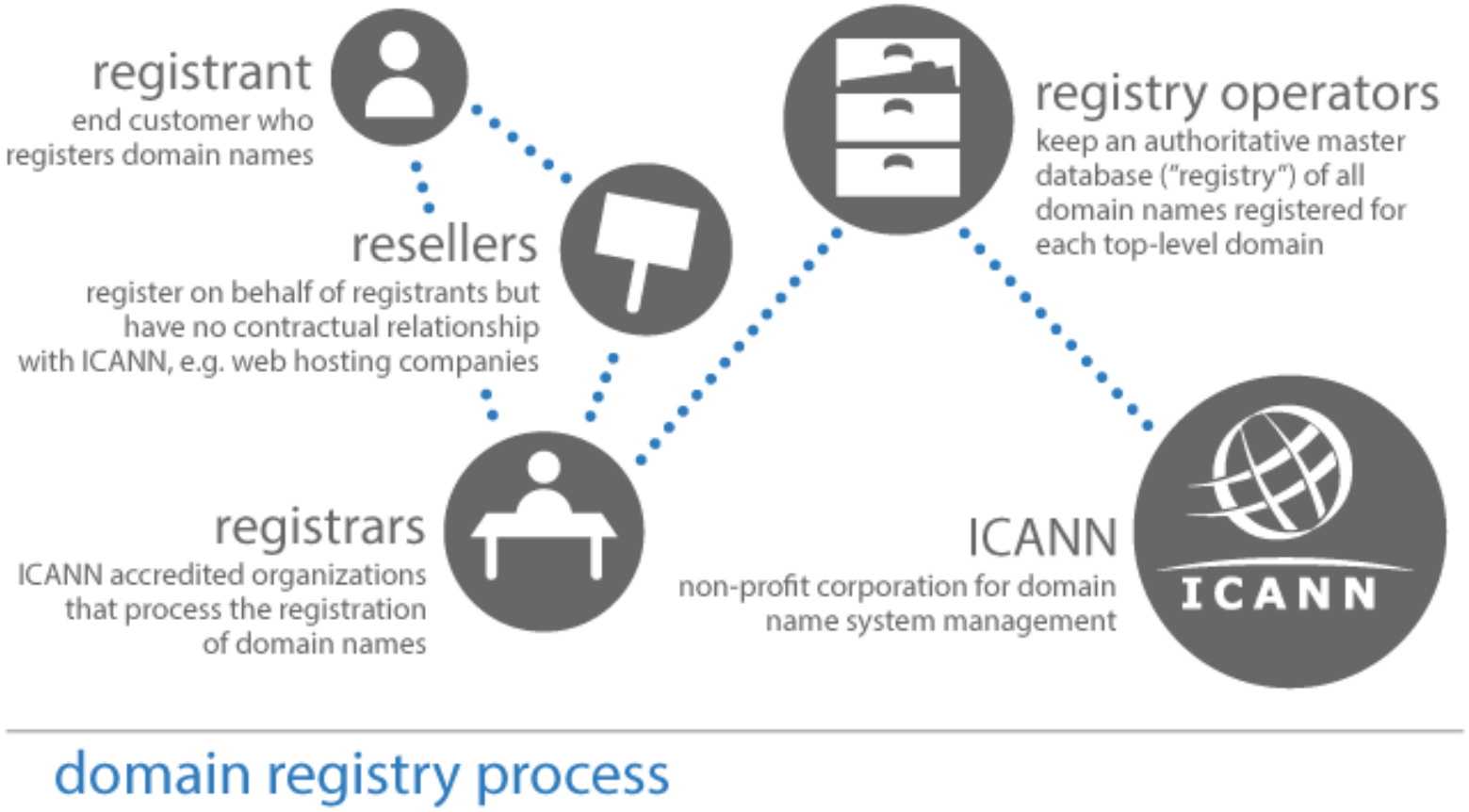
- Extensible Provisioning Protocol (EPP) is the de facto standard, and it has to be used for gTLDs (.e.g, .com, .net, .org)
- Many ccTLDs (e.g., .co, .me, .uk) also use EPP, but there are also registration systems such as REST, email, fax, etc.

How are Registries working? #2

gTLDs are **bound** to **ICANN** policies and need to provide equal access to its registrars, whereas ccTLDs may choose their own. Hence there are a lot of differences in registration and notice periods, legal regulations, technical backend, etc.



Registry Process based on gTLDs



Source: https://whois.icann.org/en/domain-name-registration-process - Effective 03/2016

What are the largest TLDs?

	Domains under Management
.com	124,900,000
.tk	26,300,000
.cn	16,800,000
.de	16,100,000
.net	15,600,000
.org	10,900,000
.uk	9,200,000

Source: Numbers rounded - Source: http://www.domain-recht.de - Effective 03/2016

What are Registrars?

A Registrar is an organization that **manages** the **reservation** of **domains**. They must be accredited by Registries to sell and maintain them.

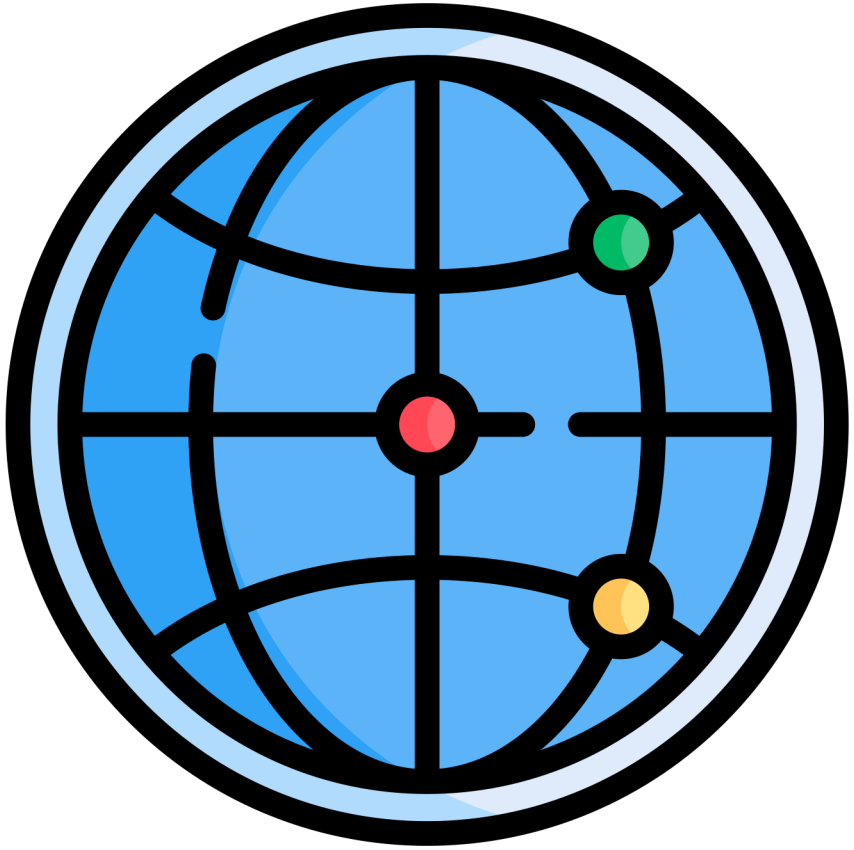
Registrars working directly with gTLD Registries need to be ICANN accredited to guarantee a defined level of stability and security. While ccTLDs may have different obligations to become an accredited Registrar.

Registrars can have Resellers. A Reseller doesn’t need to be accredited but is also bound to Registry rules and regulations.

How Registrars are working? #1

There are more than 1,200 ICANN accredited, and an unknown quantity of non-ICANN Registrars. Those are mostly accredited for their homeland ccTLD.

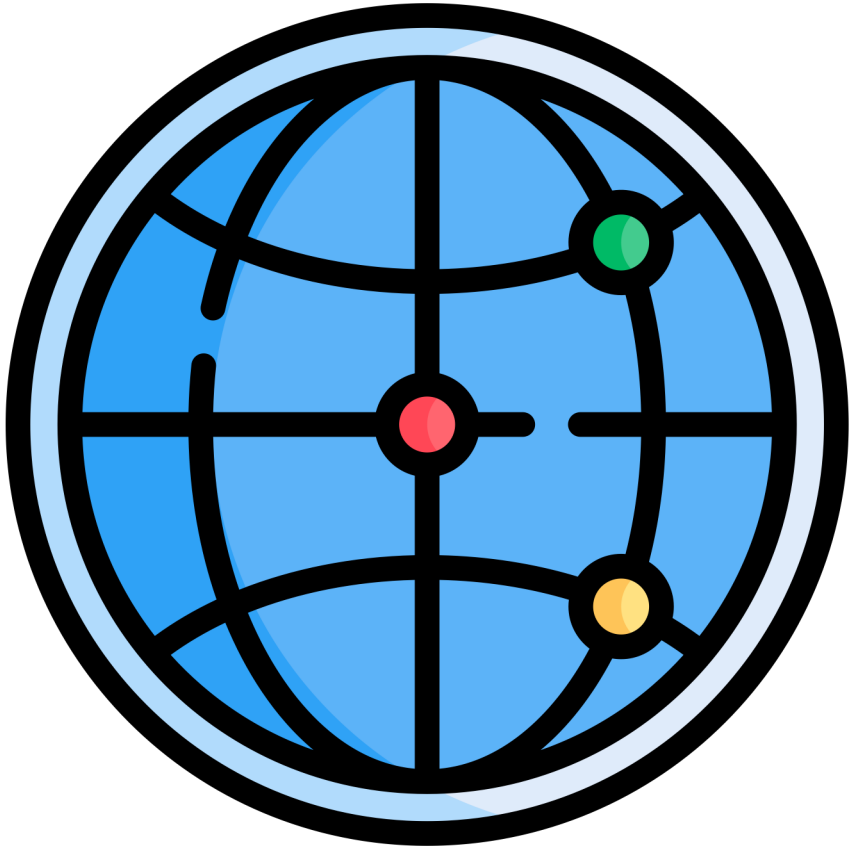
Registrars can act as Resellers as well. That is the preferred choice if they don’t want to get accredited themselves to streamline costs and lower operational efforts.



How Registrars are working? #2

Registrars pursue **different business models** and target audiences:

- Reseller Market (Channel Business) – such as InterNetX and OpenSRS
- End Customer Markets (Individuals & Organizations) – such as GoDaddy and IONOS
- Brand Protection Market (Protecting IP-Rights) – such as MarkMonitor



Thank you!

Icon made by Freepik from www.flaticon.com