

Temperature Log File Upload Service API Specification

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1. INTRODUCTION

This document outlines the technical requirements for accessing the temperature log file upload service provided by Florida SHOTS.

The temperature log file upload service enables authorized providers enrolled in the Vaccines for Children (VFC) program, meet the programmatic requirement to send temperature log file for their storage units, as described in the Appendix A 'Temperature Log File Format' and receive a response as described in the section 'Responses to Upload Services.'

Core Capabilities of the services include:

- Authenticate the sender of the import file
- Validate the format of the import file
- Import the temperature log file sent using the API and create temperature readings for use in the Florida SHOTS application.

2. SECURITY, AUTHENTICATION AND AUTHORIZATION

The file upload service is designed as a RESTful web service using HTTPS communication protocol and utilizes JWT authentication. The data encryption during the transport is provided by HTTPS (HTTP over TLS 1.2).

Each sender implementing the real-time web service interface with Florida SHOTS must request and acquire the following from Florida SHOTS:

- api_key
- username
- password

These must be submitted in the request header when requesting a JWT bearer token. Once the JWT bearer token is issued, it will be valid for 30 minutes before it times out. Sender must request for another token after the expiration time.

The sender then uses the JWT bearer token, to create a new request and send the temperature log file to Florida SHOTS for processing along with the bearer token.

3. SERVICE ENVIRONMENTS AND BASE URLS

Two service environments are provided: one for Testing and another one for Production. The Test environment will allow the provider or their datalogger technical contact to develop and test the web service client.

URL to request for JWT bearer token for the testing environment is:

<https://flshots.com/training/flshots/auth/gettoken.cls>

URL to send the temperature log file for the testing environment is:

<https://flshots.com/training/flshots/vfc/templog/receivetemplog.cls>

Upon completion of testing and approval of test results, credentials to access the production environment will be granted and base URLs to access production web services will be provided. Note: Only providers who are enrolled in the VFC program or currently in the process of enrollment into the VFC program will be approved to use the file upload service in production.

4. RESPONSES TO UPLOAD SERVICES

When a web service request is successfully processed, in addition to the status code (200 OK), a JSON string with the results of processing of the temperature log file will be sent as response.

The response JSON should contain the following properties:

- a. **status:** The status of the process. Success or Failure. (see section 'HTTP Status Codes')
- b. **failReason:** The reason for the failure. If Success, it will be blank.
- c. **totalRows:** Total rows in the file.
- d. **headerRows:** Number of header rows in the file.
- e. **rowsAdded:** The number of rows added.
- f. **rowsChanged:** The number of rows changed.
- g. **blockedExcursion:** The number of rows blocked by excursions.
- h. **blockedDupe:** The number of rows blocked by duplicates.
- i. **blockedTooOld:** The number of rows blocked because they are too old.
- j. **blockedOverlap:** The number of rows blocked because of overlap.

5. HTTP STATUS CODES

The following table provides the list of HTTP status codes and their descriptions, which you may receive when using the service.

HTTP Status Code	Reason	Description
200	OK	Your request to the service was a success. However, the temperature logs may not be completely processed. See 'Responses to Upload Services' for more details.
401	Unauthorized	Invalid credentials when requesting token or bad/missing/expired token.
404	Resource Not Found	The import log file sent is invalid or empty.
500	Internal Server Error	Contact Florida SHOTS for further information and assistance.

6. PROCESS

1. Creating a new request for JWT bearer token.

- a. Use POST (<https://flshots.com/training/flshots/auth/gettoken.cls>)
- b. Headers:
 - i. api_key = TempLog
 - ii. api_group = <this would be the username provided to you by Florida SHOTS>
 - iii. api_secret = <this would be the password provided to you by Florida SHOTS>
- c. You should receive a status of 200 OK and a token which valid for 30 minutes.

2. Creating a new request to upload the temperature log file.

- a. Use POST (<https://flshots.com/training/flshots/vfc/templog/receivetemplog.cls>)
- b. AUTH: send the JWT bearer token received above.
- c. Body: attach the temperature log file (csv format) as binary. The temperature log file must meet the Florida SHOTS Import Specification for Temperature Log (see Appendix A).
- d. In addition to validating the JWT token, the VFC-EID sent in the temperature log file must be a valid VFC-EID issued by the VFC program and should have the necessary permission to send the web-service. Upon successful authentication and validation, the temperature log file provided in the message is processed and appropriate responses returned.
- e. You should receive a status of 200 OK and a JSON String with the results of the temperature log processing (see Responses to Upload Services for details).

```
{
  "status": "Success",
  "failReason": ""
  "importResult": 99,
  "totalRows": 99,
  "headerRows": 3,
  "rowsAdded": 95,
  "rowsChanged": 0,
  "blockedExcursion": 0,
  "blockedDupe": 0,
  "blockedTooOld": 0,
  "blockedOverlap": 1
}
```

NOTE: "Because communication failures can occur at any point in the transmission, senders will need to resend messages in such cases. Florida SHOTS is designed to handle messages retransmitted by a sender for which they did not receive an acknowledgement.

7. APPENDIX A

7.1 Florida SHOTS Import Specification for Temperature Log Files

- 1. **File Format:** The incoming file should be in comma separated variable (csv) file format.
- 2. **Header Information:** The following headers should be present (in each line) along with corresponding values separated by a comma.
 - a. Header Row 1: This header is used to identify the refrigerator or freezer unit for which the user is importing the temperature data.

Header ID	Header Value	Required? (Y/N)	Type	Description/Validation Notes
User ID	#<Name of the storage unit (refrigerator or freezer)>#	Y	Text Alphanumeric. Cannot contain the following characters: ~^ ",\	User ID is used to validate that the user has selected the appropriate storage unit defined in Florida SHOTS system and import the corresponding temperature log data for that unit.

- b. Header Row 2: This header is used to identify the provider for whom the user is importing the temperature data.

Header ID	Header Value	Required? (Y/N)	Type	Description/Validation Notes
VFC EID	#<Enrollment ID for a VFC Pin)	Y if the provider uses web services to transfer the temperature log file	Numeric	This is a unique Florida SHOTS issued Enrollment Id for a VFC pin. This field is optional for providers who import the temperature log file manually through Florida SHOTS.

- c. Header Row 3: Describes the column headers for the data that should be in the csv file.

Column Headers	Position	Description/Validation Notes
Index	1	Identifies the record in the file.
Date	2	The date the temperature was logged.
Time	3	The time the temperature was logged.
Readings (F or C)	4	Temperature readings specified as either in F or C. Do not include degree (o) symbol.
Inspection Mark	5	Used to indicate that the reading is to be classified as inspected reading. Could be the name of the user who performed the inspection

3. Record Information: Each record should contain the following information.

Field	Position	Required? (Y/N)	Type	Description/Validation Notes
Index	1	Y	5N (5 digit numeric)	Record number of the data in the file. Used to report errors in the import log.
Date	2	Y	Date Format: mm/dd/yyyy	The date the temperature was logged.
Time	3	Y	Time Format: hh:mm:ss AM/PM or Military 24 hr. format	The time the temperature was logged.
Readings	4	Y	Allows 3N.1 (3 digit numeric with single decimal). Negative values allowed.	Temperature readings specified as either in F or C.
Inspection Mark	5	N	Alphanumeric. Cannot contain the following characters: ~^ ";\	Used to indicate that the reading is to be classified as an inspected reading. Could be the name of the user who performed the inspection.

4. Sample File

User ID, 501044-REFRIGERATOR 1
VFC EID, 47
Index,Date,Time,Readings(F), Inspection Mark
1,"8/11/2015","4:59:04 PM",41.4,
2,"8/11/2015","5:14:04 PM",41.4,
3,"8/11/2015","5:29:04 PM",41.5,Person1
4,"8/11/2015","5:44:04 PM",41.5,
5,"8/11/2015","5:59:04 PM",41.5,
6,"8/11/2015","6:14:04 PM",41.5,
7,"8/11/2015","6:29:04 PM",41.5,
8,"8/11/2015","6:44:04 PM",41.7,
9,"8/11/2015","6:59:04 PM",41.5,
10,"8/11/2015","7:14:04 PM",41.5,
11,"8/11/2015","7:29:04 PM",41.5,Person2
12,"8/11/2015","7:44:04 PM",41.5,
13,"8/11/2015","7:59:04 PM",41.5,
14,"8/11/2015","8:14:04 PM",41.5,
15,"8/11/2015","8:29:04 PM",41.7,
16,"8/11/2015","8:44:04 PM",41.5,
17,"8/11/2015","8:59:04 PM",41.5,
18,"8/11/2015","9:14:04 PM",41.5,
19,"8/11/2015","9:29:04 PM",41.7,
20,"8/11/2015","9:44:04 PM",41.5,
21,"8/11/2015","9:59:04 PM",41.7,
22,"8/11/2015","10:14:04 PM",41.5,
23,"8/11/2015","10:29:04 PM",41.7,
24,"8/11/2015","10:44:04 PM",41.5,
25,"8/11/2015","10:59:04 PM",41.7,