

ROOT ZONE MANAGEMENT USER GUIDE

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HOW DO I...

Account Basics

- [reset my password?](#)
- [recover my username?](#)
- [accept an invitation to be an authorizer?](#)

Change Request Processing

- [approve or reject a change request?](#)
- [submit a change request?](#)
- [review the details of technical checks?](#)
- [review the activity log for a change request?](#)

TLD Administrative Tasks

- [add a new authorizer?](#)
- [update a TLD's public contacts \(Administrative and Technical\)?](#)
- [set authorization thresholds for approving change requests?](#)

Using RZMS' Features

A. Accessing the System

Navigate to <https://rzm.iana.org>.

Log in by providing your username and password. When you first log into the updated system, you may be prompted to set a more secure password, following our more stringent password requirements for better security.

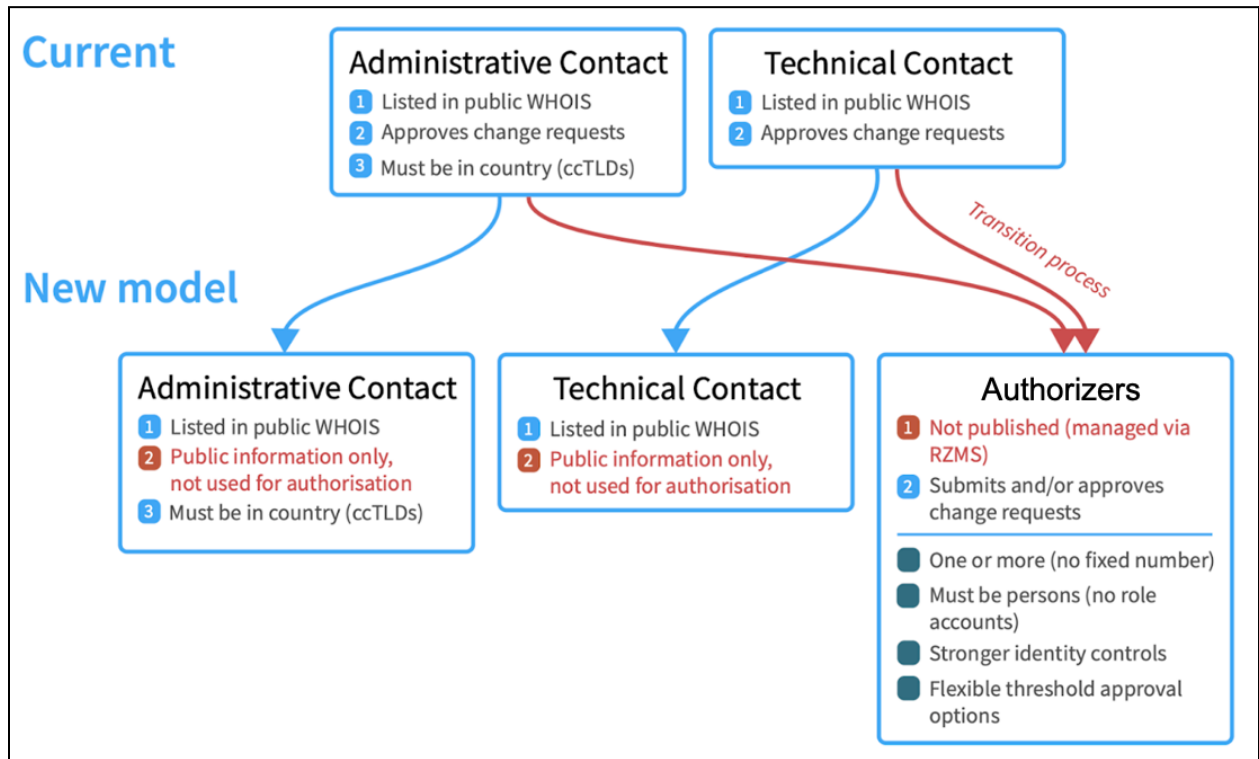
If at any time you can't remember your username, you can recover it. At the login screen, click on the username recovery link, then provide your email address and password.

Similarly, if you forget your password or want to reset it, go to the login screen, click on the password reset link, and enter your username. The system will send an email to your email address containing instructions and a link to reset your password.

B. Understanding Administrative Contacts, Technical Contacts, and Authorizers

In the past, the Administrative Contact and the Technical Contact were able to submit and approve change requests, and their information was published in public directory services such as WHOIS. These responsibilities are now separated.

The Administrative Contact and Technical Contact still are published as public contact information, such as in WHOIS and RDAP, but are no longer used to submit or approve change requests. Instead, TLD managers configure one or more credentialed users known as **authorizers** to submit and administer change requests. Authorizers' information is not made public and is managed at the discretion of the TLD manager.



To view a TLD's Administrative and Technical Contacts, select that TLD, then scroll down the **Root Zone Data** page to locate the **Public Points of Contact** box.

To view a TLD's list of authorizers, select that TLD, then click on its **Authorizers** tab. This will display the authorizers and will indicate which of the following types of requests each is permitted to submit and approve:

- **Change of Control:** changes to the TLD manager, like a delegation, transfer, or revocation
- **Non-Technical:** changes to public contact information, including organization name, administrative contact, technical contact, and registration URL
- **Technical:** changing NS or DS records; changing the WHOIS server or RDAP server(s)
- **Authorization Policy:** changing the list of credentialed users/authorizers, their permissions, or the thresholds for approving or rejecting change requests

An authorizer can be given permissions for one or more of these types of requests but can also exist without being authorized for any request types; this will give them view-only access to the TLD's information and change requests.

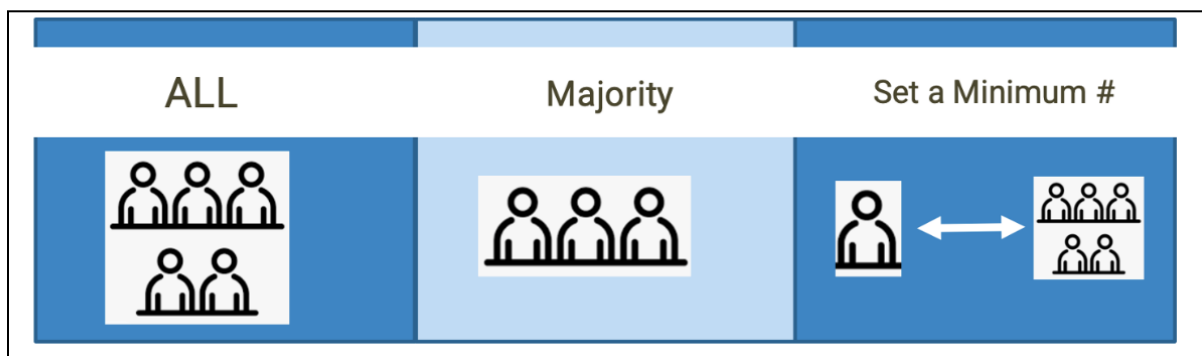
To change the request types an authorizer can submit and approve for a particular TLD, select the Modify button at the bottom of that TLD's Authorizers tab. Check a person's "All" box to authorize all request types, or check and uncheck the individual boxes for each request type to be more selective.

C. Setting Authorization Thresholds for Change Requests

You can set authorization thresholds for approving each of the four types of change requests. To change any thresholds for a TLD, select the Modify button at the bottom of that TLD's Authorizers tab. Look for the *Authorizations Needed* section. It indicates one of the following thresholds for each request type:

- **All:** All authorizers for this request type must approve any change request before it can proceed.
- **Majority:** A majority of the authorizers for this request type must approve any change request before it can proceed. "Majority" means more than half.
- **Minimum:** At least the number of authorizers specified here (for example, 2) must approve any change request before it can proceed.

Here's an example to help illustrate how this would work. Say that you have five authorizers who can approve technical change requests. If you set the threshold to ALL, then all five of them would need to approve a request. If you set the threshold to MAJORITY, at least three of them would need to approve it. And if you set a MINIMUM, you'd specify a number between one and five for how many authorizers must approve it.



Note: Only a single authorizer needs to reject a request in order for the request to fail; there is no threshold for rejection.

D. Adding a New Authorizer

To add a new authorizer for a TLD, first select the **Modify** button at the bottom of that TLD's **Authorizers** tab. Once you're in Modify mode, you should see an **Add Authorizer** link to start adding a new authorizer.

You'll be prompted to provide the following for the new authorizer:

- the authorizer's name and email address;
- the authorizer's role (which of the request types the authorizer can submit and approve, if any);

When adding a new authorizer, consider if this makes an impact to your authorization thresholds.

Once you submit your proposed changes, an invitation will be emailed to the new authorizer to create an RZMS account.

To check the status of an invitation, look at the **Change Request** page. Under **New Users** you will see their status as **Invited** until they set up their account. They must use the invitation link within 72 hours before it expires. If it expires, you can re-send it to them from the **Actions** section of the **Change Request** page.

The screenshot shows a user interface with two main sections. The top section, titled 'Actions', contains three rows of text with corresponding buttons on the right: 'Withdraw the request' with a 'Withdraw' button, 'Go to Form to approve or reject the request' with a 'Go to Form' button, and 'Resend invitation to new users' with a 'Resend' button. The bottom section, titled 'New Users', contains a paragraph of text explaining the invitation process and a table with one row. The table has three columns: a name and email address, a status, and an empty space.

Actions		
Withdraw the request		Withdraw
Go to Form to approve or reject the request		Go to Form
Resend invitation to new users		Resend

New Users

New users have been sent an email to complete the new account process. Invited users should accept their invitation using the link provided in the email within 72 hours; Expired means that the link has expired, and a new invitation needs to be sent. Use the Resend action and select user(s).

David1 Dong1 david.dong1@icann1.org	Invited	
---	---------	--

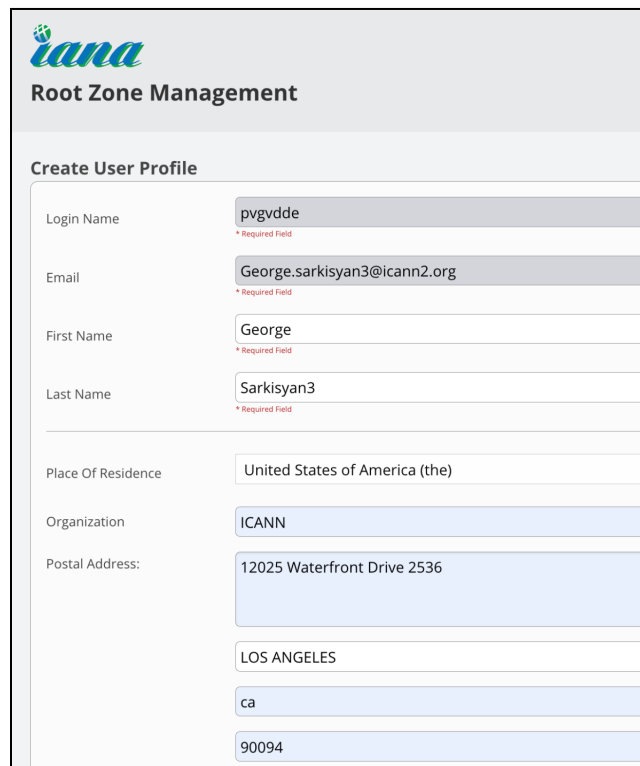
E. Accepting an Authorizer Invitation

If you've been invited to be a new authorizer, you'll receive an email that is entitled "Welcome to the IANA Root Zone Management System (RZMS)", which provides a URL that will enable you to configure a new login account.

After following the link, set your login password. Make sure to create a password meeting the requirements listed on that screen.

The link may only be used once, and is only valid for 72 hours. To reactivate an invitation, contact the person who sent you the invitation and ask them to re-send the invitation to you, which they can do through their account interface.

Once you have successfully created a password, complete your profile information. The user profile screen displays your login name; this is your login username which is automatically assigned, so make note of it for future use.



The screenshot shows a web form titled "Create User Profile" under the "Root Zone Management" header. The form contains the following fields and values:

Field	Value
Login Name	pvgvdde
Email	George.sarkisyan3@icann2.org
First Name	George
Last Name	Sarkisyan3
Place Of Residence	United States of America (the)
Organization	ICANN
Postal Address:	12025 Waterfront Drive 2536
	LOS ANGELES
	ca
	90094

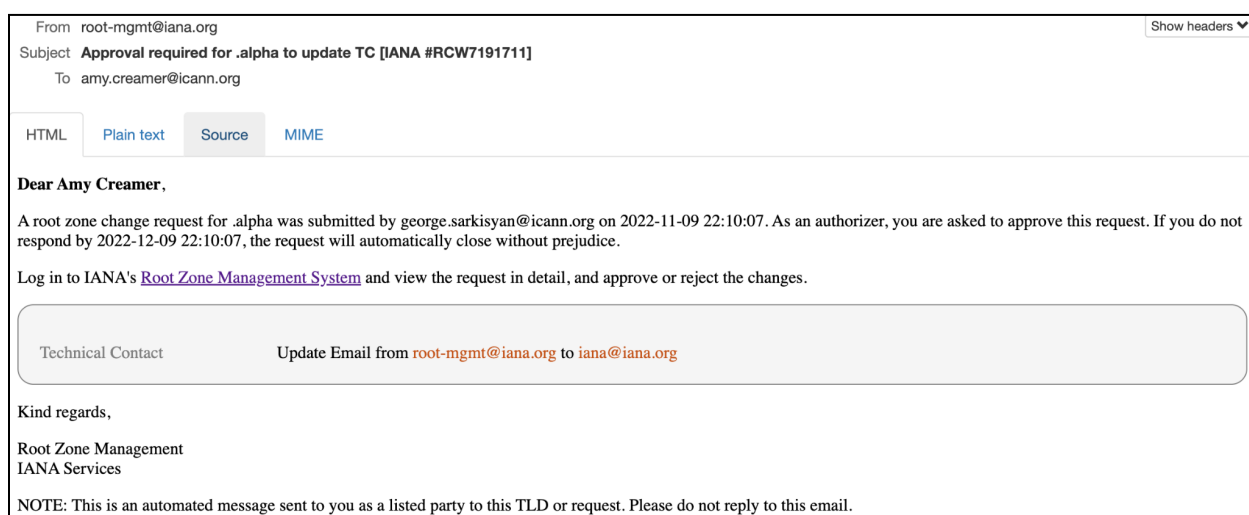
F. Updates to public contacts

When updating public contacts, Administrative Contact and Technical Contacts for a TLD, any changes to the email address will result in an email being sent to the new email address seeking consent for that email address being published. The recipient of the email must provide consent to be published through the link provided.

Please keep in mind that when you update a TLD authorizer that is also listed as a public contact, you will need to update both sections of your TLD profile.

G. Acting on Email Notifications for Approving Change Requests

Authorizers will receive an email notification when a change request is pending their approval. It should look similar to the message below. The email subject line will tell you which TLD is affected and which change request needs approval. The body of the email will tell you to log in to RZMS directly to review and act on the request. Follow the link in the email to go to the log in page.



The screenshot shows an email interface with the following details:

- From:** root-mgmt@iana.org
- Subject:** Approval required for .alpha to update TC [IANA #RCW7191711]
- To:** amy.creamer@icann.org
- Format options:** HTML, Plain text, Source, MIME
- Salutation:** Dear Amy Creamer,
- Body text:**

A root zone change request for .alpha was submitted by george.sarkisyan@icann.org on 2022-11-09 22:10:07. As an authorizer, you are asked to approve this request. If you do not respond by 2022-12-09 22:10:07, the request will automatically close without prejudice.

Log in to IANA's [Root Zone Management System](#) and view the request in detail, and approve or reject the changes.
- Action button:** A button labeled "Technical Contact" with the text "Update Email from root-mgmt@iana.org to iana@iana.org".
- Signature:** Kind regards, Root Zone Management, IANA Services
- Footnote:** NOTE: This is an automated message sent to you as a listed party to this TLD or request. Please do not reply to this email.

Once you log in, locate the open change request in the dashboard and click on its **Go to Form** button to act upon the request.

Contact Confirmation *Since 2022-11-09 22:10:07*

Domain: alpha

The request requires the authorizers to approve the change request to proceed. 0 authorizations have been received. The request will automatically close if authorization is not received by 2022-12-09 22:10:07.

Changes Requested

These are the changes to the root zone database record, and will be implemented following successful processing of the request.

Technical Contact	Update Email from root-mgmt@iana.org to iana@iana.org
-------------------	--

Actions

Withdraw the request	<input type="button" value="Withdraw"/>
Go to Form to approve or reject the request	<input type="button" value="Go to Form"/>

Authorizers

These are the authorizers notified to approve the change request.

Amy Creamer amy.creamer@icann.org	No response yet
George Sarkisyan george.sarkisyan@icann.org	No response yet

Review the change request and indicate whether you approve or reject it, then **Submit** your choice.

H. Submitting Multiple Changes Simultaneously

You can still have multiple changes in a single change request, but in addition you can submit multiple change requests instead, as long as each change request is from a separate section of your TLD screen. For example, in this screenshot, there is already an open change request involving the name servers, so the Modify button in the Name Servers pane is grayed out and unavailable. This prevents an additional change request involving the name servers from being made while the first name server request is still pending.

Name Servers

These are the authoritative name servers used to service the domain on the internet, to be listed in the DNS Root Zone.

y.iana-servers.net •	199.43.133.53	2001:500:8d:0:0:0:0:53
z.iana-servers.net •	199.43.134.53	2001:500:8e:0:0:0:0:53

- Name server is shared by other domains. Other parties may need to take action on this request before these name server changes can be implemented.

Last updated 2022-10-17 Modify

Delegation Signer Records

These records enable the DNSSEC chain of trust to your domain. They are needed for DNSSEC-enabled domains.

Modify

Additional Information

This information is published by IANA to assist customers in finding further information about the domain.

Registration URL:

WHOIS Server:

RDAP Servers:

Modify

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If you are making multiple changes on one request and one change is to a shared name server, the system will automatically split the shared name server change into a separate change request. See [Process for Glue Changes](#) for more information about these types of requests.

I. Visualizing Proposed Changes through Color Coding

Proposed changes within a change request are highlighted with color coding:

- Green: Additions
- Oranges: Changes
- Red with strike-through: Removals

In the example below of a change request for authorizers, David Dong's Request role was changed to only non-technical requests, Amy Creamer1 was removed from the TLD, and George Sarkisyan3 was added.

Authorizers

This lists the authorizers for the domain and their permissions to approve change requests.





Name	Request Type
David Dong david.dong@icann.org	Non-Technical
Selina Harrington selina.harrington1@icann.org	All
Amy Creamer amy.creamer@icann.org	All
Amy Creamer1 amy.creamer@icann1.org	All
George Sarkisyan3 George.sarkisyan3@icann2.org	Non-Technical Technical A

J. Reviewing the Details of Technical Checks

If a change request goes into the status Tech Remedy, it has technical check issues that the Technical Contact must resolve before the change request can be processed.

There are two ways you can review the details of the Technical Checks for a change request:

- Either look under **Actions** and choose to **View** the technical check results, or
- In the Activity Log, click on the alphanumeric identifier next to “has completed technical check” as shown below.

Activity		
 2022-10-27 21:25:25	System	has completed technical check - ab660868-8c84-4741-bec1-c0d839466714
 2022-10-27 21:24:24	System	has started technical check
 2022-10-27 21:23:34	System	Request entered Technical Checks
 2022-10-27 21:23:34	Selina Harrington	lodged new request for .tuesday - Update NS record(s)

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The Technical Check page gives an overall PASS/FAIL score, and then breaks it down by the results of each individual test. Below is an example of this page.

Domain: .tuesday	
<p>Technical check results from 2022-10-27 21:24:49 Click here to view Full Technical Check Log</p>	Fail
Test Results	
<p>Minimum number of name servers Checks a domain must have at least two name servers and they are not resolved to the same IP address. Click for more details ></p>	Pass
<p>Valid hostnames Checks that hostname comply with the requirements described in RFC 1123. Click for more details ></p>	Pass
<p>Name server reachability Checks that each name server is reachable by UDP and TCP. Click for more details ></p>	Fail
<p>Answer authoritatively Checks that each name server is authoritative for the designated zone. Click for more details ></p>	Fail

Selecting the “Click for more details” link expands to show the test details, like the screenshot example below illustrates:

<p>Name server reachability Checks that each name server is reachable by UDP and TCP.</p> <p>Test failed, issues summary:</p> <ol style="list-style-type: none"> 1. ns0.ja.net (128.86.1.20/TCP) did not respond to queries. 2. ns0.ja.net (128.86.1.20/UDP) did not respond to queries. 3. ns0.ja.net (193.63.94.20/TCP) did not respond to queries. 4. ns0.ja.net (193.63.94.20/UDP) did not respond to queries. 5. ns0.ja.net (2001:630:0:8::14/TCP) did not respond to queries. 6. ns0.ja.net (2001:630:0:8::14/UDP) did not respond to queries. 7. ns0.ja.net (2001:630:0:9::14/TCP) did not respond to queries. 8. ns0.ja.net (2001:630:0:9::14/UDP) did not respond to queries. 9. z.iana-servers.net (199.44.134.53/TCP) is not reachable. 10. z.iana-servers.net (199.44.134.53/UDP) is not reachable. 11. z.iana-servers.net (2001:500:8e::53/TCP) did not respond to queries. 12. z.iana-servers.net (2001:500:8e::53/UDP) did not respond to queries. 	Fail
---	-------------

K. Handling Requests for Glue Changes

Shared glue is when multiple TLDs use the same nameserver with the same hostname. Previously, changing a shared glue host's IP address required consent from ALL impacted TLDs. Now when a change request is submitted that impacts a shared nameserver, all other TLDs will be notified and given 14 days to object.

If there is an objection, IANA will review it to understand the situation. Otherwise, after 14 days, if there are no objections, the change request will proceed.

L. Reviewing RZMS Activity Logs

Each change request provides an activity log of all system actions with timestamps. This enables tracking each change request through its phases, and it also shows which user submitted each request and which authorizers approved each request. The activity log also shows previous reports of tech checks, which run every six hours. The screenshot below shows an example of several logged activities.

You can view the activity log for a change request at the bottom of the **Change Request** page.

📄	2022-09-06 23:00:07	root-mgmt@iana.org	has opted in (acknowledged) to being a public contact for .tld1
📄	2022-09-06 22:58:29	Amy Creamer	has approved request
📄	2022-09-06 22:57:47	System	sent notification to new public contact for .tld1 Amy Creamer <root-mgmt@iana.org> Technical Contact <tld-contact@iana.org>
↔	2022-09-06 22:57:46	System	Request entered Contact Confirmation
📄	2022-09-06 22:52:59	System	has completed technical check - bfb3673f-7665-4ff7-aabe-0c33078767a3

PROCESSING A CHANGE REQUEST

This page describes how to perform each of the typical steps for processing a change request:

- [Step 1: Submit the change request](#)
- [Step 2: Perform technical checks if technical changes are required](#)
- [Step 3: Authorizers confirm the change request](#)
- [Step 4: IANA staff performs validations and reviews](#)
- [Step 5: Supplemental technical checks are performed for technical changes](#)
- [Step 6: The requested changes are implemented](#)

There's also a list at the end of the [possible change request statuses](#).

Step 1: Submit the Change Request

When you log in you will see a list of the domains you manage. If you manage a large quantity of domains, click **View All Domains** to expand and see your full list of TLDs.

To initiate a change request, select the TLD you wish to modify. This will take you to a page with two tabs of contact and technical information that can be modified: **Root Zone Data** and **Authorizers**. You can submit a single change request that includes changes to one or more sections on one or both tabs, or you can enter multiple, separate change requests for each change, as long as each request is for a separate section, or there are no open requests for that section already pending.

On the **Root Zone Data** tab, you can make changes to the Registry Operator, Public Points of Contact (the Administrative and Technical Contacts), Name Servers, Delegation Signer Records, Registration URL, WHOIS Server, and RDAP Servers.



friday

Root Zone Data Authorizers

This page details the root zone delegation record for this domain. Click "Modify" for the section you want to modify and update the information. Before final submission, you will be asked to review and confirm your changes.

These are open requests for this domain; click the request to view details. There will be sections below that you will be unable to modify.

RCV3422380 Update Auth Policy

Registry Operator

The Registry Operator, also known as the TLD manager, is the legal entity responsible for managing the domain in accordance with the relevant delegation agreements.

Organization Name : **Internet Assigned Numbers Authority**

Physical address: **12025 Waterfront Drive
Suite 300
Los Angeles CA 90094
United States of America (the)**

Last updated 2022-10-17 Modify

Public Points of Contact

The administrative and technical contacts are published as points of contact for the top-level domain in public databases like RDAP and the IANA website. These contacts should be responsive to customer service enquiries from the general public for this domain. They are not used for authorizing change requests for this domain

<p>Administrative Contact</p> <p>IANA Services IANA 12025 Waterfront Drive Suite 300 Los Angeles CA 90094 United States of America (the) +1 310 301 5800 (fax) iana@iana.org</p> <p>Last updated 2022-10-17 Modify</p>	<p>Technical Contact</p> <p>Technical Contact Internet Assigned Numbers Authority 12025 Waterfront Drive Suite 300 Los Angeles CA 90094 United States of America (the) +1 310 301 5800 (fax) iana@iana.org</p> <p>Last updated 2022-10-17 Modify</p>
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Name Servers

These are the authoritative name servers used to service the domain on the Internet, to be listed in the DNS Root Zone.

x.iana-servers.net •	199.43.135.53	2001:500:8f:0:0:0:53
y.iana-servers.net •	199.43.133.53	2001:500:8d:0:0:0:53

• Name server is shared by other domains. Other parties may need to take action on this request before these name server changes can be implemented.

Last updated 2022-10-17 Modify

Delegation Signer Records

These records enable the DNSSEC chain of trust to your domain. They are needed for DNSSEC-enabled domains.

Modify

Additional Information

This information is published by IANA to assist customers in finding further information about the domain.

Registration URL:

WHOIS Server:

RDAP Servers:

Modify

On the **Authorizers** tab, you can add and remove users and modify the authorization thresholds for each change request type .

The screenshot shows the 'Authorizers' tab for the domain 'monday'. It includes a header with 'Root Zone Data' and 'Authorizers' tabs. A descriptive paragraph explains the page's purpose and lists four change request types. Below this, there are two main sections: 'Authorizers' and 'Authorizations Needed'. The 'Authorizers' section lists two users: George Sarkisyan and Amy Creamer, both with 'All' request types. The 'Authorizations Needed' section lists four request types, all with a threshold of 'All in authorizer group'. A 'Modify' button is located in the bottom right corner, and a 'Last updated' timestamp is in the bottom left.

monday

Root Zone Data Authorizers

This page details the authorizers and thresholds to manage the domain. There are four change request types: change of control requests such as a domain transfer or revocation; non-technical root zone change requests such as contacts; technical root zone change requests such as name servers and trust anchors; and authorization policy change requests. Click "Update" in the section you want to update. Before final submission, you will be asked to review and confirm your changes.

Authorizers

This lists the authorizers for the domain and their permissions to approve change requests.

Name	Request Type
George Sarkisyan george.sarkisyan@icann.org	All
Amy Creamer amy.creamer@icann.org	All

Authorizations Needed

This lists the thresholds for each change request type. The authorization policy can be set to: All - all authorizers in the group must approve; Majority - a majority of authorizers in the group must approve (50% of authorizers + 1); or Minimum - a set number, minimum, of authorizers must approve. If you select a minimum, you must make sure you have at least that number of authorizers for that request type group.

Request Type	Threshold
Change of Control	All in authorizer group
Non-Technical	All in authorizer group
Technical	All in authorizer group
Authorization Policy	All in authorizer group

Last updated 2022-10-17

Modify

To begin making changes, select the **Modify** button in the section that needs to be updated, and after making the changes select **Save**. If you need to make additional changes to other sections, do so now. When you have made all of the necessary changes and are ready to submit your request, select **Finalize Request** from the bar that will appear at both the top and the bottom of the page for your convenience.

Your edits to this domain have not been submitted yet. Once you are ready for the changes to be processed, click "Finalize Request" to review and submit your request.

Finalize Request

This page details the authorizers and thresholds to manage the domain. There are four change request types: change of control requests such as a domain transfer or revocation; non-technical root zone change requests such as contacts; technical root zone change requests such as name servers and trust anchors; and authorization policy change requests. Click "Update" in the section you want to update. Before final submission, you will be asked to review and confirm your changes.

Authorizers

This lists the authorizers for the domain and their permissions to approve change requests.

Name	Request Type
David Dong david.dong@icann.org	All
Selina Harrington selina.harrington1@icann.org	All
Amy Creamer amy.creamer@icann.org	All
Amy Creamer1 amy.creamer@icann1.org	All
George Sarkisyan3 George.sarkisyan3@icann2.org	Non-Technical Technical Authorization Policy

Authorizations Needed

This lists the thresholds for each change request type. The authorization policy can be set to: All - all authorizers in the group must approve; Majority - a majority of authorizers in the group must approve (50% of authorizers + 1); or Minimum - a set number, minimum, of authorizers must approve. If you select a minimum, you must make sure you have at least that number of authorizers for that request type group.

Request Type	Threshold
Change of Control	Minimum (1) in authorizer group
Non-Technical	Minimum (1) in authorizer group
Technical	Minimum (1) in authorizer group
Authorization Policy	Minimum (1) in authorizer group

Last updated 2022-10-17

Your edits to this domain have not been submitted yet. Once you are ready for the changes to be processed, click "Finalize Request" to review and submit your request.

Finalize Request

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You will be given a chance to review the changes one last time. If everything looks ok, select **Proceed** to submit your request.

Step 2: Perform Technical Checks If Technical Changes Are Requested

If the change request includes technical changes, such as modifications to the name servers or delegation signer records, the system will perform technical tests in order to validate the changes and ensure that errors are not introduced into the root zone. Read more about technical checks here: <https://www.iana.org/help/nameserver-requirements>

Step 3: Authorizers Confirm the Change Request

Each authorizer for the type of change submitted will receive an email asking them to log in and confirm the change request. If multiple change types are included in a single request, the required number of authorizers for each change type must confirm before the entire request moves forward.

To approve or reject a change request, an authorizer logs in and views the change request. Next, the authorizer selects the **Go to Form** button in the **Actions** section

of the change request. This will give the authorizer the option to approve or reject the request.

The screenshot shows the IANA Root Zone Management interface. At the top left is the IANA logo and the text "Root Zone Management". At the top right, the user "Amy Creamer (a7akmit)" is logged in with the email "amy.creamer@icann.org". The main content area is titled "RCV4474993" and "Contact Confirmation" with a timestamp "Since 2022-10-26 21:53:57". The domain is "wednesday". A message states: "The request requires the authorizers to approve the change request to proceed. 0 authorizations have been received. The request will automatically close if authorization is not received by 2022-11-25 21:53:57." Under "Changes Requested", it says: "These are the changes to the root zone database record, and will be implemented following successful processing of the request." A table shows the authorization policy change: "Authorization Policy" from "Update Amy Creamer permissions ([Control:Approve], [Non-Technical:Approve], [Technical:Approve], [AuthPolicy:Approve]) to [Control:None], [Non-Technical:None], [Technical:Approve], [AuthPolicy:None]". The "Actions" section has two buttons: "Withdraw" and "Go to Form" (highlighted with a red box). The "Authorizers" section shows a table with two entries: "Amy Creamer" (amy.creamer@icann.org) with "No response yet" and "David Dong" (david.dong@icann.org) with "No response yet".

The **Authorizers** section of the change request will show who has approved the changes and who has not responded yet.

The screenshot shows the "Authorizers" section of the interface. It states: "These are the authorizers notified to approve the change request." Below this is a table with two entries: "Amy Creamer" (amy.creamer@icann.org) with "Approved" and "David Dong" (david.dong@icann.org) with "No response yet".

Step 4: IANA Staff Performs Validations and Reviews

After the request has been authorized, IANA staff will complete necessary validations and reviews, and if any issues are found, clarify them with the TLD operator. The Activity Log tracks the status of the request.

Step 5: Supplemental Technical Checks for Technical Changes

The Technical Checks are performed once again as a final check before insertion into the root zone.

Step 6: Implementation

The changes will be implemented, and email notifications will be sent to the original requestor when the changes are completed.

Change Request Statuses

During the change request process, you may see your request enter one of these statuses:

Statuses	Description
Initial Review	For transfers, delegations, and revocations, IANA staff will review the change request details and collect supporting documentation at the beginning of the process.
Documents Requested Clarification	If IANA staff requests documentation or clarification from the requester, the status will be updated to either “Documents Requested” or “Clarification.”
Technical Checks Supplemental Technical Checks Tech Remedy	Technical Checks and Supplemental Technical Checks will be run for requests that contain NS and DS changes to ensure they meet the IANA technical requirements. If any of the technical checks fail, the request will be in the Tech Remedy state until the issues are resolved.
Contact Confirmation	Confirmation of change requests by the authorizers will take place while in the Contact Confirmation status. If there are updates to the public contact email address, the new public email address must consent to being published as the Administrative or Technical Contact while also in this status.
User Verification	For change requests adding a new user(s), the request will remain in this status until the users have completed their account setup and IANA staff have reviewed and verified the new user accounts.
Manager Endorsement	For changes to ccTLD administrative and technical contacts, the TLD manager will be asked to provide a confirmation letter while in this status.
Impacted Parties Notification	For updates to IP addresses of shared nameservers, technical authorizers of the impacted TLDs will be notified and given an opportunity to reject them if they do not

	agree to the changes.
Staff Review	IANA staff will review the request for completion and accuracy before moving it forward through the implementation process.
Regulatory Checks	IANA staff will review the request to ensure it meets policy and contractual requirements.
IANA Board Review	For ccTLD delegations, transfers, retirements, and revocations, IANA staff will prepare the board report while in this status.
Implementation Root Zone Maintainer Update	If technical changes were required, the updated zone file will be inserted into the root zone.
Completed Withdrawn Rejected Admin Closed	The processing of the change request has ended.