



I E T F[®]

Making the Internet work better

Open Source DBA Services

A Request for Proposals issued on 2021-10-15

IETF Executive Director
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Overview

The IETF currently uses MariaDB as the core database for internally developed applications and has active plans to migrate to PostgreSQL. It is likely that at some point we will introduce PostgreSQL multi-master replication for high availability and a suitable open source NoSQL database for document storage. We seek a contractor with one or more highly experienced open source Database Administrators to assist us on an ongoing basis and with two initial migration projects. We expect this assistance to include scheduled maintenance, formally scoped projects and ad-hoc advice and consultancy. The initial term of the contract will be for three years with the option to renew for a further three year term by mutual agreement.

Timeline

15 October 2021	RFP Issued
29 October 2021	Questions and Inquiries deadline
05 November 2021	Answers to questions issued and RFP updated if required
12 November 2021	Bids due
26 November 2021	Preferred bidder selected and negotiations begin
10 December 2021	Contract execution and work begins

RFP Process

The process for the RFP is as follows:

1. The RFP is publicly issued, posted to our website¹ and announced to the RFP Announcement mailing list², which anyone can subscribe to.
2. Potential bidders have until 29 October 2021 to submit any questions by email to ietf-rfps@ietf.org. Questions will be treated as anonymous but not private, as explained below. If you do not receive confirmation that your questions have been received within 24 hours then resend until you do.
3. A written response to all questions is provided on or before 05 November 2021, direct to those parties that sent questions, by email to the RFP

¹ <https://www.ietf.org/about/administration/rfps-and-contracts/>

² <https://www.ietf.org/mailman/listinfo/rfp-announce>

Announcement Mailing List and posted on our website³. The response will include the questions asked and the answers, but will not identify the company asking the question. If required, the RFP may be updated to correct or clarify any issues identified.

4. Bids are due by **12 November 2021** by email to ietf-rfps@ietf.org. If you do not receive confirmation that your bid has been received within 24 hours then please resend until you do. The bid should include the following information:
 - a. Executive summary
 - b. Project approach including any assumptions.
 - c. Project plan and schedule including when the work will begin and end, and any other milestones, as well as any dependencies that may delay delivery.
 - d. Fee and payment schedule.
 - e. Warranty including a proposal for fee reduction/refund due to late- or non-delivery
5. The IETF Administration LLC and designated contractors and volunteers will select a preferred bid and notify the bidder by 26 November 2021. The selection process may include questions by email and/or conference call.
6. The IETF Administration LLC then enters into contract negotiation with the preferred bidder, based on its standard contract and using the relevant sections of the Statement of Work below. If contract negotiation fails then a different preferred bidder may be chosen.
7. Contract negotiation is anticipated to complete by 10 December 2021 and result in the award of the contract. All RFP contract awards are posted on our website and announced to the RFP Announcement mailing list. The terms of the contract are later posted publicly on our website, with the fee information and signatures (where possible) redacted. In addition any Conflict of Interest declarations required of the preferred bidder are also posted publicly on our website. This transparency is non-negotiable.
8. Work generally begins immediately after award of the contract, unless specified otherwise in the Statement of Work or negotiated contract.

Jay Daley
IETF Executive Director
IETF Administration LLC

³ <https://www.ietf.org/about/administration/rfps-and-contracts/>

Statement of Work: Open Source DBA Services

Deliverables

Part 1 - Scheduled maintenance

The required deliverables are:

- A quarterly maintenance check of the [Datatracker](#) and [Mailarchive](#) databases to identify any problems and address as appropriate. The frequency of this check is negotiable if a different frequency is advised.

Part 2 - Ad-hoc advice and consultancy

The required deliverables are:

- Ad-hoc advice and consultancy from an expert in PostgreSQL and open source databases in general. This will include advising on configuration, products, performance and features.
- Occasional remote support of participants during a [codesprint](#).

We estimate the total resource requirement for this part to be in the region of 40 hours per year with a maximum of 10 hours per month. We are unable to guarantee any minimum requirements.

Part 3 - Migration of database tables from MyISAM to InnoDB

The required deliverables are:

- Full plan for the migration of the application tables that use the MyISAM database engine to InnoDB for our system administrators to follow. This plan should include any potential problems that may occur during the migration, as identified by prior research, and appropriate mitigations.
- Support to the system administrators during the migration process.
- Post-migration verification and testing.

Part 4 - Migration from MariaDB to PostgreSQL

The required deliverables are:

- Full plan for the migration of Datatracker and Mailarchive from MariaDB to PostgreSQL to our system administrators to follow. This plan should include any potential problems that may occur during the migration, as identified by prior research, and appropriate mitigations.
- Support to the system administrators during the migration process.
- Post-migration verification and testing.

Requirements

In addition to the requirements in section 4 of the RFP Process above, your response should specify:

- The experience and qualifications of the DBA(s) who will be the resources for this contract.
- Individual proposals for each of parts 1, 2, 3 and 4.

We would strongly prefer not to split the award of this contract to multiple vendors.

We will consider both hourly rates and fixed price bids. If you plan to submit an hourly rate bid for part 3 or part 4 then please include a reasonable time estimate and/or maximum fee.

Additional Details

Datatracker and Mailarchive

The IETF has developed a public facing document and workflow management tool called Datatracker⁴. This is developed in Python on Django and is the main database powered application in use. The backend database is MariaDB with the tables all using the MyISAM database engine.

The IETF has developed a web application for browsing and searching the archive of all of its list messages called Mailarchive⁵. This is developed in Python on Django and uses MariaDB with MyISAM tables.

The source code for both applications is open source, under the Revised BSD License. Currently the code for both applications is held in a single Subversion

⁴ <https://datatracker.ietf.org/>

⁵ <https://mailarchive.ietf.org/arch/>

repository⁶ but work is underway to move this to GitHub and split it into two separate repositories.

Codesprints

We run three to five 'codesprints' per year where 5-15 members of the IETF community work together for a half day or day to fix bugs, improve performance and add features to our core Datatracker product. We are planning for at least one or two to focus primarily on performance, which will include significant effort on database query optimisation.

Servers and system administration

The IETF outsources its system administration and server management. The services run on a primary server with two hot standby servers. The servers run OpenSUSE on the built-in Xen hypervisor. All applications run inside a single shared VM. The outsourced system administrators have full control of the servers.

Open source

The IETF makes all of its software available as open source under the Revised BSD License and, with rare exceptions, uses open source software components when developing its own software. We intend to continue using open source databases for the foreseeable future.

Performance monitoring

We use ScoutAPM⁷ for monitoring the performance of our Python/Django applications. This tool allows us to drill down to the underlying SQL in any operation. Access will be provided to the chosen vendor.

We are willing to consider implementing any additional performance/health monitoring services, including paid services, if that would assist with the delivery of this contract.

ENDS

⁶ <https://svn.ietf.org/svn/tools/ietfdb/>

⁷ <https://scoutapm.com>