

Template for defining an RDS Purpose:
Technical Issue Resolution -and- Academic or Public Interest DNS Research

**Technical Issue Resolution
Academic or Public Interest DNS Research**

Mailing list address: gns0-rds-pdp-1@icann.org

Mailing list archive: <http://mm.icann.org/pipermail/gns0-rds-pdp-1/>

Coordinated by: Michele Neylon

Members: Greg Aaron, Alan Woods, Greg Shatan, Stephanie Perrin, Jonathan Matkowsky, Nathalie Coupet, James Galvin

Template for defining an RDS Purpose:
Technical Issue Resolution -and- Academic or Public Interest DNS Research

Purpose Name: **Technical Issue Resolution**

Definition: *Information collected to enable contact of the relevant contacts to facilitate tracing, identification and resolution of incidents related to services associated with the domain name by persons who are affected by such issues, or persons tasked (directly or indirectly) with the resolution of such issues on their behalf.*

User	Purpose	Example Use Cases	Rationale for registration data access
Internet users affected by technical issues or those tasked with technical issue resolution on their behalf	Technical Issue Resolution	Contact to resolve problems with website, hosting, email service, etc.	Facilitate contact with domain contact (individual, role or entity) who can help resolve technical or operational issues with Domain Name (e.g., DNS resolution failures, email delivery issues, website functional issues, compromised hosting)

Tasks:

- Compromised hosting
- Email not working / Issue with mail servers
- Identifying the hosting provider / registrar
- Problem with DNS hosting - e.g. you can't access a website (name doesn't resolve) - nameservers not responding.
- Website offline

NOTE: resolving technical issues often involves data associated with multiple domain names, e.g., domain, mail domain, nameserver domain, specific service used domain.

Data:

- Technical Contacts (whoever they may be)

Template for defining an RDS Purpose:
Technical Issue Resolution -and- Academic or Public Interest DNS Research

- Registrant contacts
- Nameservers
- Server Status
- Expiry data

Sample Users:

- Abuse responder / reporter
- IT professionals
- Internet users (for the purposes of reporting an issue to the domain / website operator?)

Template for defining an RDS Purpose:
Technical Issue Resolution -and- Academic or Public Interest DNS Research

Purpose Name: **Academic or Public Interest DNS Research**

Definition: *Information collected to enable use of registration data elements by researchers and other similar persons, as a source for academic or other public interest studies or research, relating either solely or in part to the use of the DNS.*

Tasks:

- Location / name of registrar is used by ICANN and others in reports around market penetration, usage and other metrics
- Identifying trends or patterns in domain registration, e.g., domains associated with a particular topic or event
- Demographics
- Lifecycle research
- EPP statuses
- Abuse related research

Data:

- Registrar of record
- Nameservers
- domain name string or substring
- Registrant details
- All fields really

User	Purpose	Example Use Cases	Rationale for registration data access
Internet Researchers	Academic or Public Interest	Domain Name Registration History	Enable historical research about a domain name registration (WhoWas)

Template for defining an RDS Purpose:
Technical Issue Resolution -and- Academic or Public Interest DNS Research

	DNS Research	Domain Names for Specified Contact	Enable identification of all domains registered with a given name, address, nameserver, registration date, etc. (Reverse Query)
		Survey Domain Name Registrant or Designated Contact	Enable surveys of domain name Registrants or their designated contacts
Internet Researchers	Academic or Public Interest DNS Research	Cybercrime research	Understand patterns of registration, hosting, methods used by cybercriminals. See also Domain Name Registration History and Domain Names for Specified Contact above.
Internet Researchers, ICANN	Academic or Public Interest DNS Research	WHOIS accuracy studies	ICANN contractual enforcement. Cybercrime research.
Internet researchers, governments	Public policy research	Studies of Internet proliferation	Capacity-building. ICANN mission. Requires examination of domain contacts.
Internet researchers, governments	Public policy research	Legal and economic analysis	Determine need for and effect of laws (e.g., GDPR) on data accessibility, on privacy, on registry and registrar practices, on stakeholders (e.g., law enforcement), on markets, and on consumer protection
ICANN, governments	Public policy research	Effect of ICANN policies. Example 1: gTLD Marketplace Health Index Assessment. Example 2: New gTLD program: follow-up and Subsequent Procedures PDP.	ICANN mission. ICANN contractual enforcement. Cybercrime research. Consumer protection.

Academic or Public Interest DNS Research

Tasks within the scope of this purpose include research studies about domain names published in the RDS, including information about the Registrant and designated contacts, the domain name's history and status, and domain names registered by a given Registrant (Reverse Query).

Template for defining an RDS Purpose:
Technical Issue Resolution -and- Academic or Public Interest DNS Research

RDS Purpose: Technical Issue Resolution
DT1 Answers to Questions – First Draft for DT Review

From latest Working Draft:

<https://community.icann.org/download/attachments/79432604/KeyConceptsDeliberation-WorkingDraft-13Feb2018.pdf>

WG Agreement #46:

Technical Issue Resolution for issues associated with Domain Name Resolution is a legitimate purpose, based on the following definition: *Information collected to enable contact of the relevant contacts to facilitate tracing, identification and resolution of incidents related to issues associated with domain name resolution by persons who are affected by such issues, or persons tasked (directly or indirectly) with the resolution of such issues on their behalf.*

WG Agreement #47:

The following information is to be collected for the purpose of Technical Issue Resolution associated with Domain Name Resolution:

- Technical Contact(s) or (if no Technical Contact is provided) Registrant Contact(s),
- Nameservers,
- Domain Status,
- Expiry Date and Time,
- Sponsoring Registrar

Developed through deliberation on DT1 Output (November 2017):

<https://community.icann.org/download/attachments/74580012/DT1%20-%20TechIssues-Research-final.pdf>

1. Who associated with the domain name registration needs to be identified and/or contacted for the purpose of Technical Issue Resolution?

Entities who observe or are affected by technical issues associated with a domain name need to contact domain contacts who are the entities tasked (directly or indirectly) with evaluating and solving such issues. These problems may include failure of services associated with the domain (such as email or a web site), failures or errors in DNS resolution, etc. Abuse often involved a technical issue, such as when phishing sites are placed on a compromised domain or malware infects the domain's server, and such cases are often approached and resolved via similar paths as service failures.

Comment [1]: The issue is not whether or not registrants may WISH to be contacted -- they often don't know there is a problem on their domain. Instead, the issue is that people observe problems and then need to reach out to the domain contacts. I've updated this paragraph accordingly.

The contacted party may be the domain name's current "owner (the Registrant (, reached directly), the domain name's current user (the customer of a Privacy/Proxy provider, reached by relay through the PP), or a party designated by the Registrant as being tasked with resolution of technical issues associated with the domain name registration (i.e. an Administrative or Technical contact).

For various legal and practical purposes, note that:

1. The Registrant is the party ultimately responsible for the domain name.
2. Some registrants have the resources to designate other parties who have responsibility or expertise to resolve the underlying problems. IN some cases registrars offer to act as teh Technical Contact for a domain,
3. In some cases the delegated contact may need the authorization of the Registrant in order to make a fix.

From DT1 Output: <https://community.icann.org/download/attachments/74580012/DT1%20-%20TechIssues-Research-final.pdf>

Definition: *Information collected to enable use of registration data elements by researchers and other similar persons, as a source for academic or other public interest studies or research, relating either solely or in part to the use of the DNS.*

1. Who associated with the domain name registration needs to be identified and/or contacted for the purpose of Academic or Public Interest DNS Research?

Entities who buy/sell, register, or use domain names may benefit indirectly from academic or public interest DNS research.

The entities to be identified or contacted about each domain name registration (hereafter referred to as research subjects) depend upon the nature of the research, but may include the domain name's current owner (the Registrant), the domain name's current user (who may or may not be the customer of a Privacy/Proxy provider), a Privacy/Proxy provider associated with the domain name, or the Registrar of record associated with the domain name.

Identification of research subjects is often not strictly necessary for this purpose; for example, research that is performed through aggregation of domain name characteristics obtained from registration data, without regard to registrant or registrar. However, for research tasks such as determining a domain name's registration history, identifying the past and present entities associated with a specific domain name may be essential to the study.

Contact with each entity for research purposes may not be necessary or desired by those entities. For example, the GNSO-sponsored study of WHOIS abuse included surveying registrants about their experiences with abuse of contact data published in WHOIS – this study was performed for the indirect benefit of all entities with contact data in WHOIS. However, some entities may view unsolicited survey invitations as intrusive or perceive contactability for research as a risk not benefit.

2. What is the objective achieved by identifying and/or contacting each of those entities?

The party initiating contact (e.g., Internet researcher, ICANN, government) has an interest in performing the study (e.g., cybercrime research, WHOIS accuracy studies, Internet proliferation studies, legal and economic analysis of the DNS or domain name registration systems, research to inform public policy). As such, that party benefits directly from access to WHOIS data for this purpose, including data associated with the research subject or domain name that may not be personally-identifiable information (e.g., country of the registrant, sponsoring registrar).

The entity being identified or contacted for this purpose may not directly benefit, but may indirectly benefit through reduction in cybercrime, improvements in public policy, fewer data inaccuracies, Internet capacity building, enforcement of laws, consumer protection, etc. Benefits to the research subject depend upon the nature of the research.

In some cases, the research subject may benefit directly – for example, if a prospective buyer is researching the history of a domain name before purchasing it from a willing and interested seller.

3. *What might be expected of that entity with regard to the domain name?*

The identified or contacted entity has no obligation to respond to communication initiated for academic or public interest DNS research.

RDS Purpose: Technical Issue Resolution
DT1 Answers to Questions – First Draft for DT Review

At the same time, if the issue cannot be rectified via contact with the above parties, the domain's sponsoring registrar (the entity where the domain name is currently registered) may also be contacted in an effort to reach affected parties. In some cases the sponsoring registrar is also the domain's hosting, DNS, and/or email provider. Outreach to the sponsoring registrar. For example, this may be also be necessary if the problem with domain name resolution interferes with successful email delivery to intended recipient. Contacting the sponsoring registrar in cases of security problems such as phishing attacks is also reasonable and practical, because such problems cause harm and are important to report and resolve in a as timely a fashion as possible. Outreach to registrars might increase under GDPR, which will reduce or eliminate the availability of domain contact data. Some parties performing outreach may not have the necessary knowledge to determine the hosting provider of a domain, but may be able to learn the registrar's identity via a WHOIS (RDS) query.

Question from WG call for DT to answer: Is the entity you want to reach for technical issue resolution sometimes or always the account holder because they have control over the domain name registration?

2. What is the objective achieved by identifying and/or contacting each of those entities?

The party initiating contact (e.g., abuse responder / reporter, IT professional, users of the domain name, or website operator) often has an interest in the issue being resolved (e.g., mitigating abuse, reestablishing connectivity or availability of systems and services associated with the domain name).

The entity being contacted for this purpose often wishes to be contacted for the same reasons and is benefitted. In many cases, the entity (an individual or business) delegates responsibility for technical issue resolution to another entity with expertise needed to resolve the underlying problems (e.g., update nameservers, investigate the root cause for an unreachable website or mail server or compromised system).

Questions from WG call for DT consideration:

- *Is an objective having the ability to contact someone associated with the domain name registration who can quickly surmise and solve technical issues associated with the domain name such as botnets, email storms, etc?*
- *If an entity does wish to respond to contact attempts, that may be its prerogative, irrespective of the reason for the contact attempt. To the extent entities are not contactable, larger players may already know who to contact; they may or may not depend on WHOIS. Smaller players and outsiders will be impacted more if contact information is not provided through RDS. Privacy is important, but so is security and stability -- if we achieve privacy but break the internet, that is not a desirable outcome.*

3. What might be expected of that entity with regard to the domain name?

A domain contact will often have an obvious self-interest in fixing the issue.

The Internet is a connected system of networks and resources. Parties who control and operate such resources are generally expected to not allow the use of their resources in ways that allow harm to others.

The domain contact ~~contacted entity~~ may or may not have an ~~usually has no~~ legal obligation to respond to communication or to investigate the problem:-

RDS Purpose: Technical Issue Resolution
DT1 Answers to Questions – First Draft for DT Review

- A registrant may have an obligation depending upon what laws or legal obligations it is under. Examples include regulatory or breach notification laws; r contracts containing such obligations, including domain registration agreements; and contributory negligence liabilities.
- A proxy/privacy provider may have notification and communication obligations, per contracts and per forthcoming ICANN Consensus Policy (<https://gnso.icann.org/en/issues/raa/ppesai-final-07dec15-en.pdf>). Per the 2013 RAA, P/P Providers operated by registrars are required to publish "The circumstances under which the P/P Provider will relay communications from third parties to the P/P Customer" and "shall publish a point of contact for third parties wishing to report abuse".
- Per the 2013 RAA, gTLD registrars must maintain a dedicated abuse contact to receive reports of abuse involving Registered Names sponsored by Registrar, and Registrar shall publish on its website a description of its procedures for the receipt, handling, and tracking of abuse reports. Registrars must also "document its receipt of and response to all such reports."

When However, when a domain ~~T~~Technical ~~C~~contact has been tasked with technical issue resolution, the registrant may expect the ~~T~~technical ~~C~~contact to have rights needed to update registration data associated with the domain name or systems using the domain name, and/or take actions that lead to resolution.

Question from WG call for DT to consider: Is the party making contact trying to alert the people managing the domain that they have a problem that would be to their benefit to resolve or is the party making contact trying to get attention to a problem that it has?

Working Group Notes 10 March 2018, ICANN61 F2F

DT1 Answers: [Technical Issue Resolution](#)

WG Response:

- Registrars do not want to be the first point of contact for Tech Issue Resolution – go to the hosting provider (or the Registrant/contact) first. All the Registrar can do is take the DN down. The web host is in a much better position to disable access to the hostname (not the DN)
- There are registrars whose business model includes serving as Tech Contact (value add)
- Is the entity you want to reach for tech issue resolution sometimes or always the account holder? Probably not since several different entities are enumerated in the DT's answer, but this deserves further discussion
- DNS OARC meeting example – DNSSEC validation – need to contact operators of the DN, to help resolve issue, not take the entire DN down
- What is the role of the Reseller in this purpose?
- It is not necessary that Registrants understand the technical issue – the “mechanics of the Internet” need to understand/resolve the issue being reported
- You only need the help of a domain contact when the IP isn't resolving
- Nameservers will not always lead to the hosting provider
- Hosting is not regulated by ICANN – that other part of the Internet community cannot be addressed by RDS policy
- Contacting the domain holder can also be useful if the site is partially pirated, to warn the owner. no need for the host to shut down the site, but for the domain holder to clean its database

DNS Research

- DT1 Answers: [Academic or Public Interest DNS Research](#)

WG Response:

- Note that #2, benefit to prospective buyer doesn't belong in this purpose – it's another purpose
- What is “public interest” research? Too open ended
- Universities typically apply a rigid protocol to research involving humans
- Do you need data associated with individuals for this purpose? Can't you just use aggregate data? Depends on the study – for example WHOIS Misuse study, WHOIS Accuracy study both used individual registrant and contact data to study misuses and inaccuracies to inform policy development, to the benefit of future registrants