



NOAA FISHERIES

eVTR Software Application Approval Guide

For eVTR Application Development Organizations

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Greater Atlantic Regional Fisheries Office (GARFO)

Analysis & Program Support Division (APSD)

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1 Introduction

The Magnuson-Stevens Fisheries Conservation and Management Act (1976) mandates that the regional offices of NOAA Fisheries monitor marine fishing activity within the Exclusive Economic Zone (EEZ), which extends 3-to-200 miles from the coasts of the United States. (The area from 0-to-3 miles off the nation's coasts is managed by the individual states.)

The Greater Atlantic Regional Fisheries Office (GARFO) tracks fishing activity in the EEZ in the Atlantic Ocean from North Carolina to the U.S.-Canadian maritime boundary. Tracking that fishing activity includes various methods including permits, reports, and electronic devices.

By regulation, the fishing vessel's owner/operator must file a Vessel Trip Report (VTR) after a fishing trip; the electronic report is called an **eVTR**. The report includes but is not limited to information about the trip duration, the fishing effort expended (gear used, location, and duration fished), the species that were caught, and their landed weight. eVTR data are the definitive source of fishing effort information (gear and area), which is a critical input to ensure accurate catch monitoring.

This guide documents the process by which software development organizations should apply to GARFO in order to be certified to offer eVTR services to the fishing industry. These services would allow vessel operators to perform tasks including, but not restricted to, the following:

- Completing an eVTR during the course of a fishing trip
- Submitting a completed eVTR to GARFO
- Editing previously-submitted eVTRs
- Viewing submitted and incomplete eVTRs

NOTE: GARFO intends that this guide should be updated periodically in order to add, change, or remove content as needed, or to improve the quality of the document.

2 Using This Guide

This guide is organized in three main sections that outline what you need to do in order to offer eVTR services to your users:

- 1) [Preparing for Certification](#)
- 2) [Getting Certification](#)
- 3) [Maintaining Certification](#)

3 Preparing for Certification

Read this section to find out what you need to do before you can begin the formal process of applying for certification for your eVTR software application. Topics include:

- [Review GARFO Documentation Online](#)
- [Notify GARFO of Your Intention to Submit](#)

3.1 Review GARFO Documentation Online

Familiarize yourself with the documents listed immediately following (if you have not already done so) in order to understand the eVTR process. Documents include:

- *VTR Instructions*
- *eVTR Technical Requirements Guide*
- *eVTR Software Application Approval Guide* (this document)

These documents are available on the Vessel Trip Reporting web page (use following link):

[Vessel Trip Reporting in the Greater Atlantic Region](#)

3.2 Notify GARFO of Your Intention to Submit

Organizations that intend to provide an eVTR software application service to clients must contact GARFO before initiating the certification process:

- Contact: Vessel Trip Report Specialist
- Telephone: 978-282-8418
- E-mail: nmfs.gar.evtr@noaa.gov

Be sure that you provide the following information to the Vessel Trip Report Specialist:

- 1) Organization name
- 2) Organization address
- 3) Name of software application (should not conflict with existing eVTR application names as listed on the GARFO Vessel Trip Report web page)
- 4) eVTR software revision number or release number scheme
- 5) Names of your principal and secondary contacts for communicating with GARFO
- 6) Phone numbers of your principal and secondary contacts for communicating with GARFO
- 7) E-mail addresses of your principal and secondary contacts for communicating with GARFO
- 8) Any other pertinent information, including the following that may apply:
 - a) If this is the first time that your organization is applying
 - b) If this is an update required by changes that you have implemented
 - c) If this is an update required by changes that GARFO has implemented
- 9) The platforms on which the software application will be available, such as iPhone/iPad, Android phone/tablet, Windows 10, etc.

4 Getting Certification

The following provides the list of tasks that you and GARFO personnel need to satisfactorily complete in order for GARFO to certify your organization for providing eVTR services. Complete the tasks in order:

- [Applicant: Obtains Test Trips File from GARFO](#)
- [Applicant: Tests eVTR Software Application](#)
- [Applicant: Assembles Submittal Package](#)
- [Applicant: Sends Submittal Package to GARFO](#)

NOTE: Remember to contact GARFO, as outlined in the section [Notify GARFO of Your Intention to Submit](#), before you start the certification process.

4.1 *Applicant: Obtains Test Trips File from GARFO*

To begin the certification process, use the following procedure:

- 1) Go to the Vessel Trip Reporting web page (use following link):
[Vessel Trip Reporting in the Greater Atlantic Region](#)
- 2) Go to the section labeled **Software Application Approval Process**.
- 3) Locate the **eVTR Software Application Test Trips** file.
The MS Excel file contains sample eVTR trips with data sets that test both typical and atypical scenarios. GARFO maintains an identical set of sample eVTR trips in our automated test system, so that we can verify how our API has managed them. This eliminates uncertainty both for developers and for GARFO personnel.

4.2 *Applicant: Tests eVTR Software Application*

Applicant will use the Application Test package provided by GARFO to ensure that the following features of the product are tested:

- Program logic (Test Cases)
- Data integrity
- Upload Integrity
- UI Integrity

4.2.1 Test Trips

- 1) Go to the Vessel Trip Reporting web page (use following link):
[Vessel Trip Reporting in the Greater Atlantic Region](#)
- 2) Go to the section labeled **Software Application Approval Process**.
- 3) Locate the Excel file in **eVTR Test Trips**.

The Excel file contains data from example trips. Run the data from each of these example trips using your software application using the GARFO test environment. See the *eVTR Technical Requirements Guide* for instructions on how to do this.

NOTE: Developer should be able to successfully submit all test trips. These test trips also contain trips that would be rejected by both our API and the application if the developer programmed it to do so; in these cases, success would be defined as a user experience in which the error is clearly conveyed to the user, either by displaying the API error or by client-side validation preventing the submission of the trip.

4.2.2 Data Integrity

Federal regulations require that eVTR data retain its integrity and confidentiality. Read this section to better understand these requirements.

4.2.2.1 Data State Integrity

The eVTR client application shall ensure that the following conditions are met:

- Possible states of the eVTR form are as follows:
 - **Incomplete:** The eVTR form has been opened for editing but is incomplete. The state persists until all the eVTR fields have been successfully entered.
 - **Submitted:** eVTR data has been successfully uploaded to GARFO.
 - **Edited:** End user has opened for editing the eVTR data that had previously been successfully uploaded.
 - The Universal Trip ID (UTID) that was assigned to the original instance of the eVTR form does not change
 - If the API receives a VTR with a Trip ID that already exists, and the incoming trip is not rejected with errors, the system updates the original submission and replaces it with the new data.
- Each eVTR field must contain a valid value at submittal time.
- Users must be able to view or change any field in the eVTR before the upload operation.
- The end user shall not be able to edit eVTR data while the eVTR form is being uploaded.

IMPORTANT! The eVTR application must allow the user to modify eVTR data after the original eVTR form has been uploaded.

- The Universal Trip ID, once generated, cannot change under any circumstances.
- Once the user has submitted the eVTR in the application, that eVTR must be immediately presented to the GARFO API, and any error message or confirmation of success message be relayed back to the end user.

NOTE: It is not acceptable to queue reports for later submission except on the user's own device and with clear indication to the user that the report has not been submitted. The intent is that the end-user knows exactly whether and when a VTR has been accepted for the purpose of regulatory compliance.

4.2.2.2 Application Security

Applicant shall ensure that the following conditions are met:

- Application security shall be ensured by the username/password system as outlined in the *eVTR Technical Requirements Guide*, available on the GARFO Vessel Trip Report web site.

4.2.2.3 Data Storage and Transfer Integrity

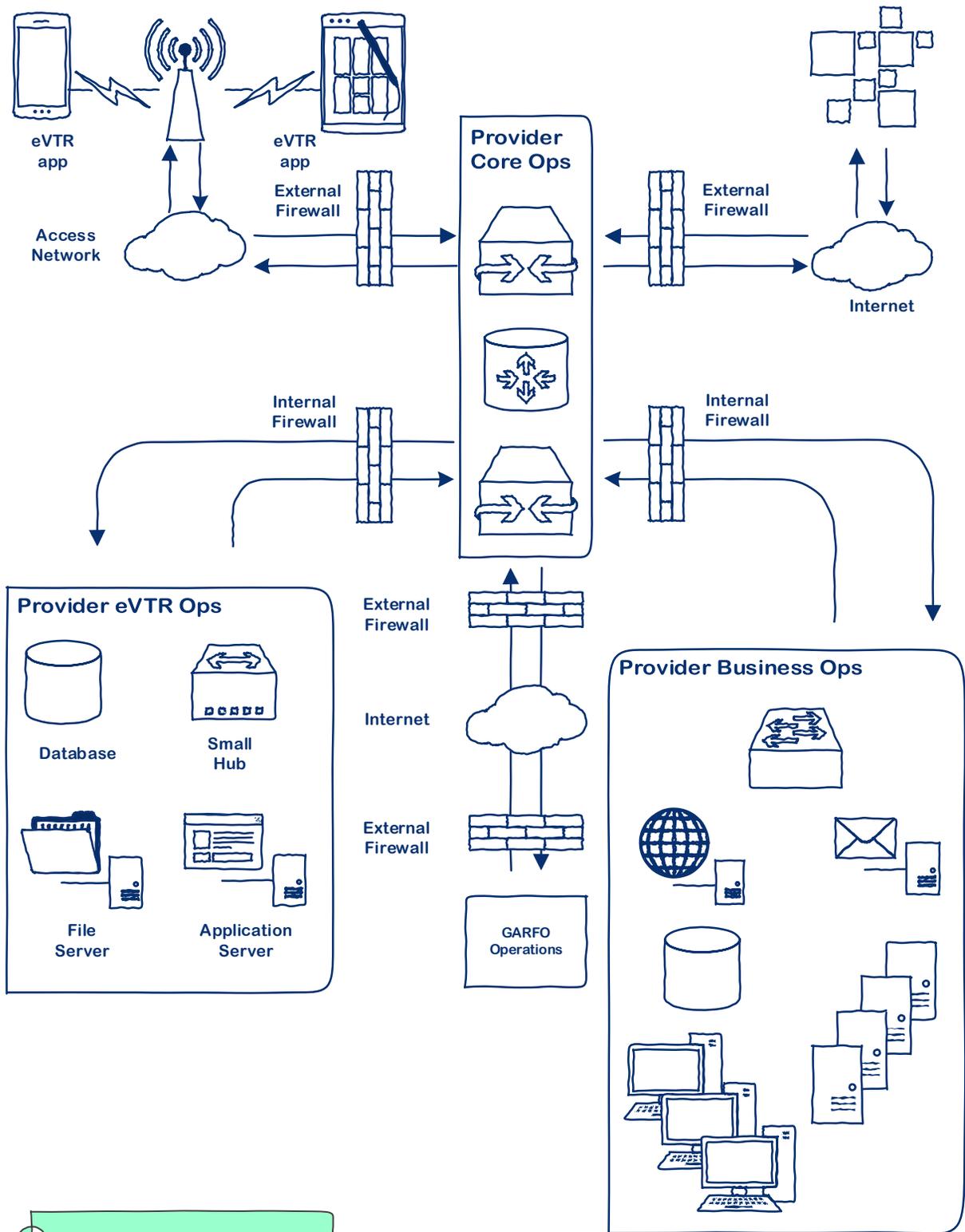
Applicant shall ensure that the following conditions are met:

- Security for the client application is the responsibility of the eVTR application provider.
- eVTR data are confidential by federal regulation. eVTR data must be encrypted in both storage and transmission. Data must be password protected on the user's device and may not be shared except with parties allowed by GARFO.
- eVTR data must be accessible to the provider and/or GARFO if troubleshooting is required.
- Include in your submission a diagram that shows the full path between the app and GARFO. Refer to [Figure 1](#) for one possible example.
- Document that your organization has accounted for the following:
 - Transmission security within the confines of your organization
 - Security of any data that pass through the infrastructure of other organizations

IMPORTANT: Software providers own the security responsibility for eVTR data before GARFO takes possession of those data. This responsibility includes assurances demonstrable to GARFO from any external entities that vendors use, such as cloud storage services, that eVTR data are being sufficiently safeguarded against theft, tampering, or unauthorized use. Further, GARFO expects compliance with industry and government security standards, and reserves the right to reject or revoke certification based on faulty security, data management, or network management.

- Ensure that eVTRs are submitted to GARFO in real time, whether the submission flows directly from the app to our API or whether there are intermediary stops along the way, such as the developer's servers.
- Ensure submissions from vessel operators are preserved in their original form, whether or not translations or manipulations are performed prior to submission to GARFO, and can and will be made available to GARFO upon request.

Figure 1: Provider Security Diagram (Example)



4.2.3 Upload Integrity

The eVTR client application shall ensure that the following conditions are met:

- Transmission shall be carried out through HTTPS protocol
- eVTR data are preserved if an upload operation is interrupted

4.2.4 UI Integrity

The eVTR client application shall ensure that the following conditions are met:

- End users shall be able to:
 - Navigate the UI from start to finish without assistance.
 - Successfully complete an eVTR form for a trip with at least one subtrip.
 - Correctly match the data in Catch, Effort, and Sales modules.
 - Receive error messages that are returned by GARFO's API in response to invalid data.

4.3 *Applicant: Assembles Submittal Package*

When your organization is ready to apply for certification, submit the following information to the Vessel Trip Report Specialist:

- Organization Identification
 - Official Name
 - Principal Contact(s)
 - Postal Address, Phone Number, E-mail
 - Electronic signature(s) of Principal(s)
- Software test results (eVTR test cases)
- Description of product integrity
- Details of how support services will be offered to application users
 - Include user documentation if it exists.

4.4 *Applicant: Sends Submittal Package to GARFO*

Send the submittal package by e-mail to the following address:

nmfs.gar.evtr@noaa.gov

Include the required submissions as attachments.

4.5 GARFO: Reviews Proposal

After GARFO receives the test package submittal, the following review process takes place :

- 1) The GARFO Certification Team reviews the software program submission.
The review period can last up to 60 days (best estimate). During the testing period, the applicant may contact GARFO for more information about the process, and GARFO may contact the submitter for additional information and materials relating to the submission.
- 2) GARFO performs the identical series of tests that the submitter performed when testing the eVTR software.
 - a) GARFO performs the checks listed in [Applicant: Tests eVTR Software Application](#).
 - b) GARFO verifies that data are submitted to GARFO in real-time, and that errors are being returned to the user.
- 3) The GARFO Certification Team completes the review and returns to the applicant one of two responses:
 - a) Approval of certification
GARFO updates its **Vessel Trip Reporting** web page to reflect the successful certification. Refer to the section [Successful Applicant: Completes Post-Approval Process](#).
 - b) Rejection of certification
Software programs that fail certification must be resubmitted, starting at the beginning of this process, after the identified issues have been addressed. Refer to the section [Unsuccessful Applicant: Rectifies Errors and Resubmits](#).

4.5.1 Successful Applicant: Completes Post-Approval Process

If GARFO notifies your organization that your eVTR software has been certified for use, perform the following process:

- 1) Notify GARFO of your projected date to go “live” with the eVTR software.
- 2) Notify GARFO of the following information for our own web site:
 - a) How to obtain the software application
 - b) Whether the software application is free
 - c) Platform compatibility (For compatibility matrix on our **Vessel Trip Reporting** web page)
 - d) Contact information for assistance
- 3) Update your web site with the appropriate information for your clients.

4.5.2 Unsuccessful Applicant: Rectifies Errors and Resubmits

If GARFO notifies your organization that your eVTR software has not been certified for use, you will be informed of the problems that led to the decision. Perform the following process:

- 1) Rectify the problem(s) that GARFO identified.
- 2) Repeat the process of submittal as described in this document, starting from the section [Notify GARFO of Your Intention to Submit](#).

5 Maintaining Certification

You should be aware of the following as you conduct your day-to-day eVTR operations:

- 1) If GARFO identifies a problem that has arisen after certification, GARFO will communicate the nature of the problem to your organization in order that the situation be addressed.
- 2) GARFO continually monitors eVTR operations. In doing this, GARFO:
 - a) Determines the status of all certifications.
 - b) Can at any time approve or revoke certification.
 - c) Can request at any time that changes be made.

IMPORTANT: In case of a serious error or a change in regulations, you must be able to demonstrate either that your end users can and will upgrade the eVTR app when necessary or that your organization can point your end users to alternative eVTR applications; this ensures that end users are able to submit eVTRs within the reporting period.

- 3) You must maintain the eVTR software revision number / release number scheme that you outlined to GARFO when you applied for certification. If you change that scheme for any reason, you must inform GARFO and the client base.

NOTE: All application upgrades and enhancements must be automatically pushed out, making all upgrades passive for users.

6 Getting Recertification

If you make one or more changes to your eVTR code base, be aware that you may need to re-certify your application with GARFO.

- A *major release* significantly changes the look-and-feel or the functionality of an app, and therefore requires recertification.
- A *minor release*, typically, would be more cosmetic in nature, or would be a code performance improvement invisible to the user and not affecting the API. This type of change would not require recertification.
- It is possible that a minor change to your application may unexpectedly affect the application such that it would generate calls to your Help Desk; in this case, you must ensure that the user population is able to successfully report their trips.
- In many instances, the GARFO API would prevent eVTRs from being submitted if the app were not functioning properly. (For instance, a code update that results in the inadvertent elimination of the Gear Size field; in this case, the API would prevent the eVTR submission).
- If your software application breaks and there may be difficulty with on-time reporting, eVTR users can use another software application as a workaround.

7 Changes in the GARFO Code Base

GARFO expects to release updates to the eVTR code base at regular or semi-regular intervals; provisionally, this interval would be every calendar quarter, though there would be those quarters in which no code change occurs. You will be informed about any upcoming code changes and be given the opportunity to update your code.