IANA Subtopic meeting with Kim Davies, Elise Gerich
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1. **IANA requests go through the GDD portal for gTLDs. Do ccTLDs use the GDD portal? If no, do they have the option to use the portal?**

- No IANA requests go through the GDD Portal. Processes are separate. IANA critical systems are self-contained. When a ccTLD or gTLD wants to make a change, they will go to a dedicated system. It's called the RZMS (Root Zone Management System). By October 1st will do 100% of the root zone change processes. Today, revocations and root server changes are not supported by RZMS.
- A gTLD gets approved by going through the GDD application process with ICANN, for contracting, etc. Once they are allowed to delegate they are given a unique link to RZMS. Fill out a form (6 or 7 steps, contact info, WHOIS server, RDAP server etc.)in RZMS. Hit submit and this creates a new delegation request within RZMS.
- Step 1. Contact validation (automatically generated – staff haven't touched anything. Staff only jump in if something goes awry).
- They click the unique link in the email to show that they received it.
- Stage 2: Technical checks. All have automated test procedure. Check a DNS key for every DS record appears in the apex of the zone. Website – it automatically probes to see if it's up, same with WHOIS and RDAP server. If failure, report will be sent to the requester. They can ask for an exemption which gets reviewed by tech person on staff (usually Kim D.). Generally then they will be either educated or granted an exemption. In normal cases, staff are not involved.
- Then it goes through processing (similar for new and modifying TLDs).
- Elise to share presentation on steps on the Root Zone File Change Process.

2. **What are the Business continuity tests, and do they include documentation that address the migration plan and failure rollover from both the business and technical perspective, in particular to address security issues?**

- Continuity and Contingency Operations plan (CCOP) is updated annually. Last test in a tabletop exercise was about 2 years ago in collaboration with Verisign. It's not available (includes back up phone #s etc.).
- Transition plan exists and is annually updated and is public. It's in contract with ICANN to update and submit in October. It is high level and there is no intention to make it too much heavier. The transition plan acknowledges that the content of the registries belongs to the community and will be provided to the successor in the case of a transition. Akin to if a registry operator changes it's back-end provider. ICANN will provide functional requirements to a successor so the successor can develop a root zone management software suite; however, it will not provide the source code to RZMS.

- Verisign is committed contractually to give their first transition plan as root zone maintainer in October 2017. PTI currently operating under the one that was reviewed in 2016.
- Transition plans are totally independent. No link between PTI plan and Verisign plan
- The transition plans do not specify a timeframe. The terms of the contracts with ICANN specify how long the root zone maintainer or the IANA functions operator have to transition to a successor. Both termination clauses specify 365 days.

3. **What is the transition plan (Previously C7.3 in the IANA functions contain) and process for all root zone management processes and functions including KSK, RZMS etc?**

- For key management facilities, whoever is writing the contract would have certain criteria. Transition plan covers this. No plans to transition them. Don't know if the keys would transition. New operator would probably generate a new KSK.

4. **What are RZMS standard operating process and procedures for the security related operation of the DNS.**

- ICANN IT security policies etc. are applicable to PTI through the shared-services contract (eg. on-boarding is done by HR dept. of ICANN, email services and associated policies etc.).
- PTI has some specific systems. The division of responsibility is that PTI is responsible for design and evolution of the systems but operational deployment is done by ICANN (eg. release-management, RZMS.) Not responsible for overseeing the overall health.
- Interrelated policies are part of the controls in SOC2 audit.

5. **What are the business continuity plans and documents to move to a new RZMS system should that be necessary?**

- Anyone who is awarded a contract should have already shown that they have a system they can launch.
- ICANN maintains two locations that host the critical PTI services. Configured to be Passive/Active. Use for eg. during maintenance windows.
- Speculative: ICANN thinking about building an additional facility in a third, non-US location. PTI would seek to leverage that if it happens.

6. **What are the documented procedures and processes around RZMS management.**

- Covered

7. **How is field verification and content authorized – what are checks and balances documentation to ensure what was entered is correct – can you put text into an IP address file**

- Fields support both IPV6 and IPV4. But it will return an error if it doesn't look valid.
- Postal address is not validated automatically because of the complexity of international addresses.
- What if someone types in the wrong address but it's verifiable?
- Cross-check between 2 reps of the TLD. Admin and tech contacts of the TLD need to check and agree it's accurate. IANA staff also do a manual review of everything.
- There is no structured training for customers. But hand-holding is part of customer relations eg. one-on-ones at ICANN meetings.
- Customers can submit change requests but can't directly change anything except password w/out staff or third party involvement. Can withdraw request. Submitting a change requests triggers steps that involve multiple parties.
- No fully-automated request workflows that impact the root zone.

8. **The relationship between PTI, ICANN and the root zone maintainer– what is the detailed post transition process between the three parties, including the chain of command, secondment of staffs (Who, where etc) and who has the ability to authorize what actions**

- Docs on PTI.ICANN.Org site – 6 different agreements between ICANN/PTI and ICANN/Verisign, ICANN/IETF and ICANN/RIRs. Subcontracted by ICANN so empowered to work directly with Verisign.
- Shared services contract and sub-license to PTI from ICANN to be able to use IANA.
- ICANN has license from IETF trust to use the IANA name and subcontract it to PTI.
- Anyone who worked at IANA within ICANN is seconded to PTI. There is 1 dedicated-shared FTE within ICANN dedicated to working on IANA functions.
- What would cause ICANN to step in and make a decision vs. PTI? It hasn't changed from when IANA was a department within ICANN. Too early to tell for long-term strategic planning. Naming community has decided that ICANN speaks for them in terms of who is designated to subcontract.
- Customer standing committee is part of ICANN and an oversight of PTIs performance of the naming functions. They are the interface for receiving reports/escalations etc. Similar to what NTIA would do.
- Tech Director of IANA is responsible for tech systems development and policies, product management. No direct operational responsibility for root zone changes. But Tech Director is subject matter expert internally. Up until 2 months ago had a responsibility for DNSSEC of the root zone. But new Director of Security (ICANN employee seconded to PTI) does this role now.
- OCTO did heavy lifting for R-and-D for the rollover before the transition. Collaboration within ICANN.
- Everyone on the org chart is seconded. EG leads the dep't with 5 direct reports. Kim Davies, Naela Sarras, Marilia Hirano, Michelle Cotton, LV McCoy (responsible for DNSSEC and security of systems). Kim has open position for product development and

is manager of dedicated software developer (not seconded) from ICANN's IT department. LV has Punky & Andres, Naela has 4 people and 1 open headcount and Marilia has 1 person reporting to her. Michelle has no direct reports. The department has a dedicated Administrative assistant, Jennifer Johnson.

- EG to send org chart.

9. **Can you provide the training materials for staff – how are they trained, frequency of training, level of detail in the training materials**

- Internal training materials but most is one-on-one training where an existing staff member is paired with that person and they work together. Incrementally will start to handle requests. No training manuals per-se. Training materials not published.
- Ongoing training: Is identified as part of the process improvement that Marilia oversees.
- Encourage people to take outside courses for bigger picture knowledge.
- If a particular issue becomes apparent, ad hoc training within the dep't is compiled. And training for ICANN staff (lunch and learns).
- Everyone has to have security training within ICANN annually. This is one of the SOC2 controls. Not internally developed.
- Staff take laptops home but they can't get in except if on the VPN.
- Administrative access to the RZMS exists. There is an audit trail and it requires 2-factor authentication. SOC2 controls ensure that access is limited.
- Super user doesn't let you make changes.
- Audit trail is assessed by third-party auditors annually. Access control is reviewed monthly.
- Need to ask IT Ops if it's checked more frequently in-house.

10. **Staff: Retention of staff – is there a formal plan for retention, staff diversity, any change in FTEs pre and post transition, need an understanding of the process for ICANN staff seconded to PTI or will it be they become PTI employees**

- Covered

11. **What are the technical security procedures used to prevent an unauthorized re-delegation of ccTLDs**

- Covered

Other
- Suggestion that sub-team look at SLE dashboard: IANA.org/performance.
- Don't forget numbering and protocol parameters functions.
- New authorization model for RZMS in development. KD to share docs.

Next steps:

- IANA sub-team will submit requests for docs through RT staff.
- Another sit down suggested once plan has been developed. Sub-team intends to share draft report with SSR2 Review Team in September.