

Second IANA Naming Function Review

DRAFT Report for Public Review

Second IANA Naming Function Review Team
7 March 2025



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1 Executive Summary

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This report presents the Second IANA Naming Function Review Team's (IFRT2) findings, analysis, issues, and recommendations, as directed and in compliance with [ICANN Bylaws](#),¹ Article 18: IANA Naming Function Reviews.

In evaluating the performance of Public Technical Identifiers (PTI), the IFRT2 has found that PTI operates reliably, efficiently, and serves the needs of IANA Naming Function customers. The IFRT2 has found no areas of performance deficiency or major opportunities for operational improvement. The recommendations presented herein serve to further clarify the IANA Naming Functions Contract (“Contract”), enhance transparency of information, and optimize future review processes.

The IFRT2 also presents a set of “Incidental Findings,” which are observations that could be addressed at an appropriate time but which do not rise to the level of recommendation.

This report reflects the consensus of the full review team.

The IFRT2 would like to thank the staff of both PTI and ICANN for their support and dedication throughout the process of this review.

¹ Internet Corporation for Assigned Names and Numbers (9 January 2025) “[Bylaws FOR INTERNET CORPORATION FOR ASSIGNED NAMES AND NUMBERS | A California Nonprofit Public-Benefit Corporation – ICANN](#)” [Accessed 28 February 2025]

2 Part 1: Findings and Recommendations

2.1 IFRT2 Finding 1: DNSSEC Policy and Practice

Contractual Reference: [IANA Naming Function Contract](#), Annex A, 4 (i) (1)

The IFRT2 identified that specific DNSSEC policy details are referred to in the Contract. Given that these policy details are maintained elsewhere and are frequently updated in line with best practices, inclusion in the Contract creates a risk that the Contract will not always reflect the latest and most effective policy.

This section of the Contract does not reflect who or what is the authoritative source for best practice in relation to DNSSEC. The review team was also not able to identify an authoritative source (or sources) for reference in Recommendation 2 below, although the Base Registry Agreement may offer a useful reference.²

2.1.1 Recommendation 1

Recommendation ID: **IFRT2-2025-Rec1**

The IFRT2 recommends removing the policy details from the IANA Naming Function Contract (see Annex A, 4 (i) (1)).

Evaluation Criteria:

- The IANA Naming Function Contract removes references to specific DNSSEC policy details.

Expected Due Date: ICANN Board Recommendation Approval plus 365 days.

Priority: Low

Status: *This will be updated following acceptance of the final IFRT2 report.*

2.1.2 Recommendation 2

Recommendation ID: **IFRT2-2025-Rec2**

The IFRT2 recommends identifying and pointing to the appropriate policy authority for DNSSEC in the IANA Naming Function Contract (see Annex A, 4 (i) (1)).

Evaluation Criteria:

² See page 79, section “DNSSEC” of ICANN (2024) “[Base Registry Agreement](#)”

-
- 101 • The IANA Naming Function Contract names the authoritative source for DNSSEC
102 policy.
103

104 Expected Due Date: ICANN Board Recommendation Approval plus 365 days.

105
106 Priority: High

107
108 Status: *This will be updated following acceptance of the final IFRT2 report.*
109
110

111 **2.2 IFRT2 Finding 2: Contract Amendment** 112 **Transparency**

113
114 Contractual Reference: [IANA Naming Function Contract](#)
115

116 In reviewing the IANA Naming Function Contract, the IFRT2 Team gathered insights and findings
117 that had already been addressed by amendments that were not immediately obvious or
118 available to the team.
119

120 **2.2.1 Recommendation 3**

121
122 Recommendation ID: **IFRT2-2025-Rec3**
123

124 To improve transparency and to support the next IFRT, the IFRT2 recommends that the
125 Contract, as amended, is made publicly accessible. If this is not possible, the review team
126 suggests providing a clear mapping of which lines have been amended to sit alongside the
127 original Contract.
128

129 Evaluation Criteria:

- 130 • Those accessing the IANA Naming Function Contract can identify where
131 amendments have overridden the text, either from within the Contract itself or on the
132 page that houses the Contract.
- 133 • Those accessing the IANA Naming Function Contract can read the most recent
134 amended version of the Contract or navigate to it from the Contract itself.
135

136 Expected Due Date: ICANN Board Recommendation Approval plus 183 days.
137

138 Priority: Med
139

140 Status: *This will be updated following acceptance of the final IFRT2 report.*
141

142 **2.3 IFRT2 Finding 3: Frequency of Reviews**

143
144 [ICANN Bylaws](#) Reference: Section 18.2(b)
145

146 Following the first IFR report, the ccNSO council suggested amending the frequency of the
147 IANA Naming Function Review (IFR). Currently, the frequency is defined in section 18.2 (b) as:
148 “once every five(5) years, measured from the date the previous IFRT for a Periodic IFR was
149 convened.”³ Because periodic IFRs take approximately 12-18 months to complete and are then
150 followed by implementation time, the ccNSO suggested that situations could arise in which a
151 review begins without sufficient time to observe the impacts of prior changes. The review team
152 notes that this observation proved accurate in the case of IFR2, which began with limited time
153 after the recommendations of IFR1 were implemented.
154

155 2.3.1 Recommendation 4

156 Recommendation ID: **IFRT2-2025-Rec4**

157
158
159 The IFRT2 recommends amending ICANN Bylaws Section 18.2(b) to read “once every five (5)
160 years, measured from the date that the most recent IFRT submits its Final Report to the ICANN
161 Board of Directors.”

162
163 Evaluation Criteria:

- 164 • Initiation of an amendment, as described, to ICANN Bylaws Section 18.2(b)
- 165 • This change requires that those accountable for the timely completion of IFRs, the
166 ICANN Board of Directors, ensure that procedural controls exist to mitigate the risk of
167 stalled reviews.

168
169 Expected Due Date: ICANN Board Recommendation Approval plus 365 days.

170
171 Priority: Med

172
173 Status: *This will be updated following acceptance of the final IFRT2 report.*
174

175 2.4 IFRT2 Incidental Findings

176
177 In its review, the IFRT2 identified several items deemed incidental but worthy of note. They do
178 not rise to the level of a formal recommendation; however, they are included in this report for
179 consideration by ICANN, PTI, and future review teams.
180

181 2.4.1 Incidental Finding 1: Contract Revisions

182
183 The IFRT2 conducted a detailed review of the IANA Naming Function Contract and identified
184 several drafting improvements. No single improvement warranted a Contract change itself.
185 However, the review team encourages ICANN and PTI staff to consider the items in [Appendix B](#)
186 when the Contract is next revised.
187

³ Internet Corporation for Assigned Names and Numbers (9 January 2025) “[Bylaws FOR INTERNET CORPORATION FOR ASSIGNED NAMES AND NUMBERS | A California Nonprofit Public-Benefit Corporation – ICANN](#)” Section 18.2 (b) [Accessed 28 February 2025]

188 2.4.2 Incidental Finding 2: Transition Plan

189

190 Contractual Reference: [IANA Naming Function Contract](#) Article IX Section 9.3

191

192 The IFRT2 notes that there is a requirement to review the Contract transition plan every five
193 years. Whereas that anniversary has not yet taken place at the time of this review, the review
194 team notes that it would be helpful to ensure that this document is made publicly available with
195 a notation reflecting the date of the most recent review.

196

197 2.4.3 Incidental Finding 3: SLA Reporting

198

199 Upon review of PTI performance in relation to Service Level Agreements (SLAs), the review
200 team noted that there were situations in which external factors – unrelated or otherwise outside
201 the authority of PTI – could affect SLA achievement. The team noted multiple occurrences of
202 apparent SLA violations that, in fact, were dependent on a customer system or process (and
203 therefore not a violation). Given that this requires case-by-case review by those consuming the
204 reports, the team asks staff to consider whether there is an alternative way to identify and
205 handle regular exceptions.

206

207 2.4.4 Incidental Finding 4: Ombuds

208

209 Article 8 of the Contract includes a role for the ICANN Ombuds in the event that a complaint is
210 not resolved by the initial process within the CSC, stating: “If the Complaint is still not resolved,
211 the Complainant or the President of Contractor may escalate the matter in writing to ICANN’s
212 Ombudsman.”

213

214 Since this dual pathway for complaints might result in confusion, the review team investigated
215 the history of its role in the Contract. The team found that, during the transition of IANA
216 functions from the National Telecommunications and Information Administration (NTIA) in
217 2016,⁴ the combination of complaint resolution processes was designed to ensure “adequate
218 checks and balances to protect against capture.”⁵

219

220 To date, there have been no complaint escalations to the Ombuds. Given that no procedural
221 problems have been experienced or identified with the Ombuds’ role, the critical importance of
222 avoiding capture, and the cited role that the Ombuds plays in mitigating the risk of capture, the
223 team does not recommend amending this part of the Contract. However, subsequent
224 Accountability and Transparency Reviews (ATRT) or those focused on the Office of the
225 Ombuds may wish to explore this further.

⁴IANA Stewardship Transition Coordination Group (2015) “[Proposal to Transition the Stewardship of the Internet Assigned Numbers Authority \(IANA\) Functions from the U.S. Commerce Department’s National Telecommunications and Information Administration \(NTIA\) to the Global Multistakeholder Community](#)” [Accessed 28 February 2025]

⁵ NTIA (June 2016) “[IANA Stewardship Transition Proposal Report](#)” [Accessed 28 February 2025]

226 3 Part 2: Background on the Review

227 3.1 Introduction

228 The IFR is an accountability mechanism created as part of the IANA stewardship transition to
229 ensure that Public Technical Identifiers (PTI) meets the needs and expectations of its naming
230 customers.
231

232 The second IFR was convened by the ICANN Board by resolution on 10 September 2023,⁶ in
233 compliance with [Article 18](#) of the ICANN Bylaws, which state:

234 *“The Board, or an appropriate committee thereof, shall cause periodic and/or special*
235 *reviews (each such review, an “IFR”) of PTI’s performance of the IANA naming function*
236 *against the Contractual requirements set forth in the IANA Naming Function Contract*
237 *and the IANA Naming Function SOW to be carried out by an IANA Function Review*
238 *Team (“IFRT”) established in accordance with [Article 18](#).”⁷*

239 The IFR2 began with a call for qualified volunteers to serve on the review team. Choosing from
240 a pool of candidates seeking nominations, ICANN’s Supporting Organizations (SOs) and
241 Advisory Committees (ACs) nominated a list of candidates to inform SO/AC Chairs’ discussions
242 and decisions as they assembled the composition of the review team. An ICANN Board member
243 serves on the review team in a liaison capacity.
244

245 3.2 Membership

246 As per the ICANN Bylaws, the review team was selected by ICANN’s SOs and ACs. The review
247 team was assembled at ICANN 78 (Hamburg) in October 2023 and began its work.
248

249

⁶ Internet Corporation for Assigned Names and Numbers (2023) “[Approved Resolutions | Regular Meeting of the ICANN Board 10 September 2023](#)” [Accessed 28 February 2025]

⁷ Internet Corporation for Assigned Names and Numbers (9 January 2025) “[Bylaws FOR INTERNET CORPORATION FOR ASSIGNED NAMES AND NUMBERS | A California Nonprofit Public-Benefit Corporation – ICANN](#)” Article 18. [Accessed 28 February 2025]

254 **Table 1: Members of the IFRT2 Team**

255

Name	Region	SO / AC Appointment
Ashley Heineman (Co-Chair)	NA	RrSG
Peter Koch (Co-Chair)	EUR	ccNSO
Carlton Samuels	LAC	ALAC
Edowaye Makanjuola	AF	GAC
Jonathan Robinson	EUR	RySG
Lars-Johan Liman	EUR	RSSAC
Lyman Chapin	NA	SSAC
Olga Cavalli	LAC	ccNSO
Rafik Dammak	AP	NCSG
Rajiv Prasad	NA	CSG
Rick Wilhelm	NA	RySG
Sami Ali	AP	ccNSO
Brett Carr	EUR	CSC Liaison
Alan Barrett		ICANN Board Liaison
Steve Conte		ICANN Liaison
Marilia Hirano		PTI Liaison

256

257 **Notes:**

- 258 ● The Address Supporting Organization (ASO) and Internet Architecture Board (IAB)
- 259 declined their right to appoint a liaison to the review team.
- 260 ● The ICANN Bylaws, Section 18.8:(d) state: “The IFRT shall be led by two co-chairs: one
- 261 appointed by the GNSO from one of the members appointed pursuant to clauses (c)-(f)
- 262 of [Section 18.7](#) and one appointed by the ccNSO from one of the members appointed
- 263 pursuant to clauses (a)-(b) of [Section 18.7](#).”
- 264 ○ The GNSO appointed co-chair is Ashley Heineman.
- 265 ○ The ccNSO appointed co-chair is Peter Koch.

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3.3 Review Execution and Methodology

3.3.1 Team Establishment

The review team commenced with a series of briefings designed to introduce all members to the work of PTI, IANA, CSC, and the Contractual requirements against which performance would be reviewed.

Table 2: Background Information and Briefings to the IFRT2

Briefing Session	Date	Slides	Recording
IANA Services Overview	10 Jan 2024	Available Here	Available Here
Briefing from the IANA Team on Root Zone Management and Performance Monitoring	06 Feb 2024	Available Here	Available Here
CSC Overview	06 Mar 2024	Available Here	Available Here

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During this period, the IFR2 Team developed a set of founding documents:

- [Terms of Reference \(TOR\)](#)
- [An Indicative Work Plan](#)

These documents established the baseline expectations of team deliverables, routines, practices, scope, and timelines.

On 28 February 2024, the review team [announced](#) the creation of these documents and invited participation from the ICANN community, offering communication options and links to the IFR2 Wiki.⁸

The IFR2 team leveraged its Wiki to provide organization, transparency, and accessibility. It included:

- All founding documents highlighted above
- Communication methods, including mailing lists and links to register
- All emails to the IFR2 distribution, published [here](#)
- List of past and future plenary meetings with meeting notes, recordings, and materials
- Action Trackers and links to work-in-progress
- Links to resources and data required for the review

⁸ Internet Corporation for Assigned Names and Numbers (2024) "[IFR2 Team Starts Review of Key ICANN Function](#)" [Accessed 28 February 2025]

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3.4 The IFRT2 Work Methodology

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The IFR2 Team convened on 23 October 2023 and met every other week on a Tuesday, with Co-Chairs and ICANN staff meeting in the “off weeks” to organize the agenda.

302

303

304

To undertake its work, the review team methodically reviewed a number of inputs as required by section 18.4 of the ICANN Bylaws:

305

306

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Table 3: Findings associated with Review Materials

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Review Materials	Findings
IANA Naming Function Contract and Statement of Work	See Appendix B
Bylaws Scope Requirements	This analysis is contained in the “Scope Review and Findings” section of this report
IFR1 Recommendations and Implementation Status	The review team reviewed the IFR1 findings and recommendations , as well as the public comments on recommended changes, which led to Recommendation 3.
Performance Reports provided by PTI in accordance with the IANA Naming Function Contract (section 18.4.a.)	The online dashboard of PTI’s metrics: https://sle-dashboard.iana.org/ PTI’s Monthly SLA Reports: https://www.iana.org/performance/csc-reports . Monthly audit report on the root zone files: www.iana.org/performance/root-audit . The annual IANA Function Customer Engagement Survey
Reports provided by the CSC as well as recommendations made by the CSC (section 18.4.b and d)	Monthly CSC Reports on PTI’s Service Level Agreements (SLAs):
Report following community input through the intended Public Comment on the Draft Initial Report (section 18.4.c)	To follow the Public Comment Period

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312 3.5 Decision-Making Methodologies

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314 The IFRT2 followed the meeting rules from the ICANN Bylaws Section 18.9. Meetings:

315

“(a) All actions of the IFRT shall be taken by consensus of the IFRT, which is where a small minority may disagree, but most agree. If consensus cannot be reached with respect to a particular issue, actions by the majority of all of the members of the IFRT shall be the action of the IFRT.”

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The review team leadership is responsible for designating each decision as having one of the following designations:

320

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Full consensus: no review team members speak against the recommendation in its last readings.

322

323

Consensus: a small minority disagree, but most agree. A rule of thumb for judging consensus is that the decision is supported by 80 percent of the review team (does not override Bylaws Section 18.5 for specific situations).

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326

Strong support but significant opposition: most of the group supports a recommendation, but a significant number of members do not (does not override Bylaws Section 18.5 for specific situations).

327

328

329

Divergence: no strong support for any particular position but rather many different points of view. Sometimes, this is due to irreconcilable differences of opinion; sometimes, it is due to the fact that no one has a particularly strong or convincing viewpoint. Nonetheless, the members of the group agree that it is worth listing the issue in the report.

330

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332

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Minority view: proposal where a small number of people support the recommendation. This can happen in response to a **consensus**, **strong support but significant opposition**, and **no consensus**; or it can happen in cases where there is neither support nor opposition to a suggestion made by a small number of individuals.

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Based upon the review team’s needs, the leadership may direct that review team participants do not have to have their name explicitly associated with any full consensus or consensus view/position. However, in all other cases, and in those cases where a group member represents the minority viewpoint, their name must be explicitly linked, especially in those cases where polls were taken.

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Consensus calls should always involve the entire review team and, for this reason, should take place on the designated mailing list to ensure that all review team members have the opportunity to participate fully in the consensus process. It is the role of the leadership to designate which level of consensus is reached and announce this designation to the review team. Members of the review team should be able to challenge the designation of the leadership as part of the review team’s discussion. However, if disagreement persists, review team members may use the process set forth below to challenge the designation.

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349 **ICANN Bylaws, Section 18.9.(b)** “Any members of the IFRT not in favor of an action
350 (whether as a result of voting against a matter or objecting to the consensus position)
351 may record a minority dissent to such action, which shall be included in the IFRT
352 minutes and/or report, as applicable.”

353 All minority dissents must detail the analysis or recommendations in the final report with which
354 its author disagrees, including a rationale for that disagreement.

355 The authors of minority dissents are encouraged to provide alternative recommendations that
356 include the same details and context as is required from the recommendations in this document.

357 **3.6 Requirements for Recommendation Drafting**

358
359 The review team remained conscious of ICANN Bylaws requirements when drafting their
360 recommendations:

- 361
- 362 1. Perform Review according to Review Scope.
- 363 2. Make recommendations according to the Review Scope.
- 364 3. Initiate a Public Comment period and any other processes for obtaining community input
365 (such as, but not limited to, in person sessions during ICANN meetings, responses to
366 public surveys, and public input during meetings 18.4.c*) on PTI’s performance under
367 the IANA Naming Function Contract & SOW (18.3.h*) as well as improvement
368 recommendations (technical, process or other) (18.4.d*).
- 369 4. Request input from the CSC (18.3.j*).
- 370 5. Review PTI Reports created to meet IANA Naming Function Contract & SOW
371 requirements and that were created during the IFR period being reviewed (18.4.a*).
- 372 6. Review CSC Reports created to meet the CSC Charter requirements and that were
373 created during the IFR period being reviewed (18.4.b*).
- 374 7. Review results of any site visits by the IFRT (18.4.e*) (IV.7.3.b & Annex A: 3.a.ii**).
- 375

376 The Review Team should ensure any recommendation:

- 377 1. Is supported by data and analysis of the existing deficiency and a proposal to address it
378 (18.5.b*).
- 379 2. Provides a proposed remedial procedure with an explanation of how this will correct the
380 issue (18.5.b*).
- 381 3. Provides a timeline for implementing (18.5.b*).
- 382 4. Provides prioritization if there is more than one recommendation (18.5.b*).
- 383 5. Is not made public to the community or Board if it impacts gTLD registry operator
384 services and receives opposition from the Registry Stakeholder Group’s appointed IFRT
385 member (18.5.c*).
- 386
- 387
- 388
- 389

390 4 Scope and Review Findings

391

392 4.1 ICANN Bylaws 18.3.(a)

393

394 *“Review and evaluate the performance of PTI against the requirements set forth in*
395 *the IANA Naming Function Contract in relation to the needs of its direct customers and the*
396 *expectations of the broader ICANN community, and determine whether to make any*
397 *recommendations with respect to PTI’s performance.”*

398

399 **Objective**

400 Consistent with ICANN’s mission and Bylaws, Section 18.3(a), the review team will assess the
401 needs and expectations of IANA naming function direct customers and the broader community
402 and then determine if there are any gaps in PTI’s performance. The IFRT will examine PTI’s
403 performance against SLAs originally developed by the community; review PTI’s annual
404 customer engagement survey; discuss PTI’s performance with the Customer Standing
405 Committee (CSC); solicit input through the first Public Comment of an Initial Draft; and other
406 methods that the review team deems appropriate.⁹

407

408 **Findings**

409 The review team has reviewed the IANA Naming Function Contract and PTI’s performance
410 relative to its direct customers and community. We briefed the Registry Stakeholder Group
411 (RySG) and held an Open Review Team Meeting (November 13) at ICANN81, where the review
412 team provided an update on the review and sought feedback on the following questions:

413

- 414 ● Is PTI’s performance meeting members’ needs?
- 415 ● Do members experience any systemic issues
- 416 ● Do the IANA Naming Function Contract and SOW meet their needs?¹⁰

417

418 No performance issues or systemic challenges were identified in that session.

419

420 **Recommendations**

421 The IFR2 Team makes no recommendations based on gaps in PTI performance relative to
422 customer and community feedback.

423

424 4.2 ICANN Bylaws 18.3.(b)

425

426 *“Review and evaluate the performance of PTI against the requirements set forth in*
427 *the IANA Naming Function Contract and IANA Naming Function SOW.”*

428

429 **Objective**

430 Consistent with ICANN’s mission and Bylaws, Section 18.3(b), the review team will assess all
431 IANA naming function related requirements in the Contract and SOW and determine if PTI has
432 met these. The IFRT will do so through such means as interviews with PTI and ICANN staff

⁹ [IFR2 Terms of Reference](#)

¹⁰ <https://icann81.sched.com/event/1p2lY/second-iana-naming-function-review-ifr2-team-work-session>

433 and/or community subject matter experts, available monthly reporting and monitoring tools, as
434 well as IANA audit reports that apply to IANA naming functions.¹¹

435
436 **Findings**

437 The review team has performed a methodical review of the IANA Naming Function Contract and
438 Statement of Work and assessed PTI’s performance relative to it.

439
440 **Recommendations**

441 Recommendations 1-3 and Incidental Findings derive from this review.

442
443 **4.3 ICANN Bylaws 18.3.(c)**

444
445 *“Review the IANA Naming Function SOW and determine whether to recommend any*
446 *amendments to the IANA Naming Function Contract and IANA Naming Function SOW to*
447 *account for the needs of the direct customers of the naming services and/or the community at*
448 *large.”*

449
450 **Objective**

451 Consistent with ICANN’s mission and [Bylaws](#), Section 18.3(c), and based on the analysis
452 conducted for 18.3.(a) and 18.3.(i) in particular, the review team will review the IANA Naming
453 Function Contract and SOW to determine if the needs of IANA naming customers are fully
454 covered through a review team analysis.

455
456 **Findings**

457 Please see the table in Appendix B.

458
459 **Recommendations**

460 Recommendations 1-2 and the Incidental Findings relate to Bylaw 18.3(c).

461
462 **4.4 ICANN Bylaws 18.3.(d)**

463
464 *“Review and evaluate the openness and transparency procedures of PTI and any oversight*
465 *structures for PTI’s performance, including reporting requirements and budget transparency.”*

466
467 **Objective**

468 Consistent with ICANN’s mission and [Bylaws](#), Section 18.3(c), the review team will assess PTI’s
469 procedures while considering any customer feedback on the openness and transparency for
470 such procedures as assessed in 18.3.(a) and (i). The review team considers PTI oversight
471 structures to include, but not exclusive to: Board oversight, management, community
472 committees, and other accountability mechanisms.

473
474 **Findings**

475

¹¹ [JFR2 Terms of Reference](#)

476 Following its review of PTI processes, stakeholder feedback, and discussions with PTI staff, the
477 IFRT2 echoes the findings of the first IFRT. PTI operates as autonomously and as transparently
478 as possible:

- 479 • The PTI management team maintains sufficient oversight over operations.
- 480 • The PTI Board is administrative and is not engaged in day-to-day operations.
- 481 • The PTI budgeting process is open and transparent with no funding challenges
482 impacting operations or customer service.
- 483 • There are no observable issues with reporting between CSC and PTI.
- 484 • The CSC is empowered to execute its oversight function with support from PTI.

485
486 **Recommendations**

487 The review team has no recommendations in relation to this section
488

489 **4.5 ICANN Bylaws 18.3.(e)**

490
491 *“Review and evaluate the performance and effectiveness of the Empowered Community
492 (EC) with respect to actions taken by the EC, if any, pursuant to [Section 16.2](#), [Section](#)
493 [18.6](#), [Section 18.12](#), [Section 19.1](#), [Section 19.4](#), [Section 22.4\(b\)](#) and [Annex D](#).”*

494
495 **Objective**

496 The review team will evaluate the performance and effectiveness of actions taken by the EC in
497 relation to Sections 18.6 and 18.12 as approved by the Board in September 2023 and
498 completed by the EC in November 2023.
499

500 **Findings**

501 To date, there have been no Empowered Community (EC) actions in relation to Bylaws
502 Sections 16.2, 18.6, 18.12, 19.1, 19.4,22.4(b).
503

504 **Recommendations:**

505 The review team has no recommendations in relation to this section.
506

507 **4.6 ICANN Bylaws 18.3.(f)**

508
509 *“Review and evaluate the performance of the IANA naming function according to established
510 service level expectations during the IFR period being reviewed and compared to the
511 immediately preceding Periodic IFR period.”*

512
513 **Objective**

514 The review team will review relevant monthly reporting and monitoring tools to evaluate the
515 performance of the IANA naming function according to established service level expectations
516 and directly evaluate these against the findings from the first IFR.
517

518 **Findings**

519 The IFRT2 reviewed relevant reporting and monitoring tools to evaluate the performance of the
520 IANA naming function. The team notes that none of the IFR1 recommendations would have
521 been reasonably expected to influence these metrics, so no comparison was conducted.
522

523 **Recommendations**

524 There are no recommendations related to this section, although Incidental Finding 3 relates to
525 SLA reporting.
526

527 **4.7 ICANN Bylaws 18.3.(g)**

528
529 *“Review and evaluate whether there are any systemic issues that are impacting PTI's*
530 *performance under the IANA Naming Function Contract and IANA Naming Function SOW.”*
531

532 **Objective**

533 Consistent with ICANN's mission and Bylaws, Section 18.3(g), the IFRT will review any
534 complaints and escalations to IANA to evaluate if there are any systemic and/or recurring issues
535 while also considering input from the community.
536

537 **Findings**

538 Table 3 lays out the review materials considered during the review period. The review team
539 briefed the Registry Stakeholder Group (RySG) and held an Open Review Team Meeting
540 (November 13) at ICANN81, where the review team provided an update on the review and
541 sought feedback on the following questions:
542

- 543 ● Is PTI's performance meeting members' needs?
 - 544 ● Do members experience any systemic issues
 - 545 ● Do the IANA Naming Function Contract and SOW meet their needs?¹²
- 546
547

548 **Recommendations**

549 There are no recommendations related to this section.
550

551 **4.8 ICANN Bylaws 18.3.(h)**

552
553 *“Initiate public comment periods and other processes for community input on PTI's performance*
554 *under the IANA Naming Function Contract and IANA Naming Function SOW (such public*
555 *comment periods shall comply with the designated practice for public comment periods*
556 *within ICANN).”*
557

558 **Objective**

559 Consistent with ICANN's mission and Bylaws, Section 18.3(h), the review team will solicit input
560 from the community on PTI's performance through such means as holding consultations with
561 the community, a Public Comment period (i.e., for an Initial Draft), and other methods that the
562 review team deems appropriate.
563

564 **Findings**

565 The review team briefed the Registry Stakeholder Group (RySG) and held an Open Review
566 Team Meeting (November 13) at ICANN81, where the review team provided an update on the
567 review and sought feedback on the following questions:
568

- 569 ● Is PTI's performance meeting members' needs?
- 570 ● Do members experience any systemic issues

¹² <https://icann81.sched.com/event/1p2lY/second-iana-naming-function-review-ifr2-team-work-session>

-
- 571 • Do the IANA Naming Function Contract and SOW meet their needs?¹³

572
573 This Draft Report is being released for public comment at this time, and further updates will be
574 added to this section.

575
576 **Recommendations**

577 There are no recommendations related to this section.
578

579 4.9 ICANN Bylaws 18.3.(i)

580
581 *“Consider input from the CSC and the community on PTI's performance under the IANA Naming*
582 *Function Contract and IANA Naming Function SOW.”*

583
584 **Objective**

585 Consistent with ICANN's mission and Bylaws, Section 18.3(i), the review team will discuss PTI's
586 performance with the Customer Standing Committee (CSC) and solicit input from the
587 community through such means as holding consultations with the community, a Public
588 Comment period such as for an Initial Draft; and other methods that the review team deems
589 appropriate.

590
591 **Findings**

592
593 Throughout this review, IFRT2 has had active participation from the CSC liaison and maintained
594 open discussions with the CSC. The review team had specific feedback with regard to SLAs,
595 complaint escalation, and the transition plan. This Draft Report is being released for public
596 comment at this time, and further updates may be added to this section.

597
598 **Recommendations**

599 The review team shaped Incidental Findings 2-4 following discussion and input from the CSC.
600

601 4.10 ICANN Bylaws 18.3.(j)

602
603 *“Identify process or other areas for improvement in the performance of the IANA naming*
604 *function under the IANA Naming Function Contract and IANA Naming Function SOW and the*
605 *performance of the CSC and the EC as it relates to oversight of PTI.”*

606
607 **Objective**

608 Consistent with ICANN's mission and Bylaws, Section 18.3(j), based on the review team's
609 findings from 18.3.(a) to 18.3.(i), the review team will make recommendations for specific,
610 measurable steps that can be taken to improve any deficiencies or gaps.

611
612 **Findings**

613 The review team found no specific deficiencies in the oversight of PTI or the performance of the
614 IANA naming function.

615
616 **Recommendations**

617 There are no recommendations related to this section.

¹³ <https://icann81.sched.com/event/1p2lY/second-iana-naming-function-review-ifr2-team-work-session>

618
619

620 4.11 ICANN Bylaws 18.3.(k)

621
622 *“Consider and assess any changes implemented since the immediately preceding IFR and their*
623 *implications for the performance of PTI under the IANA Naming Function Contract*
624 *and IANA Naming Function SOW.”*

625
626 **Objective**

627 The review team will review the implementation of recommendations provided by the first IFR
628 and the impact of implementation on the performance of PTI under the IANA Naming Function
629 Contract and the IANA Naming Function SOW.

630
631 **Findings**

632 As a result of reviewing the Public Comments on the implementation of IFR1 recommendations,
633 the IFRT2 found that there may be insufficient time to judge the impact of implementation prior
634 to subsequent IFRs.

635
636 **Recommendation**

637 Recommendation 4, “Frequency of Reviews,” resulted from this finding.

DRAFT

638 5 Appendices

639 5.1 Appendix A: Glossary

640 An assessment of this type requires a common understanding of the key terms associated with
641 the review. Following the precedent set in the first review, the IFRT2 is operating under the
642 following definitions as well as the definitions from the IANA Naming Function Contract's
643 Definition Section:
644

645 From [Glossary of IANA Terms](#):

- 646
647
648 ● **Customer:** A generic top-level domain (gTLD) registry operator, a ccTLD manager or registry
649 operator or other direct customer of the IANA naming Services provider, as defined by the
650 IANA Naming Function Contract, Article 1, Section 1.1 (k).

- 651 ● **Country code top-level domain (ccTLD):** A class of top-level domains only assignable to
652 represent countries listed in the ISO 3166-1 standard. At present these are two-letter
653 codes like ".UK", ".DE" etc., however in the future it is expected there will be non-Latin
654 equivalents also available. Much of the policy-making for individual country-code top-level
655 domains is vested with a local sponsoring organisation, as opposed to other top-level
656 domains where ICANN sets the policy. It is a requirement that ccTLDs are operated within
657 the country they are designated so appropriate local laws, governments etc. have a say in
658 how the domain is run.

- 659 ● **Delegation:** Refers to the process by which the operator of the IANA naming function initially
660 assigns management responsibility or assigns previously assigned responsibility or
661 assigns previously assigned responsibility (after a revocation) for the management of a
662 ccTLD, as further defined in the RFC 1591 as interpreted by the FOI. [*pulled from IANA*
663 *Naming Function Contract*]

- 664 ● **DNS: Domain Name System:** The Domain Name System (DNS) helps users to find their
665 way around the Internet. Every computer on the Internet has a unique address - just like a
666 telephone number - which is a rather complicated string of numbers. It is called its "IP
667 address" (IP stands for "Internet Protocol"). IP Addresses are hard to remember. The DNS
668 makes using the Internet easier by allowing a familiar string of letters (the "domain name")
669 to be used instead of the arcane IP address. So instead of typing 207.151.159.3, you can
670 type www.internic.net. It is a "mnemonic" device that makes addresses easier to
671 remember.

- 672 ● **Domain Name System Security Extensions (DNSSEC):** A technology that can be added to
673 the Domain Name System to verify the authenticity of its data. The works by adding
674 verifiable chains of trust that can be validated to the domain name system.

- 675 ● **DNS zone:** a section of the Domain Name System name space. By default, the root zone
676 contains all domain names, however in practice sections of this are delegated into smaller
677 zones in a hierarchical fashion. For example, the ".COM" zone would refer to the portion of
678 the DNS delegated that ends in ".COM".

- 679 ● **Domain name:** A unique identifier with a set of properties attached to it so that computers
680 can perform conversions. A typical domain name is "icann.org". Most commonly the

-
- 681 property attached is an IP address, like “208.77.188.103”, so that computers can convert
682 the domain name into an IP address. However the DNS is used for many other purposes.
683 The domain name may also be a delegation, which transfers responsibility of all sub-
684 domains within that domain to another entity.
- 685 ● **Domain name label:** a constituent part of a domain name. The labels of domain names are
686 connected by dots. For example, “www.iana.org” contains three labels — “www”, “iana”
687 and “org”. For internationalised domain names, the labels may be referred to as A-labels
688 and U-labels.
 - 689 ● **Domain name registrar:** An entity offering domain name registration services, as an agent
690 between registrants and registries. Usually multiple registrars exist who compete with each
691 other, and are accredited. For most generic top-level domains, domain name registrars are
692 accredited by ICANN.
 - 693 ● **Domain name registry:** A registry tasked with managing the contents of a DNS zone, by
694 giving registrations of sub-domains to registrants.
 - 695 ● **Domain name server:** A general term for a system on the Internet that answers requests to
696 convert domain names into something else. These can be subdivided into authoritative
697 name servers, which store the database for a particular DNS zone; as well as recursive
698 name servers and caching name servers.
 - 699 ● **Domain Name System (DNS):** The global hierarchical system of domain names. A global
700 distributed database contains the information to perform the domain name conversations,
701 and the most central part of that database, known as the root zone is coordinated by us.
 - 702 ● **Domain Name System Root:** see Root Zone.
 - 703 ● **Domain:** A set of host names consisting of a single domain name and all the domain names
704 below it.
 - 705 ● **Domain Name:** As part of the Domain Name System, domain names identify IP resources,
706 such as an Internet website.
 - 707 ● **GNSO: Generic Names Supporting Organization:** The supporting organization responsible
708 for developing and recommending to the ICANN Board substantive policies relating to
709 generic top-level domains. Its members include representatives from gTLD registries,
710 gTLD registrars, intellectual property interests, Internet service providers, businesses and
711 non-commercial interests.
 - 712 ● **Generic Top Level Domain (gTLD):** Most TLDs with three or more characters are referred
713 to as “generic” TLDs, or “gTLDs”, such as .COM, .NET, and .ORG. In addition, many new
714 gTLDs such as .HOTELS and .DOCTOR are now being delegated.
 - 715 ● **Internationalized Domain Names (IDNs):** : IDNs are domain names that include characters
716 used in the local representation of languages that are not written with the twenty-six letters
717 of the basic Latin alphabet “a-z”. An IDN can contain Latin letters with diacritical marks, as
718 required by many European languages, or may consist of characters from non-Latin
719 scripts such as Arabic or Chinese. Many languages also use other types of digits than the
720 European “0-9”. The basic Latin alphabet together with the European-Arabic digits are, for
721 the purpose of domain names, termed “ASCII characters” (ASCII = American Standard
722 Code for Information Interchange). These are also included in the broader range of
723 “Unicode characters” that provides the basis for IDNs.

-
- 724 ● **Internet Architecture Board (IAB):** The oversight body of the IETF, responsible for overall
725 strategic direction of Internet standardisation efforts. The IAB works with us on how the
726 protocol parameter registries should be managed. The IAB is an activity of the Internet
727 Society, a non-profit organisation.
 - 728 ● **Internet Assigned Numbers Authority (IANA):** A suite of various Internet coordination
729 functions, relating to ensuring globally-unique protocol parameter assignment, including
730 management of the root of the Domain Name System and IP Address Space.
 - 731 ● **Internet Coordination Policy (ICP):** A series of documents created by ICANN between
732 1999 and 2000 describing management procedures. Three such documents were
733 published before the numbering system stopped being used. Subsequent ICANN
734 publications have not been given ICP numbers.
 - 735 ● **Internet Engineering Steering Group (IESG):** The committee of area experts of the IETF's
736 areas of work, that acts as its Board of management.
 - 737 ● **Internet Engineering Task Force (IETF):** The key Internet standardisation forum. The
738 standards developed within the IETF are published as RFCs. Our protocol parameter
739 registries are closely aligned with the work of the IETF.
 - 740 ● **Internet Protocol (IP):** The fundamental protocol that is used to transmit information over the
741 Internet. Data transmitted over the Internet is transmitted using the Internet Protocol,
742 usually in conjunction with a more specialised protocol. Computers are uniquely identified
743 on the Internet using an IP Address.
 - 744 ● **IP address:** A unique identifier for a device on the Internet. The identifier is used to
745 accurately route Internet traffic to that device. IP addresses must be unique on the global
746 Internet, although some are re-used within private networks using a system of private IP
747 addresses and network address translation.
 - 748 ● **ISO:** International Organisation for Standardisation. An international organisation comprised
749 mostly of national standardisation agencies.
 - 750 ● **ISO 3166:** A suite of international standards for labelling countries, territories, sub-national
751 entities and former countries. Most notable, Part 1 of ISO 3166 (aka ISO 3166-1) is used
752 to determine country-codes for top-level domains.
 - 753 ● **Recursive name server:** A domain name server configured to perform DNS lookups on
754 behalf of other computers. This is often configured at corporate network boundaries and
755 ISPs for their network customers to use. As an individual domain name lookup can often
756 involve multiple queries to different servers, these name servers do these iterative lookups
757 and only provide back to the computer the final answer. They are often combined with the
758 functions of a caching name server to improve network performance, and therefore are
759 also known as caching resolvers.
 - 760 ● **Redelegation:** The transfer of a delegation from one entity to another. Most commonly used
761 to refer to the redelegation process used for top-level domains.
 - 762 ● **Redelegation process:** A special type of root zone change where there is a significant
763 change involving the transfer of operations of a top-level domain to a new entity. Such a
764 change must be evaluated by ICANN staff to ensure that the new entity meets a number of
765 criteria, and must be voted on and agreed by the ICANN Board of Directors.
 - 766 ● **Registrant:** The entity that has acquired the right to use an Internet resource. Usually this is
767 via some form of revocable grant given by a registrar to list their registration in a registry.

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- 768 ● **Registrar:** Domain names can be registered through many different companies (known as
769 "registrars") that compete with one another. The registrar you choose will ask you to
770 provide various contact and technical information that makes up the registration. The
771 registrar will then keep records of the contact information and submit the technical
772 information to a central directory known as the "registry." This registry provides other
773 computers on the Internet the information necessary to send you email or to find your web
774 site. You will also be required to enter a registration Contract with the registrar, which sets
775 forth the terms under which your registration is accepted and will be maintained.
 - 776 ● **Registry:** The "Registry" is the authoritative, master database of all domain names registered
777 in each Top Level Domain. The registry operator keeps the master database and also
778 generates the "zone file" which allows computers to route Internet traffic to and from top-
779 level domains anywhere in the world. Internet users don't interact directly with the registry
780 operator; users can register names in TLDs including .biz, .com, .info, .net, .name, .org by
781 using an ICANN-Accredited Registrar.
 - 782 ● **Registry operator:** The entity that runs a registry.
 - 783 ● **Reverse IP:** A method of translating an IP address into a domain name, so-called as it is the
784 opposite of a typical lookup that converts a domain name to an IP address. Utilises PTR
785 records in the IN-ADDR.ARPA zone for IPv4, and IP6.ARPA for IPv6.
 - 786 ● **RFCs:** A series of Internet engineering documents describing Internet standards, as well as
787 discussion papers, informational memorandums and best practices. Internet standards
788 that are published in an RFC originate from the IETF. The RFC series is published by the
789 RFC Editor.
 - 790 ● **Root:** the most central (or all-encompassing) authority of any naming or numbering system.
791 Usually used to refer to the domain name system root (see Root Zone). However, we are
792 also the root for IP addresses, and other systems.
 - 793 ● **Root Servers:** the authoritative name servers for the root zone. These are considered unlike
794 regular name servers in part because they are generally the most critical and heavily-used
795 name servers. They are also special as they are not easily replaced, as changes to them
796 needs to be stored in every name server worldwide in a hints file.
 - 797 ● **Root Zone:** The top of the domain name system hierarchy. The root zone contains all of the
798 delegations for top-level domains, as well as the list of root servers, and is managed by us.
 - 799 ● **Root Zone Management:** The management of the DNS Root Zone by us.
 - 800 ● **RZM:** see Root Zone Management.
 - 801 ● **Sponsoring organization:** The entity acting as the trustee of a top-level domain on behalf of
802 its designated community. Sponsoring organisations are not assigned ownership of a
803 domain, rather, are custodians appointed by their local Internet community to act as proper
804 stewards in that community's best interests. The Sponsoring Organization can generally
805 be re-assigned if the local Internet community wishes using the redelegation process.
 - 806 ● **Sub-domain:** A domain that resides within another domain. For example, "www.icann.org" is
807 a sub-domain of "icann.org", and "icann.org" is a sub-domain of "org". Sub-domains are
808 entrusted to other entities through a process of delegation.
 - 809 ● **TLD:** see top-level domain.

-
- 810 ● **Top-level domain (TLD):** The highest level of subdivisions with the domain name system.
811 These domains, such as “.COM” and “.UK” are delegated from the DNS Root zone. They
812 are generally divided into two distinct categories, generic top-level domains and country
813 code top-level domains.
 - 814 ● **Trustee:** An entity entrusted with the operations of an Internet resource for the benefit of the
815 wider community. In root zone management, usually in reference to the sponsoring
816 organisation of a top-level domain.
 - 817 ● **U-label:** The Unicode representation of an internationalised domain name, i.e. how it is
818 shown to the end-user. Contrast with A-label.
 - 819 ● **Unicode:** A standard describing a repertoire of characters used to represent most of the
820 worlds languages in written form. The collection of scripts used to do this is maintained by
821 the Unicode Consortium and is constantly growing. Unicode is the basis for
822 internationalised domain names.
 - 823 ● **Un-sponsored top-level domain:** a sub-classification of generic top-level domain, where
824 there is no formal community of interest.
 - 825 ● **Variants:** In the context of internationalised domain names, an alternative domain name that
826 can be registered, or mean the same thing, because some of its characters can be
827 registered in multiple different ways due to the way the language works. Depending on
828 registry policy, variants may be registered together in one block called a variant bundle.
829 For example, “internationalise” and “internationalize” may be considered variants in
830 English.
 - 831 ● **Variant bundle:** A collection of multiple domain names that are grouped together because
832 some of the characters are considered variants of the others.
 - 833 ● **Variant table:** A type of IDN table that describes the variants for a particular language or
834 script. For example, a variant table may map Simplified Chinese characters to Traditional
835 Chinese characters for the purpose of constructing a variant bundle.
 - 836 ● **WHOIS:** WHOIS protocol (pronounced "who is"; not an acronym) An Internet protocol that is
837 used to query databases to obtain information about the registration of a domain name (or
838 IP address). The WHOIS protocol was originally specified in RFC 954, published in 1985.
839 The current specification is documented in RFC 3912. ICANN's gTLD agreements require
840 registries and registrars to offer an interactive web page and a port 43 WHOIS service
841 providing free public access to data on registered names. Such data is commonly referred
842 to as "WHOIS data," and includes elements such as the domain registration creation and
843 expiration dates, nameservers, and contact information for the registrant and designated
844 administrative and technical contacts. WHOIS services are typically used to identify
845 domain holders for business purposes and to identify parties who are able to correct
846 technical problems associated with the registered domain.

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5.2 Appendix B: Contract Revisions and Findings

Contract Section	Revisions and Findings
Article I: Definitions and Construction	The Review Team found that a significant number of terms were not clearly defined in the sections of text to which Article I points. This may be remedied at a time when other changes are being made to the Contract.
Article II: Conditions Precedent	No findings
Article III: Representations and Warranties	No findings
Article IV: Services and Requirements	Finding highlighted in section 4.4(b)
Section 4.1 “Designation”	No findings
Section 4.2 “U.S. Presence”	No findings
Section 4.3 “Scope of the IANA Naming Function”	No findings
Section 4.4 “Performance of IANA Naming Function”	Drafting suggestion identified in Section 4.4(b)
(b) Contractor shall treat the IANA Naming Function with equal priority as the other IANA functions performed by Contractor and process all requests promptly and efficiently.	Clarify that “requests” means Naming Function requests.
Section 4.5: Separation of Policy Development and Operational Roles	No findings
Section 4.6: User Instructions	No findings
Section 4.7: Responsibility and Respect for Stakeholders	No findings
Section 4.8: Management of the .INT TLD	No findings

Section 4.9: General Manager; Key Personnel	No findings
Section 4.10: Inspection of All Deliverables and Reports Before Publication	No findings
Article V: Performance	No findings
Article VI: Transparency and Decision-Making	No findings
Article VII: Audits, Monitoring, and Reviews	Findings highlighted in Section 7.1
Section 7.1: Audits	Suggested clarification in Section 7.1(a)
(a) Contractor shall generate and publish via the IANA Website a monthly audit report identifying each root zone file and root zone “WHOIS” database change request and its status. The relevant policies under which the changes are made shall be noted within each monthly report. Such audit report shall be due to ICANN no later than 15 calendar days following the end of each month.	Suggest removing the term “WHOIS”
Section 7.2: Performance Monitoring	No findings
Section 7.3: IANA Naming Function Reviews	No findings
Article VIII: Escalation Mechanisms	See Incidental Finding 4 “Ombudsman” with reference to Article VIII Section 8.1(a)
(a) If Contractor receives a customer service complaint from a customer (a “Complaint”), Contractor will review the Complaint and attempt to resolve it to the reasonable satisfaction of the person or entity who brought the Complaint (the “Complainant”) as soon as reasonably practicable. If the Complaint is not so resolved, the Complainant may escalate the matter in writing to Contractor’s management team, in which case Contractor shall notify the CSC. If the Complaint is still not resolved, the Complainant or the President of Contractor may escalate the matter in writing to ICANN’s Ombudsman.	See Incidental Finding 4 in the main body of the report.
Article IX: Term; Renewal; Transition and Termination	See Incidental Finding 2 “Transition Plan” with reference to Article IX Section 9.3 (d)

Section 9.1: Initial Term	No finding
Section 9.2: Renewal; Termination	No finding
Section 9.3: Transition	See Incidental Finding 2 “Transition Plan” with reference to Article IX Section 9.3 (d)
(d) ICANN, in conjunction with the CSC as necessary, shall review the transition plan at least every five years.	Process suggestion in Incidental Finding 2 “Transition Plan.” No drafting change identified.
Section 9.4: Survival of Terms	No findings
Article X: Resources, Fees, and Budget	Clarification suggested in Section 10.2
Section 10.1: Resources and Fees	No findings
Section 10.2: Budget Contractor shall comply with the requirements set forth in its Bylaws relating to preparing, submitting and monitoring an annual budget. ICANN will meet annually with the General Manager of Contractor to review the annual budget for the IANA Naming Function, which shall be approved in accordance with Contractor’s Bylaws and ICANN’s Bylaws (“Approved IANA Budget”).	Review team suggests that “its Bylaws” (highlighted to the left) refer to “Contractor Bylaws” for clarity.
Article XI: Security Requirements	No findings
Article XII: Confidentiality	No findings
Article XIII: Intellectual Property	No findings
Article XIV: Miscellaneous	Suggested amendment in Section 14.2
Section 14.1: Indemnification	No finding
Section 14.2: Notices All notices to be given under or in relation to this Contract will be given either (i) in writing at the address of the appropriate Party as set forth below or (ii) via electronic mail as provided	This section of the text includes email addresses for individuals. The review team proposes leveraging role-based email addresses to mitigate the risk of employee turnover.

below, unless that Party has given a notice of change of postal or email address, as provided in this Contract.

If to ICANN:

Internet Corporation for Assigned Names and Numbers

12025 Waterfront Drive, Suite 300

Los Angeles, CA 90094-2536

Attn: President and Chief Executive Officer

Phone: +1-310-301-5800

Email: goran.marby@icann.org

With a copy to (which shall not constitute notice):

Internet Corporation for Assigned Names and Numbers

12025 Waterfront Drive, Suite 300 Los Angeles, CA 90094-2536

Attn: General Counsel

Phone: +1-310-301-5800

Email: john.jeffrey@icann.org

With a copy to (which shall not constitute notice):

Internet Corporation for Assigned Names and Numbers

12025 Waterfront Drive, Suite 300 Los Angeles, CA 90094-2536

Attn: President, Global Domains Division

Phone: +1-310-301-5800

Email: akram.atallah@icann.org

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If to Contractor:

Public Technical Identifiers

12025 Waterfront Drive, Suite 300 Los Angeles, CA 90094-2536

Attn: Elise Gerich

Phone: +1-310-463-1108

Section 14.3: Amendments

No findings

Section 14.4: Waiver	No findings
Section 14.5: Severability	No findings
Section 14.6: Assignment and SubContracting	No findings
Section 14.7: Governing Law	No findings
Section 14.8: Third Party Beneficiaries	No findings
Section 14.9: English Version	No findings
Section 14.10: Savings Clause	No findings
Section 14.11: Cumulative Remedies	No findings
Section 14.12: Counterparts	No findings
Section 14.13: Headings	No findings
Section 14.14: Further Assurances	No findings
Section 14.15: Entire Contract	No findings
Annex A: Statement of Work for Management of the DNS Root Zone	Substantial suggested edits throughout this section. See also Recommendations 1-2.
Annex A, 1(a) Root Zone Management The Root Zone Management component of the IANA Naming Function is the administration of certain responsibilities associated with the Internet DNS root zone management.	The definition of Root Zone Management is circular and could be re-drafted for clarity.
Annex A, 1(b) Root Zone Management	No finding
Annex A, 1(c) Root Zone Management Contractor shall also implement DNSSEC in all zones for which ICANN has technical administration authority.	See Recommendation 2.
Annex A, 1(d)(i) Root Zone Management Contractor shall facilitate and coordinate the root zone of the domain name system, and maintain 24 hour-a-day/7 days-a-week operational	The review team suggests that the language in this section could be reviewed for clarity and the appropriate level of detail.

coverage. Contractor shall work collaboratively with the Root Zone Maintainer, in the performance of this function.

i. Contractor shall receive and process root zone file change requests for TLDs. These change requests include addition of new or updates to existing TLD name servers (“NS”) and delegation signer (“DS”) resource record (“RR”) information along with associated “glue” (A and AAAA RRs). A change request may also include new TLD entries to the root zone file. Contractor shall process root zone file changes as specified in Section 2 of this Annex A.

Annex A, 1(d)(ii)

Contractor shall maintain, update, and make publicly accessible a Root Zone registration database with current and verified contact information for all TLD registry operators. The Root Zone registration database, at a minimum, shall consist of the following data fields: domain status and contact points for resolving issues relating to the operation of the domain (comprised of at least organizational name, postal address, email address and telephone number). Contractor shall receive and process root zone registration data change requests for TLDs.

The review team suggests that the language in this section could be reviewed for clarity and the appropriate level of detail.

Annex A, 1(d)(iii)

Contractor shall apply existing policies in processing requests related to the Delegation, Revocation and Transfer of ccTLDs, including RFC 1591 as interpreted by the FOI and any further clarification of these policies developed by the ccNSO, as appropriate under ICANN’s Bylaws, and approved by the ICANN Board. In addition to these policies, Contractor shall, where applicable, consult the GAC 2005 ccTLD Principles. If an existing policy framework does not cover a specific situation, Contractor will use commercially reasonable efforts to consult with and provide opportunity for input from Significantly Interested Parties and, where

The review team suggests that the language in this section could be reviewed for clarity and the appropriate level of detail.

necessary, may request the ccNSO to undertake policy development work to address such issues.	
<p>Annex A, 1(d)(iv) Contractor shall apply existing policy frameworks in processing requests related to retirement of a ccTLD, including RFC 1591 as interpreted by the FOI and any further clarification of these policies developed by the ccNSO, as appropriate under ICANN’s Bylaws, and approved by the ICANN Board. If an existing policy does not cover a specific situation, Contractor will use commercially reasonable efforts to consult with and provide opportunity for input from Significantly Interested Parties and, where necessary, may request the ccNSO to undertake policy development work to address such issues.</p>	No finding
<p>Annex A, 1(d)(v) Contractor shall verify that all requests related to the delegation and redelegation of generic TLDs are consistent with the procedures developed by ICANN.</p>	The review team suggests that the language in this section could be reviewed for clarity and the appropriate level of detail.
<p>Annex A, 1(d)(vi) Contractor shall maintain an automated root zone management system that, at a minimum, includes (A) a secure (encrypted) system for customer communications; (B) an automated provisioning protocol allowing customers to manage their interactions with the root zone management system; (C) an online database of change requests and subsequent actions whereby each customer can see a record of their historic requests and maintain visibility into the progress of their current requests; (D) a test system, which customers can use to meet the technical requirements for a change request; and (E) an internal interface for secure communications between the Contractor and the Root Zone Maintainer.</p>	See Recommendations 1-2
<p>Annex A, 2 (a) Service Levels Contractor shall perform the Services in accordance with the following “Service Levels”.</p>	The review team notes that there are different occurrences of Periodic Review referenced throughout the Contract and

<p>The expectation is that Contractor will normally perform within the threshold. The thresholds will be modified over time as part of periodic reviews of the service level expectation. A subset of the following measures relate to measurement of non-routine changes where it is not applicable to set a specific threshold for performance. It is expected for measurements of non-routine process steps these will only be reported with no applicable service level expectation.</p>	<p>suggests clarifying what the periodic review is here.</p>
<p>Annex A, 2 (b) Service Levels</p>	<p>No findings</p>
<p>Annex A, 2 (c) through (g)</p>	<p>No findings</p>
<p>Annex A, 3 (a) Program Reviews and Site Visits</p> <p>Contract acknowledges that the CSC is entitled to conduct reviews in accordance with ICANN’s Bylaws and the CSC Charter.</p> <p>ii. Contractor acknowledges that an IFRT is entitled to conduct site visits in accordance with ICANN’s Bylaws.</p>	<p>The review team suggests a minor correction from “Contract” to “Contractor”</p>
<p>Annex A, 3 (b) Monthly Performance Progress Report</p>	<p>No findings</p>
<p>Annex A, 3 (c) Program Reviews and Site Visits</p> <p>Root Zone Management Dashboard. Contractor shall work collaboratively with ICANN and Interested and Affected Parties to produce the dashboard to report Service Level Expectations for Root Zone Management, which will be used for real-time reporting of Contractor’s performance.</p>	<p>The review team notes that the language of “real-time” is vague and could be clarified.</p>
<p>Annex A, 3 (d) Performance Standards Report</p> <p>Performance Standards Reports. Contractor shall develop and publish performance standard metric reports for the IANA Naming Function in</p>	<p>The review team notes that the language of “website” is vague and could be clarified by saying “IANA website.”</p>

consultation with the CSC. The performance standards metric reports will be published via a website every month (no later than 15 calendar days following the end of each month).	
<p>Annex A, 3 (e) Customer Service Survey</p> <p>In accordance with ICANN's Bylaws, Contractor shall collaborate with the CSC and ICANN to maintain and enhance the annual customer service survey consistent with the performance standards for Root Zone Management. The survey shall, at a minimum, include a feedback section for the IANA Naming Function. No later than 60 calendar days after completing a customer service survey, Contractor shall prepare a report (the "CSS Report"), submit the CSS Report to ICANN and publicly post the CSS Report to the IANA Website.</p>	The review team suggests removing the phrase "In accordance with ICANN's Bylaws" since the ICANN Bylaws do not refer to this activity.
Annex A, 3 (f) Final Report	No findings
Annex A, 3 (g) Inspection and Acceptance	No findings
<p>Annex A, 4 (a) DNSSEC at the authoritative Root Zone</p> <p>DNSSEC at the authoritative Root Zone requires cooperation and collaboration between the Contractor and the Root Zone Maintainer. The baseline requirements encompass the responsibilities and requirements for Contractor and these responsibilities and requirements must be implemented in cooperation with similar responsibilities and requirements defined within ICANN's relationship with the Root Zone Maintainer.</p>	The review team suggests that this section would benefit from further references to explain (a) ICANN's relationship with the "Root Zone Maintainer" and (b) the responsibilities of each party.
Annex A, 4 (b) (i) General Requirements	No findings
Annex A, 4 (b) (ii) General Requirements	No findings
Annex A, 4 (b) (iii) General Requirements	No findings

Annex A, 4 (c) (i) (1) Security Authorization and Management Policy

- i. Contractor shall have its own security policy in place; each security policy must be periodically reviewed and updated, as appropriate.
- 1. Supplemental guidance on generating a Security Authorization Policy may be found in NIST SP 800-37.

The NIST document referenced is subject to updates. The review team suggests adding text to allow for future versions of the NIST document. This could be achieved by adding, for example, "as may be updated from time to time" or by ensuring a reference to the most current version.

Annex A, 4 (c) (ii) (1) Security Authorization and Management Policy

- ii. The policy shall have a contingency plan component to account for disaster recovery (both man-made and natural disasters).
- 1. Supplemental guidance on contingency planning may be found in SP 800-34

The NIST document referenced is subject to updates. The review team suggests adding text to allow for future versions of the NIST document. This could be achieved by adding, for example, "as may be updated from time to time" or by ensuring a reference to the most current version.

Annex A, 4 (c) (iii) (1) Security Authorization and Management Policy

- iii. The policy shall address Incident Response detection, handling and reporting (see 4 below).
- 1. Supplemental guidance on incident response handling may be found in NIST SP 800- 61.

The NIST document referenced is subject to updates. The review team suggests adding text to allow for future versions of the NIST document. This could be achieved by adding, for example, "as may be updated from time to time" or by ensuring a reference to the most current version.

Annex A, 4 (d) (i) (1-2) IT Access Control

- d. IT Access Control
 - i. There shall be an IT access control policy in place and enforced for the key management functions
 - 1. This includes both access to hardware/software components and storage media as well as ability to perform process operations.
 - 2. Supplemental guidance on access control policies may be found in NIST SP 800-12

The lower-case term "key" is vague, since it could refer to essential management functions or those relating to cryptographic keys. Furthermore, the referenced NIST document is subject to updates.

The review team suggests referring to "cryptographic key" if that is what is intended. Furthermore, allow for future versions of the NIST document by adding "as may be updated from time to time" or by referencing most current version.

<p>Annex A, 4 (d) (ii) IT Access Control</p> <p>ii. Users without authentication shall not perform any action in key management.</p>	<p>The lower-case term "key" is vague, since it could refer to essential management functions or those relating to cryptographic keys. The review team suggests referring to "cryptographic key" if that is what is intended.</p>
<p>Annex A, 4 (d) (iii) IT Access Control</p> <p>iii. In the absence of a compelling operational requirement, remote access to any cryptographic component in the system (such as hardware security modules) is not permitted.</p>	<p>The review team finds that the term "the system" is vague here and suggest that it refers to DNSSEC signing, if that is what is intended.</p>
<p>Annex A, 4 (e) (i) Security Training</p> <p>i. All personnel participating in the Root Zone Signing process shall have adequate IT security training.</p>	<p>The review team notes that the term "adequate" is not defined and suggests that a subsequent section refer to what is deemed "adequate."</p>
<p>Annex A, 4 (e) (ii) Security Training</p>	<p>No findings</p>
<p>Annex A, 4 (f) (i) (1-2) Audit and Accountability Procedures</p> <p>f. Audit and Accountability Procedures</p> <p>i. Contractor shall periodically review/update: (1) its formal, documented, audit and accountability policy that addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and (2) the formal, documented procedures to facilitate the implementation of the audit and accountability policy and associated audit and accountability controls.</p> <p>1. Supplemental guidance on auditing and accountability policies may be found in NIST SP 800-12.</p> <p>2. Specific auditing events include the following:</p> <p>a. Generation of keys.</p> <p>b. Generation of signatures</p>	<p>The NIST document referenced is subject to updates. The review team suggests adding text to allow for future versions of the NIST document. This could be achieved by adding, for example, "as may be updated from time to time" or by ensuring a reference to the most current version.</p>

<p>c. Exporting of public key material</p> <p>d. Receipt and validation of public key material (i.e., from the ZSK holder or from TLDs)</p> <p>e. System configuration changes</p> <p>f. Maintenance and/or system updates</p> <p>g. Incident response handling</p> <p>h. Other events as appropriate</p>	
<p>Annex A, 4 (f) (ii) Audit and Accountability Procedures</p> <p>ii. Incident handling for physical and exceptional cyber-attacks shall include reporting to ICANN in a timeframe and format as mutually agreed by ICANN and Contractor.</p>	<p>The review team suggests updating the term “cyber-attacks” to “cyber incidents.”</p>
<p>Annex A, 4 (f) (iii) Audit and Accountability Procedures</p>	<p>No findings</p>
<p>Annex A, 4 (f) (iv) Audit and Accountability Procedures</p> <p>iv. A version of the reports provided to ICANN or the CSC must be made publically available.</p>	<p>The review team suggests specifying what is meant by “a version.”</p>
<p>Annex A, 4 (g) (i) (1-2) Physical Protection Requirements</p>	<p>No findings</p>
<p>Annex A, 4 (g) (ii) Physical Protection Requirements</p>	<p>No findings</p>
<p>Annex A, 4 (g) (iii) Physical Protection Requirements</p> <p>iii. All hardware components used to store keying material or generate signatures shall have short-term backup emergency power connections in case of site power outage. (See NIST SP 800-53r3).</p>	<p>The NIST document referenced is subject to updates. The review team suggests adding text to allow for future versions of the NIST document. This could be achieved by adding, for example, "as may be updated from time to time" or by ensuring a reference to the most current version.</p>
<p>Annex A, 4 (g) (iv) Physical Protection Requirements</p> <p>iv. Appropriate protection measures shall be in place to prevent physical damage to facilities as appropriate.</p>	<p>Duplicate use of the word “appropriate” could be corrected. Further, the term would benefit from clarification.</p>

Annex A, 4 (h) (i) (1) All Components

i. All hardware and software components must have an established maintenance and update procedure in place.

1. Supplemental guidance on establishing an upgrading policy for an organization may be found in NIST SP 800-40

The NIST document referenced is subject to updates. The review team suggests adding text to allow for future versions of the NIST document. This could be achieved by adding, for example, "as may be updated from time to time" or by ensuring a reference to the most current version.

The review team also notes that the scope of the requirement is not clear.

Annex A, 4 (h) (ii) (1) All Components

ii. All hardware and software components provide a means to detect and protect against unauthorized modifications/updates/patching.

The review team finds that the scope of this requirement is not clear.

Annex A, 4 (i) (1) Interface Basic Functionality

2. Having procedures for:
a. Scheduled roll over for TLD key material;
b. Supporting emergency key roll over for TLD key material; and
c. Moving TLD from signed to unsigned in the root zone.

The review team finds that these requirements relate broadly to DNSSEC policy. Refer to Recommendations 1-2.

Annex A, 4 (ii) Interface Basic Functionality

No findings

Annex A, 4 (iii) Interface Basic Functionality

No findings

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5.3 Appendix C: Review Team Attendance

Name	Attendance
Alan Barrett (UTC +4)	87%
Ashley Heineman (UTC-4/-5)	100%
Brett Carr (UTC/+1)	68%
Carlton Samuels (UTC-5)	68%
Ching Chiao (UTC-4/-5)	57%
Edowaye Makanjoula (UTC+1)	71%
Jonathan Robinson (UTC/+1)	71%
Lars-John Liman (UTC+1/+2)	74%
Lyman Chapin (UTC-4/-5)	35%
Olga Cavalli (UTC-3)	48%
Peter Koch (UTC+1/+2)	90%
Rafik Dammak (UTC+9)	48%
Rick Wilhelm (UTC-4/-5)	97%
Sami Ali (UTC+3)	77%

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5.4 Appendix D: Comments Received on the IFRT2's Initial Report

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To be included in the Final Report

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