

# VA FitHeart App SDD Addendum

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## Application Information

The System Design Document (SDD) is a dual-use document that provides the conceptual design as well as the as-built design. This document will be updated as the product is built, to reflect the as-built product. Per the Project Management Accountability System (PMAS) Guide, the SDD with conceptual design is required prior to the Milestone 1 Review. The as-built for each delivery must be incorporated prior to the Milestone 2 Review.

|                   |   |
|-------------------|---|
| Software Name     | FitHeart  |
| Project Increment | TBD   |
| Product Version   | 1.0.0   |
| Git Repository    | Stash Link  |
| Intended Audience | <input checked="" type="checkbox"/> Veteran/Service Member<br><input checked="" type="checkbox"/> Caregiver<br><input type="checkbox"/> Provider<br><input type="checkbox"/> Public |
| Software Type     | <input type="checkbox"/> Service<br><input checked="" type="checkbox"/> App<br><input type="checkbox"/> Background Process<br><input type="checkbox"/> Other: <Specify>             |

## Data Classification

### Data Boundaries

| Question | Yes | No | If Yes, what information / data | If yes, then identify any consumer or source system(s) for the data |
|----------|-----|----|---------------------------------|---|
|          |     |    |                                 |   |

|  |   |   |  |  |
|--|---|---|--|--|
| Does the user enter information or data into the mobile application?                               | X |   | BP, Pulse, Weight, Glucose, Cholesterol, Mood, Fitness, Fitness Goals                          | FitHeart, Cardiac Rehab Provider, Health Tracker Services, Health Factor Services, Notification Services, Authorization Services |
| Does Mobile Application store information or data entered by the User? If yes, where is it stored? | X |   | Data is stores in associated VAMF services. No PII/PHI is stored in the browser or on a device |  |
| Does Mobile Application transmit/push data entered outside of the VAMF to VA?                      |   | X | No data is pushed by the application or services   |  |
| Does Mobile Application pull data from a VA Database (external to VAMF)?                           |   | X |  |  |
| Does the Mobile Application store in the VAMF or on the device data pulled from a VA Database?     | X |   | User information is stored   | Auth Services 4.x and Metrics 1.0.x  |

#### Data Risk Classification

| Mobile Application Classification (Only one box may be checked)   | Mark with X |
|---|-------------|
| 1 – Very Low: Mobile Application Does Not Use VA Resource   |             |
| 2 – Low: Read only access to non-sensitive VA Resource(s) (No PII / PHI)                                  |             |
| 3 – Medium: Write access to VA Resource(s)  |             |
| 4 – High: Read and/or Write access of sensitive data to VA Resource(s) (Includes PII/PHI/other sensitive) | X           |

## Application Design

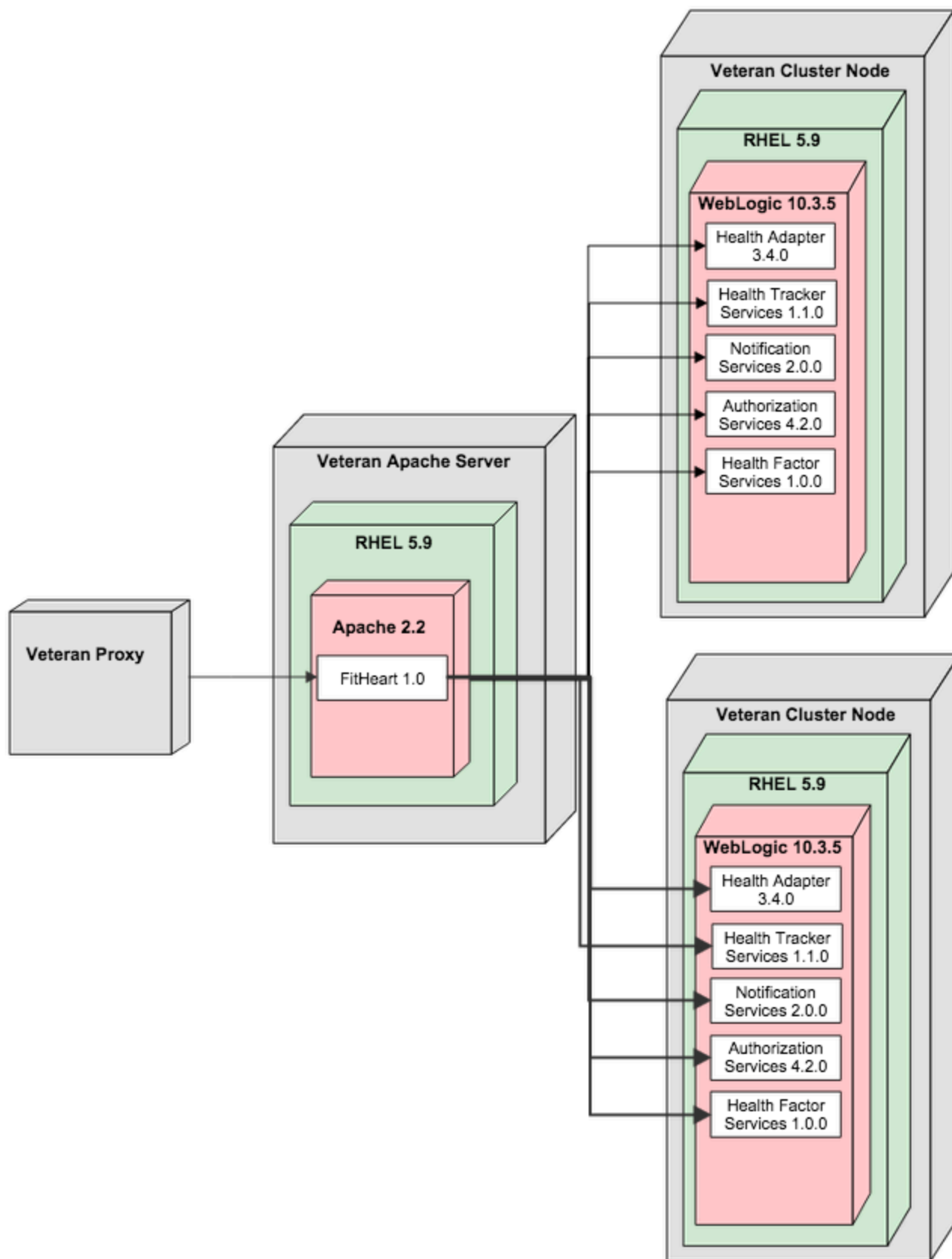
This application is a full-featured web application built on AngularJS that is designed to interact with a subset of VAMF services. The following sections outline the navigation of the application and the sequence diagrams are organized according to the menu layout as seen by the user. The home screen represents both an unauthenticated landing page for the application and a means of providing summary information for authenticated Patients who use the application regularly.

The landing page includes the ability to setup and review fitness goals and also enter progress towards those goals. Goals are defined weekly from 0000 on the start date to 2359 six days later. For this reason, the storage of exercise information is technically PGD but structured in an application specific format. FitHeart will rely on a new service named *Health Factor Services* to track fitness goals and record fitness activities in support of a Patient's cardiac rehab efforts. Representing exercise activity in a yet-to-be-defined corporate format will therefore not be in scope.

## Architecture Diagram

### Components

This diagram provides a high-level view of the Deployment components that *FitHeart* is dependent upon.



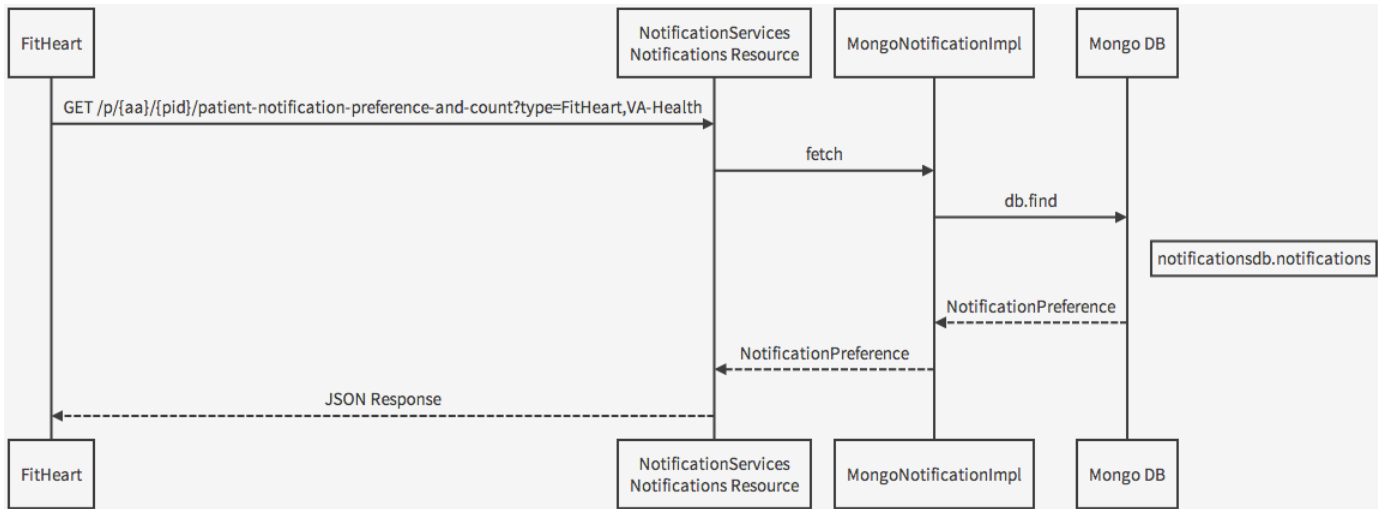
[Home](#)

[Notifications](#)

The home page contains a summary of the number of unread In-app notifications for FitHeart. If the user elects to receive VA Health notifications from providers (an option in the notification preferences), the unread count will contain the sum of unread FitHeart and VA Health (provider) notifications.

Following acronyms used in all of the sequence diagrams in this document.

- p - patient
- aa - assigning-authority
- pid - patient unique id.



### Fitness Goals

Only one valid goal will exist per time period. Specifically, the most recently recorded goal will always take the place of the previous goal.

Please refer to [Health Factor Services 1.0 SDD#FitnessGoals](#) for sequence diagrams, rest endpoints and data model for CRUD operations.

## Fitness Activity

### Weekly Summary

The Weekly Activity Goals module under Fitness Activity contains progress data (duration, steps, and distance) for the current goal week. The request for goals will retrieve the current goal period.

Please refer to [Health Factor Services 1.0 SDD#FitnessActivity](#) for sequence diagrams, rest endpoints and data model for CRUD operations.

## Health

### Menu

The menu for the health section displays the last known entry for a patient. For this functionality, the application uses the /latest endpoints

### Latest Blood Pressure

Displays the latest Blood Pressure record via *Health Tracker Services*. Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-VitalSigns](#) for sequence diagram .

### Latest Weight

Displays the latest Weight record via *Health Tracker Services*. Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-VitalSigns](#) for sequence diagrams.

### Latest Glucose

Displays the latest Glucose record via *Health Tracker Services*. Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-ChemistryLabs](#) for sequence diagrams.

### Latest Cholesterol (Lipids)

Displays the latest cholesterol record via *Health Tracker Services*. Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-ChemistryLabs](#) for sequence diagrams.

Latest Mood

Displays the latest mood record via *Health Tracker Services*. Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-Mood](#) for sequence diagrams.

For all of the items below the user can add, view, update and delete operations.

Blood Pressure and Pulse

Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-VitalSigns](#) for sequence diagrams, rest endpoints and data model for CRUD operations.

Weight

Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-VitalSigns](#) for sequence diagrams, rest endpoints and data model for CRUD operations.

Glucose

Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-ChemistryLabs](#) for sequence diagram, rest endpoints and data model for CRUD operations.

Kidney Journal

Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-PatientNotes](#) for sequence diagram, rest endpoints and data model for CRUD operations.

Cholesterol (Lipids)

Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-ChemistryLabs](#) for sequence diagram, rest endpoints and data model for CRUD operations.

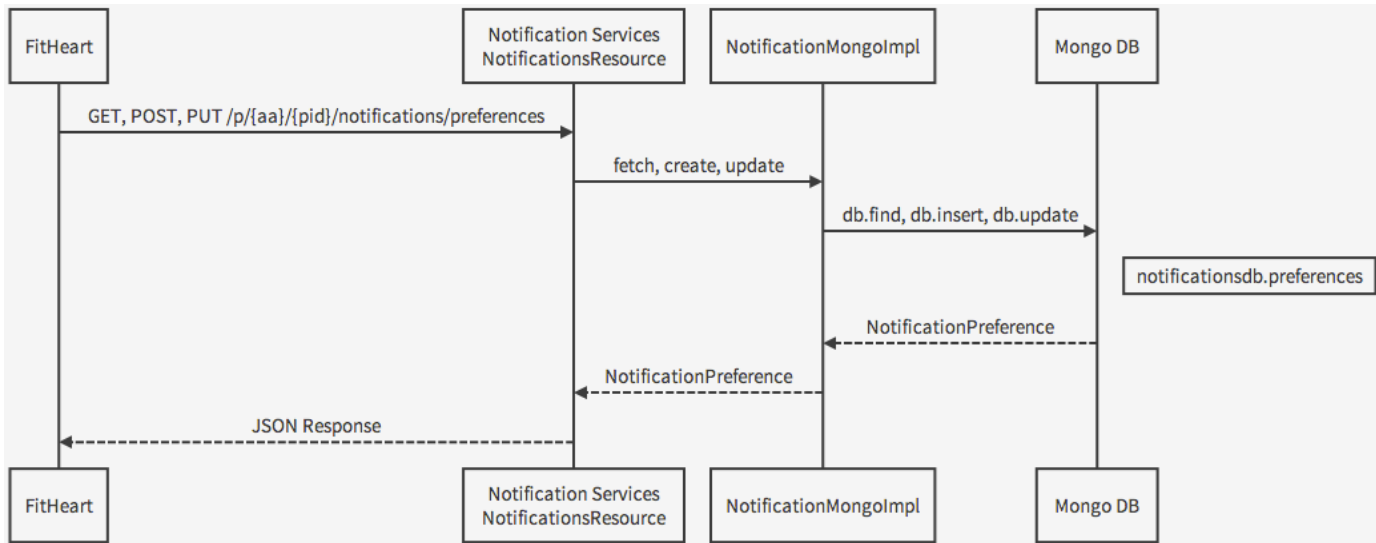
Mood

Please refer to [HTS 1.1.0 Appendix - Patient Reported History#PatientReportedHistory-Mood](#) for sequence diagram, rest endpoints and data model for CRUD operations.

Notifications

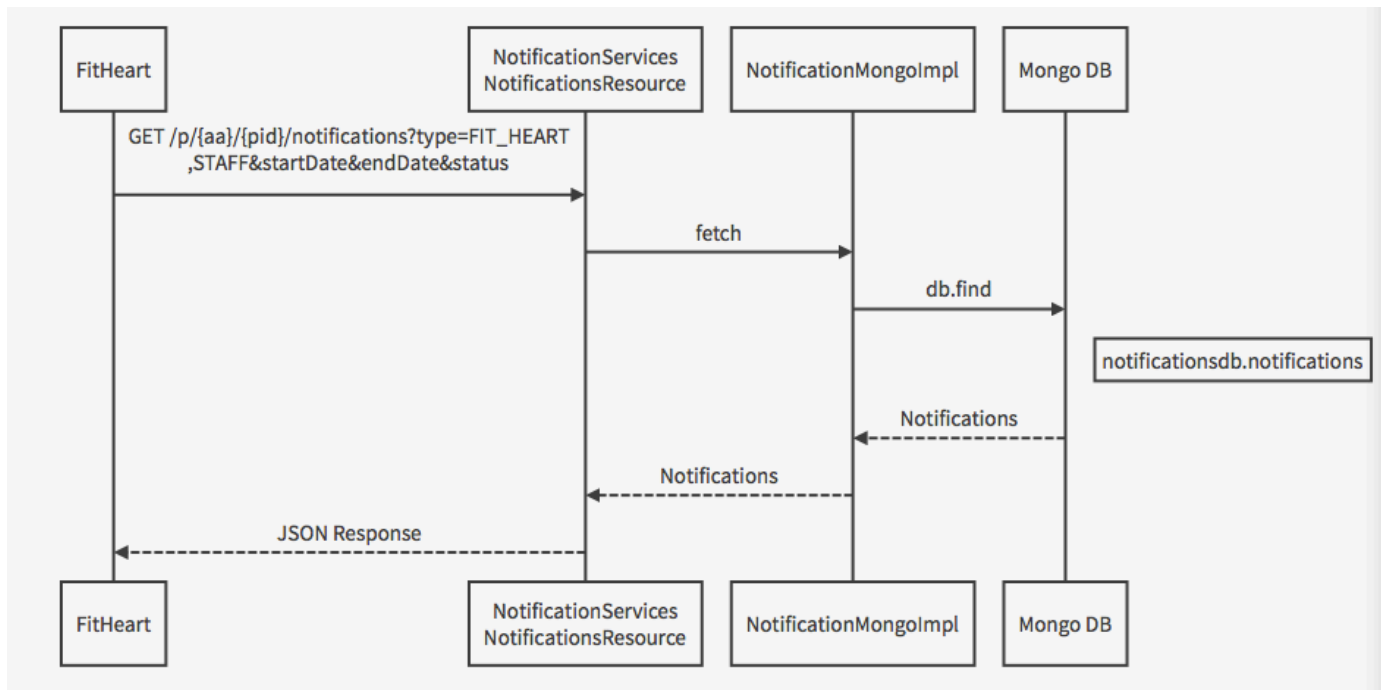
Preferences

All notification sections of an app allow a user to update their e-mail address and preferred time zone



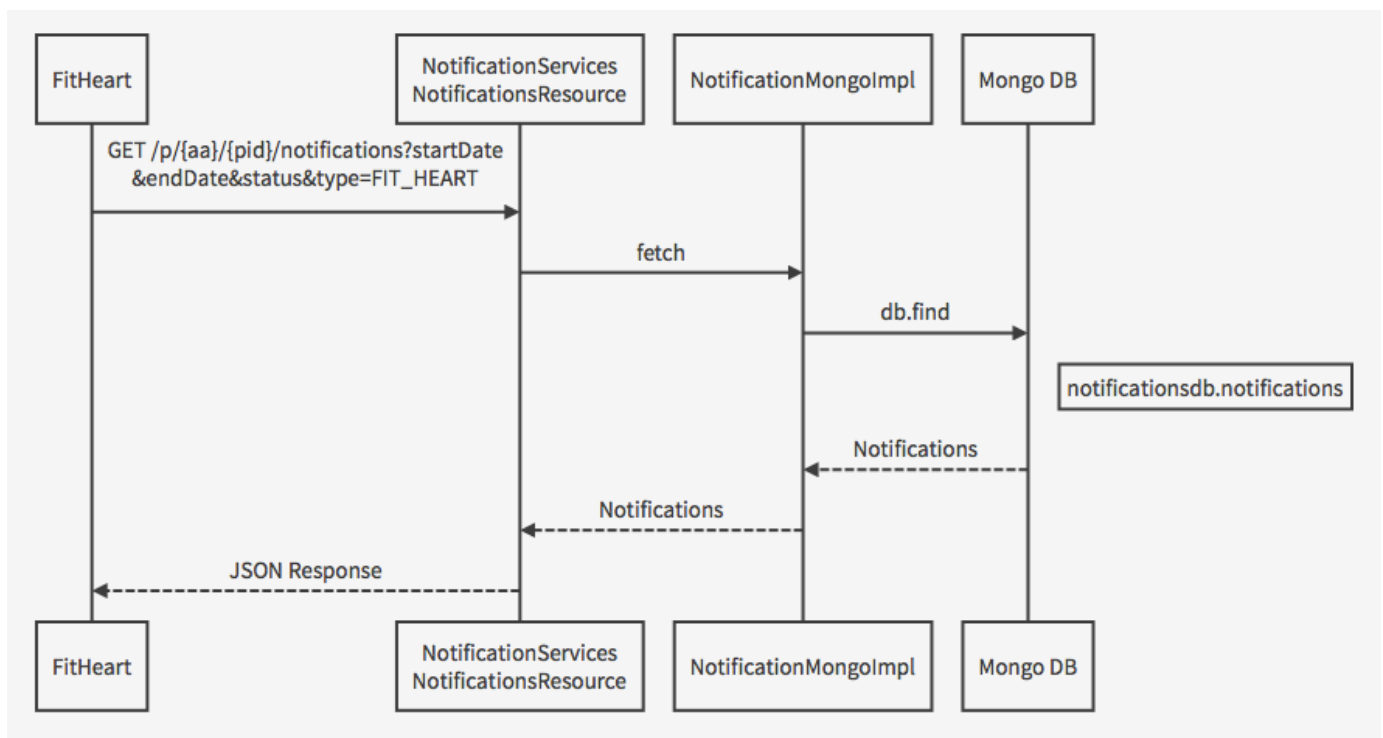
## All Notifications

All notifications is a feature that allows a user to review any and all notifications that have been generate at their request (FitHeart and Provider generated).



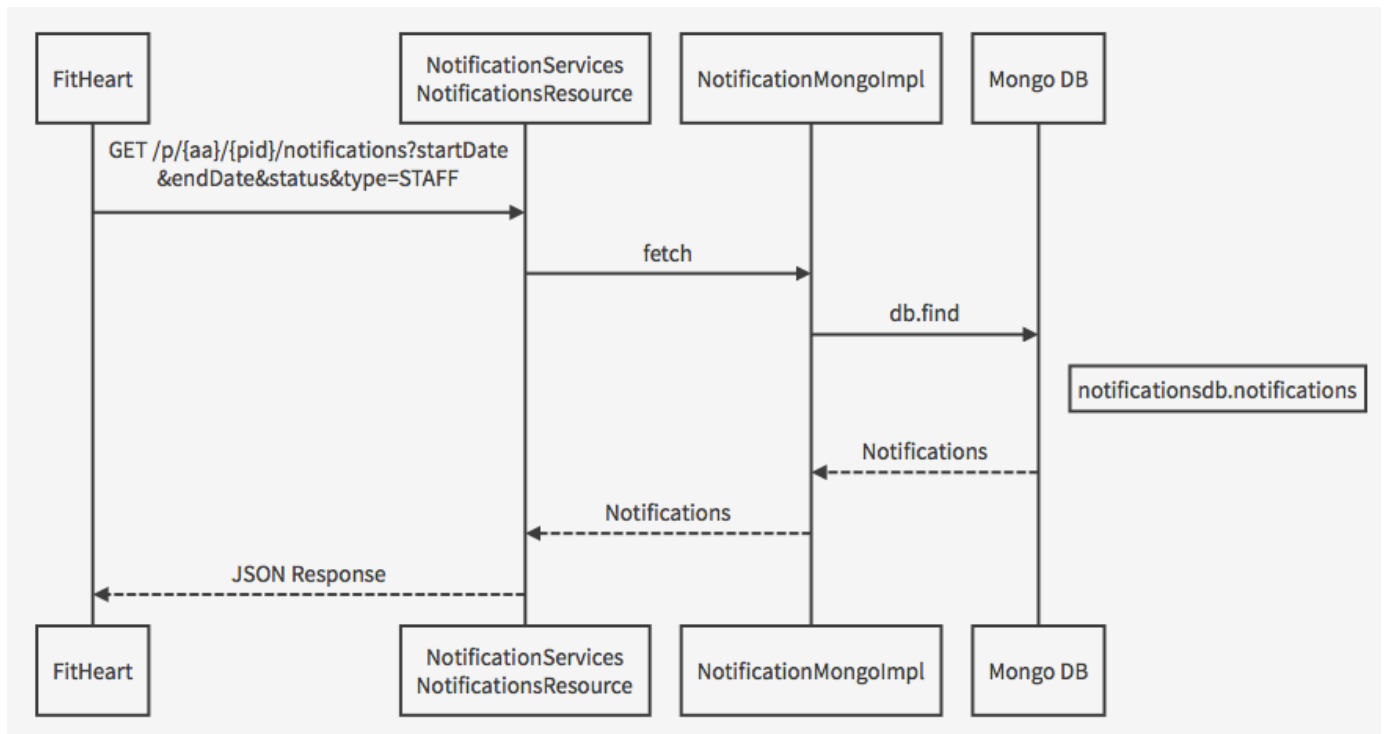
## VA FitHeart In-App Notifications

VA FitHeart In-App notifications are messages generated specifically for the VA FitHeart app. These notifications will originate from notification settings created in the health section of the app. For example, a Veteran may want to have a notification sent to them on a daily basis to remind them to measure their blood pressure and record it in the application.



## VA Health Messages (Provider)

VA Health Messages are notifications sent by a provider to the FitHeart application. A companion staff application is also available



## Learn More

The Learn More feature of the app will contain a number of focus areas containing static content. This content is packaged within the FitHeart app and has no external dependencies.

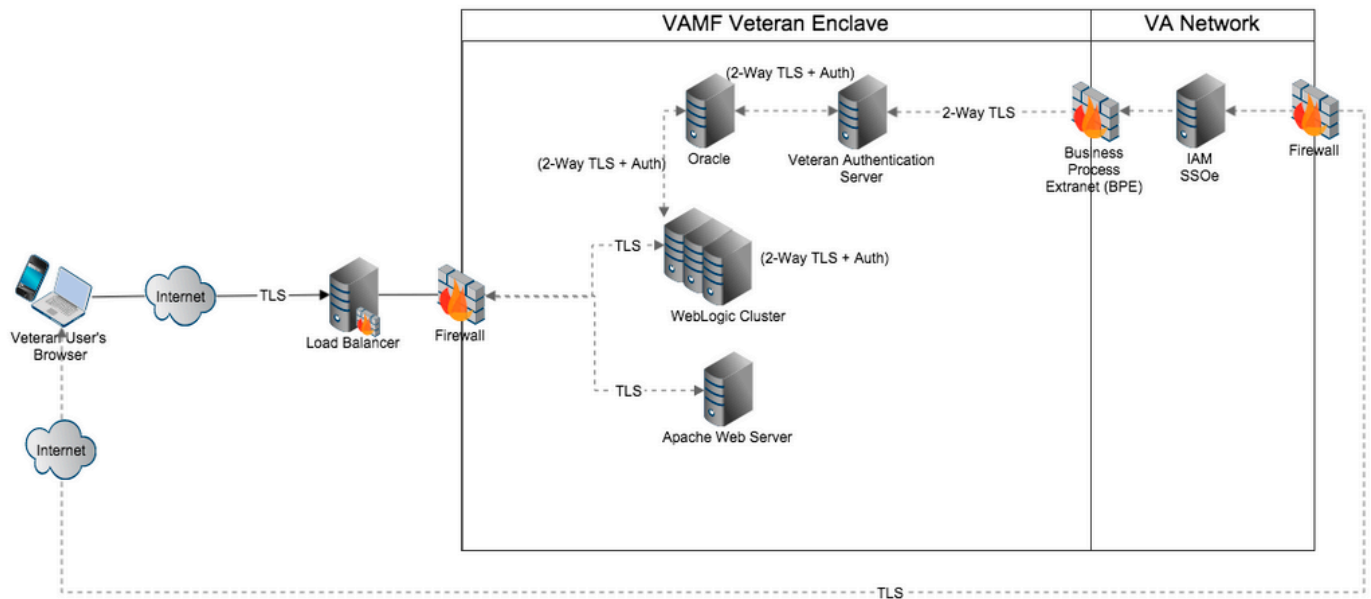
## Support

The support feature of the app will contain a number of focus areas containing static content and, in some cases, review questions. This content is packaged within the FitHeart app and has no external dependencies.

# Architecture Diagrams

## Network

This diagram provides a high-level view of the network in which *FitHeart* is designed to run within.



## Service Dependencies

*FitHeart* relies upon a number of supporting services, each of which are versioned and documented externally. These services include:

| Service                 | Version | SDD Link  |
|-------------------------|---------|---|
| Health Tracker Services | 1.1     | <a href="#">Health Tracker Services 1.1 SDD</a> |
| Notification Services   | 2.1     | <a href="#">Notification Services 2.1 SDD</a>   |
| Health Factor Services  | 1.x     | <a href="#">Health Factor Services 1.0 SDD</a>  |
| Authorization Services  | 4.x     | Program SDD                                     |
| Health Adapter          | 3.x     | Program SDD                                     |

## Device / OS Summary

| Device's OS | Native | Hybrid | Web-Only | OS version supported | Targeted devices (iPhone, iPad, Samsung model...) | Estimated Storage Required for Device |
|-------------|--------|--------|----------|----------------------|---|---------------------------------------|
| iOS         |        |        | X        | 7.0+                 | iPhone  | n/a                                   |
| Android     |        |        | X        | 4.0+                 | Tablets   | n/a                                   |
| Windows 8   |        |        | X        | Windows 8            | Desktop   | n/a                                   |

## Libraries

| Technologies, Libraries, and Tools Used in the App | Version | On the TRM? (If not, provide a link to the waiver) | Used for                  |
|--|---------|--|---------------------------|
| Bootstrap  | 3.x     | Yes  | UI Formatting and Styling |

|            |        |                              |   |
|------------|--------|------------------------------|---|
| jQuery     | 1.11.x | Yes                          | HTML traversal, HTML manipulation, event handling, animation, and Ajax                      |
| AngularJS  | 1.2.x  | Waiver Requested for V 1.2.x | Foundational HTML enhancement framework that supports ajax interactivity with VAMF Services |
| Highstock  | 2.0.x  | Yes                          | Interactive charts and graphing.  |
| Lo-dash    | 2.4.x  | Yes                          | JSON data formatting and manipulation   |
| Modernizr  | 2.6.x  | Yes                          | Browser feature detection   |
| Moment.js  | 2.8.x  | Submitted; Under Review      | Datetime Formatting & Timezone Conversion   |
| Require.js | 2.1.x  | Yes                          | Library Compression & Concatenation   |

## Data Architecture

Due to the complexity of the application, the data architecture for this application is documented and maintained in the service-specific SDDs.

- [Health Tracker Services 1.1 SDD](#)
- [Notification Services 2.1 SDD](#)
- [Health Factor Services 1.0 SDD](#)

## Expected User Base

| User Category | Total Number of Users | Concurrent Users |
|---------------|-----------------------|------------------|
| Veterans      | 20,000 - 50,000       | 10               |

## Estimated Data Profile

| Table or Collection  | Number of Rows / Entries | Estimated Size per Entry | Total Disk (with assumed user profile) |
|--|--------------------------|--------------------------|--|
| Fitness Activity<br><i>Health Factor Services</i><br>healthfactordb.fitness                    | 5-10                     | 2KB                      | 100KB - 200KB                          |
| Fitness Goal<br><i>Health Factor Services</i><br>healthfactordb.fitnessgoals                   | 1                        | 1KB                      | 10KB                                   |
| Blood Pressure / Pulse<br><i>Health Tracker Services</i><br>medicalhistorydb.vitalsignsbundles | 5-10                     | 2KB                      | 100KB - 200KB                          |

|   |         |     |               |
|---|---------|-----|---------------|
| Weight<br><i>Health Tracker Services</i><br>medicalhistorydb.vitalsigns       | 5-10    | 1KB | 50KB - 100KB  |
| Lipids<br><i>Health Tracker Services</i><br>medicalhistorydb.chemlabbundles   | 2-4     | 2KB | 40KB - 80KB   |
| Glucose<br><i>Health Tracker Services</i><br>medicalhistorydb.chemlabs        | 5-10    | 1KB | 50KB - 100KB  |
| Mood<br><i>Health Tracker Services</i><br>medicalhistorydb.mood               | 5-10    | 1KB | 50KB - 100KB  |
| Notifications<br><i>Notification Services</i><br>notificationdb.notifications | 10 - 20 | 1KB | 100KB - 200KB |
| Reminders<br><i>Notification Services</i><br>notificationdb.reminders         | 2-4     | 1KB | 20KB - 40KB   |

## VAMF Interfaces

### Existing Interfaces

| Interface Name (incl. version number) | Data Used by Mobile App | Source of Data    | Data Retrieved - provide specific data elements used by this app  |
|---------------------------------------|-------------------------|-------------------|---|
| Health Adapter 3.x                    |                         | IAM/SSOE and User | MhpUser : firstName, lastName, displayName, rightOfAccessAccepted<br><br>Patient : firstName, lastName, displayName, gender, age, dateOfBirth, patientIdentifier<br><br>Others : all data fields except patientIdentifier |
| Authorization Services 4.x            |                         |                   | ResourceLastAccess:   |

### New/Updated VAMF Interfaces

| Interface Name (incl. version #) | Data Used by Mobile App | Source of Data | Included in Program-Level SDD? |
|----------------------------------|-------------------------|----------------|--------------------------------|
|----------------------------------|-------------------------|----------------|--------------------------------|

|                               |  |          |  |
|-------------------------------|--|----------|--|
| Health Tracker Resource 1.1.0 | Vital Signs (Blood Pressure/Pulse, Weight)<br><br>Mood<br><br>Chemistry Labs (Glucose, Cholesterol/Lipids) | User/PGD | No - <a href="#">Health Tracker Services 1.1 SDD</a> |
| Health Factor Services 1.0.0  | Fitness Activity<br><br>Fitness Goals  | User/PGD | No - <a href="#">Health Factor Services SDD</a>      |

## Dependencies/SLA

FitHeart is not dependent upon new deliverables from external contractors or teams.

## Traceability

Please refer to the the RTM on the [FitHeart 1.0](#) release documents page.

## Developer & PM Contact Information

| Developer Name/Point of Contact (POC) | VA E-Mail Address   | Phone Number      |
|---------------------------------------|---------------------|-------------------|
| ██████████                            | ██████████████████  | ██████████        |
| Developer Organization/Company        | Contract Start Date | Contract End Date |
| ██████████                            | ██████████          | ██████████████    |
| Web and Mobile Solutions PM or POC    | VA E-Mail Address   | Phone Number      |
| ██████████                            | ██████████████████  | ██████████        |
| VA Product Development PM or POC      | VA E-Mail Address   | Phone Number      |
| ██████████                            | ██████████████████  | ██████████        |