

1.0 Introduction

ICANN is working on an Identifier Technical Health Indicators project (ITHI) and has requested the NRO's input. The NRO-EC tasked the RSCG to agree on a work plan and project schedule and start working on risk identification and definition.

The RSCG discussed same during its face-to-face meeting in Mauritius 1-2 Dec 2016. To get a better understanding of the ITHI , we used as reference the information found at www.icann.org/ithi as well as Alain Durand's presentation at the ICANN 57 in Hyderabad (<https://www.icann.org/en/system/files/files/ithi-icann57-07nov16-en.pdf>).

2.0 RSCG's ITHI Work Plan

The steps in the project and the deadlines were defined as follows:-

- a) Produce a draft of Definitions and Risk identifiers by 2nd December 2016 (Completed)
- b) Submit the draft to the NRO-EC by 3rd December 2016 (Completed)
- c) Incorporate feedback from the NRO-EC into the draft document (Completed)
- d) Prepare the indicators draft at the first RSCG face to face meeting in Q1 2017 (Completed)
- e) Submit indicators draft to the NRO EC by the end of Q1 2017 (Completed)
- f) Incorporate feedback from the NRO-EC into the draft (Completed)
- g) Submit final report to the NRO-EC in Q2 2017 (This date could change based on Community Consultation period) (Changed to Q1 2018 due to public consultation) (work in progress)

3.0 Identify the Risks to each of the aspects of accurate data?

The Registry is a set of registration data for Internet Number Resources (INRs) managed by each RIR. Every RIR is responsible for ensuring the accuracy of its Registry. The RIR Whois databases provide access to the public data of the Registry.

Accurate data is defined as being 'Comprehensive', 'Correct' and 'Current' (3C's). We proceeded with identifying the risks of the 3C's.

3.1 Comprehensive

Registration of the Data – is the data registered, comprehensive and complete?

RISK : Internet Number Resource (INR) is not accounted for in the registry (missing)

Consequences:

- The integrity of the Registry is compromised
- Credibility of the Registry system is threatened
- Could create operational problems for the legitimate Resource Holder
- Could create legal issues for the RIR if they do not uphold their responsibility to publicly display the registration information

Uniqueness of the Data – are any INR duplicated in the registry? Issued to more than one organization?

RISK: Duplication of Internet Number Resources – it shows up more than once in the registry(*complete or partial overlaps of number resources*).

Consequences:

- Could create operational issues for the legitimate Resource Holder of the resources
- Could create operational issues for users of the data

3.2 Correct

Correctness of the Data – has the data been verified with official sources for legal name? is able to reach a functioning and relevant party during the vetting and verification processes of each RIR?

RISK: Registry data is incorrect and cannot be relied upon

Consequences:

- Could create credibility issues for the RIR if the data is incorrect
- Resource Holder cannot be contacted when needed for operational/abuse issues/public safety
- RIRs not able to contact the Resource Holder
- Internet Number Resource could be hijacked because it is not clear who the legitimate Resource Holder is.
- Increases the possibility of unauthorized transfer of INR

3.3 Current

Currency of Data – is the data confirmed to be up to date in accordance with the policies of the responsible RIR? Has the data been recently updated?

RISK: Unable to determine whether the information is correct

Consequences:

- If data that has not been recently confirmed to be up to date or updated, then there is no way to tell that the information is correct
- Increase chances for Resource registration hijackings and BGP hijackings if the record has not been updated or validated.

4.0 Causes

a) What could cause the data to not be comprehensive?

1. Resource Holder provides incomplete information
2. The integrity of the Registry data could be compromised either through authorised or unauthorised changes
3. Over time, resource registration requirements have become more stringent
4. Lack of coordination between RIRs
5. System/software failures
6. Governing laws within the economy that may prevent the RIR from being able to obtain required data(e.g privacy laws)

b) What could cause the data to not be correct?

1. Resource Holder either intentionally or unintentionally provides incorrect information
2. Resource Holder refuses to provide correct information
3. Information entered into systems incorrectly
4. Lack of verification processes in place
5. Failure to follow defined RIR verification procedures
6. Failure of Resource Holder to update the Registry as data changes occur
7. Unauthorised changes made to the registration records

c) What could cause the data to not be current?

1. Resource Holder fails to provide updated information in a timely manner
2. Change in legislation may prevent the RIR from obtaining the required data
3. Resource Holder does not understand the importance of maintaining up-to-date data

4. Resource Holder is unfamiliar with the processes and tools of the Registry
5. Resources are abandoned by Resource Holder

5.0 Metrics

1. Scope:
 - a. We have defined the metrics for the measurement phase of this project to include all INRs administered by each RIR and included in the NRO extended delegated statistics.
 - b. Specifically we have excluded those INRs reserved by IANA for the technical community, special purposes and future delegations.
 - c. Legacy INRs (as defined by each RIR) will be measured, tracked and reported separately
 - d. This table is specific to collection and not presentation of measurements

	Definition	Measurement	Measurement Unit	Comments
Comprehensive	Complete (all required data is available)	All INRs administered by each RIR are accounted for in the NRO extended delegation statistics	<ul style="list-style-type: none"> X number of INRs administered missing out of total INRs in the NRO extended stats file Percentage of completeness translated by number above 	Goal is to be 100% [3]
		INRs registration / holdership data is available for all INRs accounted for in the NRO extended delegation statistics [1]	<ul style="list-style-type: none"> Legal Name and address = 50%, POC Information = 50% [2] Required holdership data: Legal name and associated legal address, point of contact (email, phone any of these) 	Goal to be determined after first measurement
Correct	Unique (no duplicated data)	INRs administered by each RIR are not duplicated in the NRO extended delegation statistics	<ul style="list-style-type: none"> X number of INRs administered overlapping out of total INRs in the NRO extended stats file Percentage of completeness translated by number above 	Goal is to be 100% (0% overlapping) [3]
	Matching official sources [4] for legal name and address	The required registration / holdership data listed for the INRs holder matches official sources	<ul style="list-style-type: none"> Legal name and address 50% of total correctness 	To be 100% correct, records must have legal name and address matching official sources as well as a functioning and reachable relevant party
	Functioning and reaching a relevant party	The required registration/holdership contact data listed for the INR holder is a functioning and reachable relevant party	<ul style="list-style-type: none"> Point of contact: email / phone 50% of total correctness 	
Current	Confirmed to be up to date or <i>recently</i> updated [5]	The required holdership data listed for the INR holder is confirmed to be up-to-date or updated [1]	<p>Give a weight to each data point to reach a total score out of 100%</p> <ul style="list-style-type: none"> 50% legal name and address 50% point of contact 	

Table Notes:

[1] What is required holdship data that RIRs measure: Legal name, associated legal address, point of contact email and/or phone

[2] There are 2 data points required for each holder. Each data point will be weighted as 50% for a total of 100%

[3] Recommend measurement to be conducted daily for completeness and uniqueness of all INRs

[4] "Official sources" is defined as "Authorised/recognised authority within the economy"

[5] Overall each RIR will define the exact metric to be measured per their own approved policies and procedures, there will be an RIR specific table created by each RIR for use in their region.