**Scheduling Manager Service 2.4.x - SRVDD**

[Summary of Service](#_bookmark0)

[Data Storage and Classification](#_bookmark1) [Scheduling Manager Application](#_bookmark2)

1. [Application Design Perspective](#_bookmark3)
   1. [- Design Principles and Patterns](#_bookmark4)
   2. [- Conceptual Overview](#_bookmark5)

[1.2.1 - High-Level Component Diagram](#_bookmark6)

1. [Logical Perspective 2.1 - REST Endpoint Breakdown (Swagger definition to be added in version 3.x)](#_bookmark7)

[2.2 - Sequence Diagrams](#_bookmark8)

[The following diagrams illustrate a general workflow and the Scheduling Manager Services application's role in endpoint](#_bookmark9) [operations](#_bookmark9)

[HTTP GET Operations](#_bookmark10) [HTTP PUT Operations](#_bookmark11) [HTTP POST Operations](#_bookmark12) [HTTP DELETE Operations](#_bookmark13)

1. [Physical Perspective](#_bookmark14)

[Deployment Diagram (Platform Stabilization Environment)](#_bookmark15)

1. [Dependencies Summary](#_bookmark16)
   1. [- VA Interfaces](#_bookmark17)

[MDWS 3.2.8 - SOAP Endpoints](#_bookmark18)

* 1. [- VAMF Shared Services](#_bookmark19) [Authorization Service v4.3.x](#_bookmark20) [Patient Viewer Service v2.3.4](#_bookmark21) [User Context Service v1.0.1](#_bookmark22) [Patient Profile Service v1.0.0](#_bookmark23)

[Staff Video Connect Service v1.0.0](#_bookmark24) [Task Service v1.0.0](#_bookmark25)

* 1. [- Technology Stack Summary](#_bookmark26)

1. [Data Model](#_bookmark27)
   1. [Oracle Data Architecture](#_bookmark28)

[Entity Relationship Diagram](#_bookmark29) [APPOINTMENT\_REQUEST](#_bookmark30) [APPOINTMENT\_REQUEST\_MESSAGE](#_bookmark31) [APPT\_REQ\_INPROCESS](#_bookmark32) [AR\_DETAIL\_CODE](#_bookmark33) [BEST\_TIME\_TO\_CALL](#_bookmark34)

[DETAIL\_CODE](#_bookmark35) [FACILITY](#_bookmark36)

[NOTIFICATION\_PREFERENCE](#_bookmark37) [PATIENT](#_bookmark38) [PATIENT\_METADATA](#_bookmark39) [USER\_FEEDBACK](#_bookmark40) [USER\_HISTORY](#_bookmark41)

* 1. [MongoDB Data Architecture](#_bookmark42) [Clinical Services Collection](#_bookmark43)

1. [Non-Functional Requirements](#_bookmark44)
   1. [Security](#_bookmark45)
   2. [Capacity Requirements](#_bookmark46)
   3. [Projected Database capacity](#_bookmark47)
2. [Developer and Program Manager (PM) Contact Information](#_bookmark48)

# Summary of Service

The System Design Document (SRVDD) is a dual-use document that provides the conceptual design as well as the as-built design. This document is updated as development progresses to reflect the as-built implementation.

|  |  |
| --- | --- |
| **Software Name** | Scheduling Manager Service |
| **Product Version** | 2.4.0 |
| **Source Repository** |  |



|  |  |
| --- | --- |
| **Enclave(s)** | Veteran Provider |
| **Software Type** | Service App  Background Process Other |

## Data Storage and Classification



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 |  | Veteran appointment info, provider messages to veterans | Oracle database, MongoDB database |
| Does Mobile Application store information or data entered by the User? If yes, where is it stored? | X |  | Veteran appointment info, provider messages to veterans | Oracle database, MongoDB database |
| Does Mobile Application transmit/push data entered outside of the VAMF to VA? | X |  | Veteran appointment info | VistA |
| Does Mobile Application pull data from a VA Database (external to VAMF)? | X |  | Veteran appointment info | VistA |
| Does the Mobile Application store in the VAMF or on the device data pulled from a VA Database? |  | X |  |  |

**This application can be classified as one of the following:**

|  |  |
| --- | --- |
| **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 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 |

**Scheduling Manager Application**

The **Scheduling Manager** application provides scheduling clerks the following capabilities:

1. Process veteran appointment requests submitted via the Veteran Appointment Request (VAR) application.
2. Process Express Care requests submitted via the VAR application.
3. Book or cancel VistA appointments for veterans.
4. Schedule adhoc video visit appointments for veterans.

# Application Design Perspective

## - Design Principles and Patterns

Single Page Application - The Single Page Application design pattern will be leveraged, so web page content will not be routed through these web services

Application Specific Dependencies - External REST service dependencies are managed through application specific resource directory (resource-directory.json) packaged with the application. Each REST service endpoint is defined with a "title" and "href". For convenience, all the dependencies are identified in the VAMF Interfaces section.

REST Conventions - The application works with data using HTTP verbs. GET is used for retrieving data, POST is used for creating or processing data, PUT is used for updating data and DELETE is used for deleting data.

Exception Handling using HTTP standards - Exception handling is performed based on HTTP status codes. Bad Request (status code

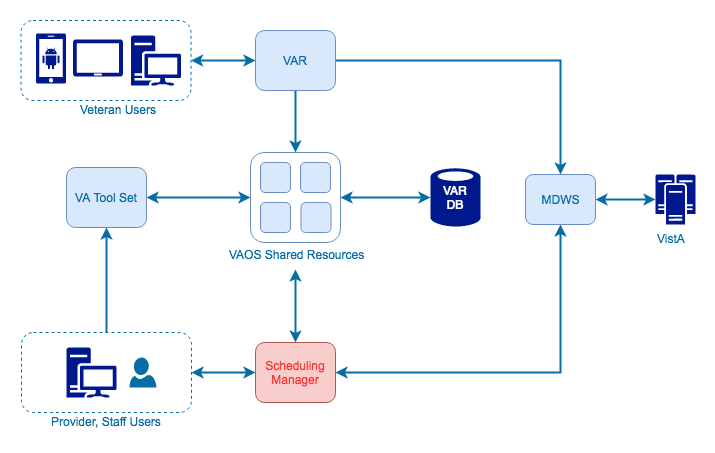
400) is handled at the Model or Resource level. Internal Server Error (status code 500) is handled globally within the application. Leveraging common VAMF Services such as Authorization Services and Metric Services.

## - Conceptual Overview

Summary:

The **Scheduling Manager Application** is the receiver of Veteran Appointment Requests in the VAOS (VA Online Scheduling) suite of applications. The primary users are **Providers/Staff** in the VA. Scheduling Manager operates against the ***Scheduling Manager Service (this application)*** that interface with the ***VAR DB*** as well as settings managed from the ***VA Tool* Set** application. Workflows in **Scheduling Manager Application** direct appointment bookings through ***VIA*** (formerly MDWS) to update data in ***VistA*** systems.

### 1.2.1 - High-Level Component Diagram



1. **Logical Perspective**

## - REST Endpoint Breakdown (Swagger definition to be added in version 3.x)

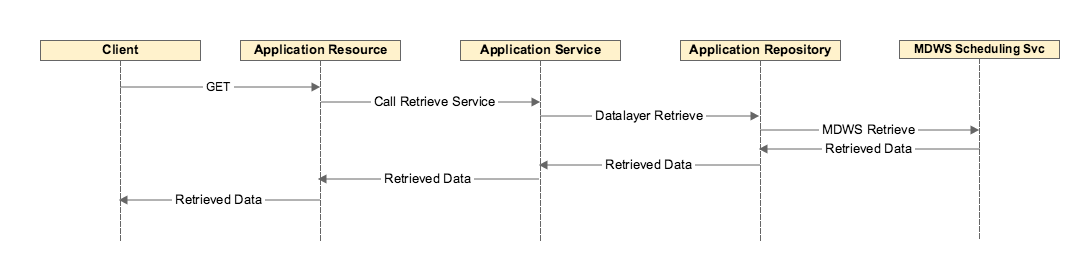
|  |  |  |
| --- | --- | --- |
| **Interface Name** | **Method** | **Endpoint (Prefix: /SchedulingManager Service/v2/rest)** |
| Get Resource Directory | GET | /location-service/site/{facility-code}/resource- directory |
| Get Specialties | GET | /location-service/site/{facility-code}  /specialties |
| Get Locations | GET | /location-service/site/{facility-code}/locations |
| Get Appointments Metdata | GET | /appointment-service/metadata |
| Get Appointment Requests | GET | /appointment-service/appointment-requests |
| Get Appointment Request Messages | GET | /appointment-service/patient/{assigning- authority}/{patient-id}/appointment-requests  /system/{system-id}/id/{appointment-request- id}/messages |
| Create Appointment Request Message | POST | /appointment-service/patient/{assigning- authority}/{patient-id}/appointment-requests  /system/{system-id}/id/{appointment-request- id}/messages |
| Mark Appointment Request Message as Read | POST | /appointment-service/patient/{assigning- authority}/{patient-id}/appointment-requests  /system/{system-id}/id/{appointment-request- id}/messages/read |
| Get Appointment Request Message | GET | /appointment-service/patient/{assigning- authority}/{patient-id}/appointments/system/  {system-id}/id/{appointment-request-id} |
| Update Appointment Request Message | PUT | /appointment-service/patient/{assigning- authority}/{patient-id}/appointments/system/  {system-id}/id/{appointment-request-id} |
| Set Appointment Request In Process | POST | /appointment-service/patient/{assigning- authority}/{patient-id}/appointments/system/  {system-id}/id/{appointment-request-id}  /inprocess |
| Unset Appointment Request In Process | DELETE | /appointment-service/patient/{assigning- authority}/{patient-id}/appointments/system/  {system-id}/id/{appointment-request-id}  /inprocess |
| Set an Appointment Request "Read" flag | PUT | /appointment-service/patient/{assigning- authority}/{patient-id}/appointment-requests  /system/{system-id}/id/{appointment-request- id}/appointment/provider-read |
| Get Patient DFN | GET | /appointment-service/patient/{assigning- authority}/{patient-id} |
| Get Patient Preference | GET | /patient/{assigning-authority}/{patient-id}  /preference |
| Update Patient Preference | PUT | /patient/{assigning-authority}/{patient-id}  /preference |
| Get Resource Diretory | GET | /scheduling-service/site/{site-code}/resource- directory |
| Get Appointment Slots | GET | /scheduling-service/site/{site-code}/available- appointment-slots/clinic/{clinic-id} |

|  |  |  |
| --- | --- | --- |
| Get Booked Appointments | GET | /scheduling-service/site/{site-code}/patient/  {assigning-authority}/{patient-id}/booked- appointments |
| Create a Booked Appointment | POST | /scheduling-service/site/{site-code}/patient/  {assigning-authority}/{patient-id}/book- appointment |
| Create a Community Care Appointment | POST | /scheduling-service/site/{site-code}/patient/  {assigning-authority}/{patient-id}/schedule- new-cc-request |
| Get Appointment Types | GET | /scheduling-service/site/{site-code}/purpose- list |
| Get Cancelation Reasons | GET | /scheduling-service/site/{site-code}/cancel- reasons-list |
| Cancel Appointment | PUT | /scheduling-service/site/{site-code}/patient/  {assigning-authority}/{patient-id}/cancel- appointment |
| Get Clinical Services | GET | /clinical-service |
| Get Disabled Features | GET | /disabled-features |

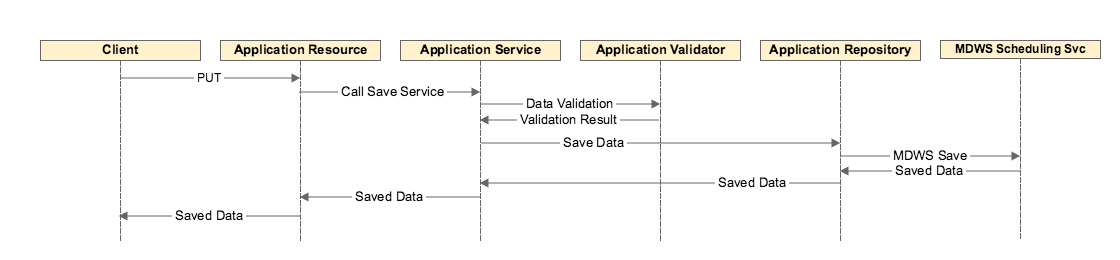
* 1. **- Sequence Diagrams**

The following diagrams illustrate a general workflow and the **Scheduling Manager Services** application's role in endpoint operations

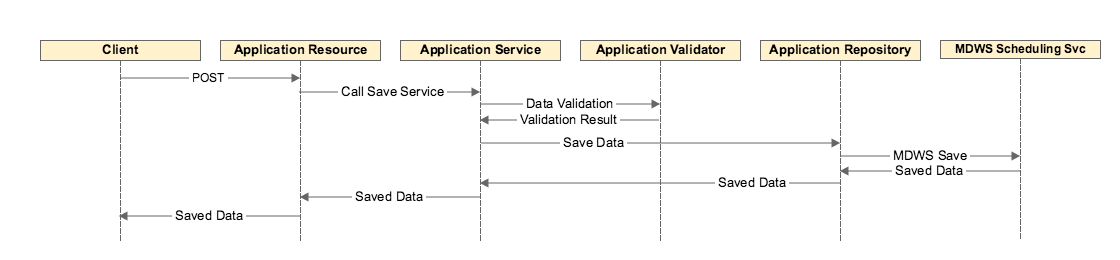
**HTTP GET Operations**



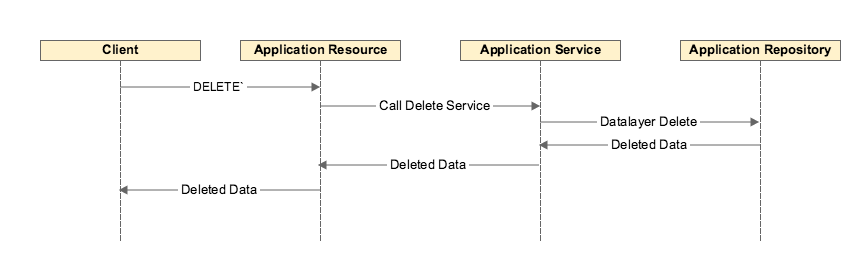
**HTTP PUT Operations**



**HTTP POST Operations**



**HTTP DELETE Operations**

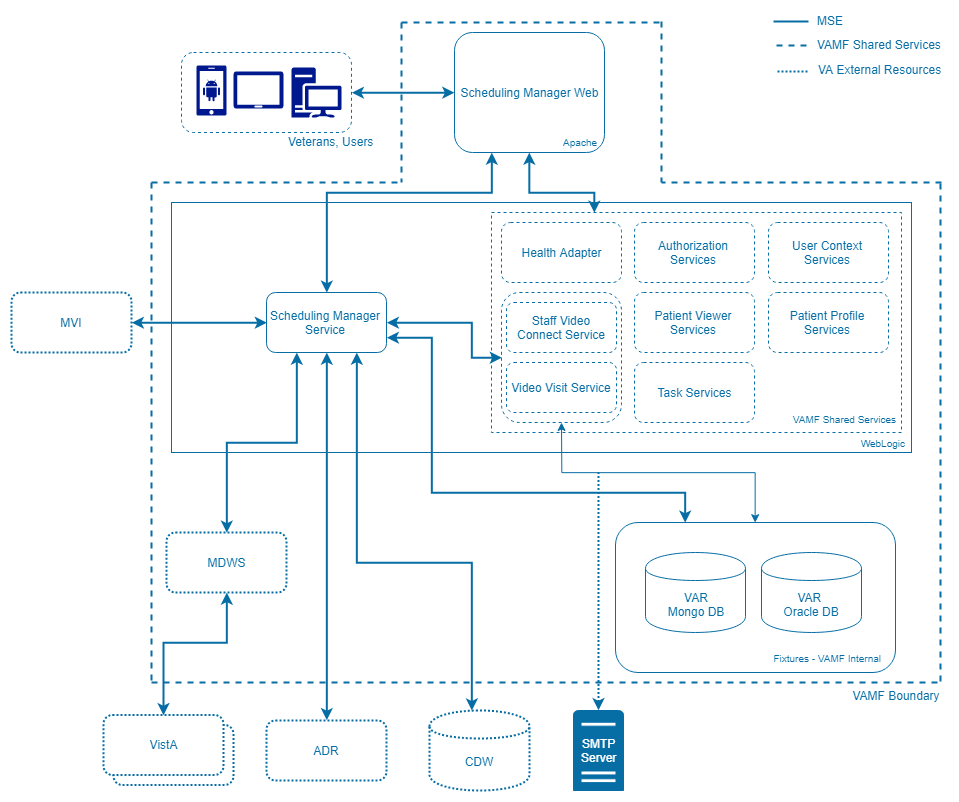


1. **Physical Perspective**

Deployment of the entirety of the **Scheduling Manager** application is depicted in the diagram below. The diagram highlights several key high- level interactions between the various components supporting the software. The **Scheduling Manager Web (UI)** application is deployed to Apache. The **Scheduling Manager Service** application is deployed to the WebLogic cluster alongside its dependent shared services. **Scheduli ng Manager 2.x** is intended for deployment in Platform Stabilization. **Scheduling Manager Service** leverages ***MDWS*** to make requests to ***VistA*** for EHR data including demographics and appointments. **Scheduling Manager Service** makes direct requests to ***CDW***, ***ADR***, and ***MVI*** for patient information and correlation data, and accesses the ***VAR Mongo DB*** and ***VAR Oracle DB*** for appointment information. Both **Scheduling Manager Service** and **Video Visit Service** connect to an external ***SMTP Server*** server to complete workflows relevant to this

application. Please refer to the ***Video Visit Service*** SRVDD for additional information and component dependencies not listed in this diagram. Please also refer to the other ***VAMF Shared Services*** SRVDDs for additional information and component dependencies related to those services independently, but not listed in this diagram.

**Deployment Diagram (Platform Stabilization Environment)**



1. **Dependencies Summary**

The **Scheduling Manager Service** application has dependencies on the following existing VA interfaces:

## - VA Interfaces

### MDWS 3.2.8 - SOAP Endpoints

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **HTTP Method** | **SchedulingSvc.asmx** |
| Make Appointment | POST | /SchedulingSvc/makeAppointment |
| Cancel Appointment | POST | /SchedulingSvc/cancelAppointment |
| Get Booked Appointments | POST | /SchedulingSvc/getAppointmentsBookingNotes |
| Get Available Slots | POST | /SchedulingSvc/getClinicSchedulingDetailsByDateRange |
| Get Cancel Reason List | POST | /SchedulingSvc/getCancellationReasons |

|  |  |  |
| --- | --- | --- |
| Get Appointment Types | POST | /SchedulingSvc/getAppointmentTypes |
| Get Clinics with Specialties | POST | /SchedulingSvc/getClinicsWithSpecialties |
| Get Patients by Clinic | POST | /SchedulingSvc/getPatientsByClinic |
| Select Patient | POST | /SchedulingSvc/select |

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **HTTP Method** | **EmrSvc.asmx** |
| Login | POST | /EmrSvc/login |
| Get User Security Keys | POST | /EmrSvc/getUserSecurityKeys |
| Get Specialties | POST | /EmrSvc/getSpecialties |

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **HTTP Method** | **QuerySvc.asmx** |
| Get Clinics with Specialties | POST | /QuerySvc/ddrLister |

* 1. **- VAMF Shared Services**

**Authorization Service v4.3.x**

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **Method** | **REST Endpoint** |
| OAuth Token | GET | /AuthorizationServices/oauth  /token |
| Resource Last Accessed Time | GET | /AuthorizationServices/rest  /resourceLastAccessedTime |
| Login | GET | /AuthorizationServices/login |
| Provider Authorize | GET | /AuthorizationServices/provider  /authorize |
| Security Check | POST | /AuthorizationServices/provider  /security\_check |

**Patient Viewer Service v2.3.4**

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **Method** | **REST Endpoint** |
| Resource Directory | GET | /PatientViewerServices/rest  /public/resource-directory |
| User Session | GET | /PatientViewerServices/rest  /public/user-session |
| MHP User | GET | /PatientViewerServices/rest  /mhpuser |
| Patient | GET | /PatientViewerServices/rest  /patient/{assigning-authority}/  {unique-id} |
| Patient Identifiers | GET | /PatientViewerServices/rest  /patient/{assigning-authority}/  {unique-id}/identifiers |

**User Context Service v1.0.1**

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **Method** | **REST Endpoint** |
| User Context | GET | /UserContext/rest/context/user/system/{site-code}}/id/{user-id} |

**Patient Profile Service v1.0.0**

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **Method** | **REST Endpoint** |
| Contacts | GET | /PatientProfileServices/rest/v1  /patient/{assigning-authority}/  {unique-id}/contacts |
| Demographics | GET | /PatientProfileServices/rest/v1  /patient/{assigning-authority}/  {unique-id}/demographics |

**Staff Video Connect Service v1.0.0**

|  |  |  |
| --- | --- | --- |
| **Interface Name** | **Method** | **REST Endpoint** |
| Appointments | GET | /staff-videoconnect-resources/v1  /provider/{facility-code}/{staff- id}/patient/{assigning-authority}  /{patient-id}/appointments |
| Book Appointment | POST | /staff-videoconnect-resources/v1  /provider/{facility-code}/{staff- id}/patient/{assigning-authority}  /{patient-id}/appointment |

**Task Service v1.0.0**

The **Scheduling Manager Services** application has an indirect dependency on Task Service as Patient Viewer Service depends on it.

## - Technology Stack Summary

|  |  |  |
| --- | --- | --- |
| **Technologies, Libraries, and Tools Used in the App** | **Version** | **On the TRM? (If not, provide a link to the waiver)** |
| JRE | 7 | Yes |
| Spring Framework | 4.2.5 | Yes |
| Jersey | 2.22.2 | Yes |
| MongoDB | 3.0.x | Yes |
| Oracle | 11g | Yes |

1. **Data Model**

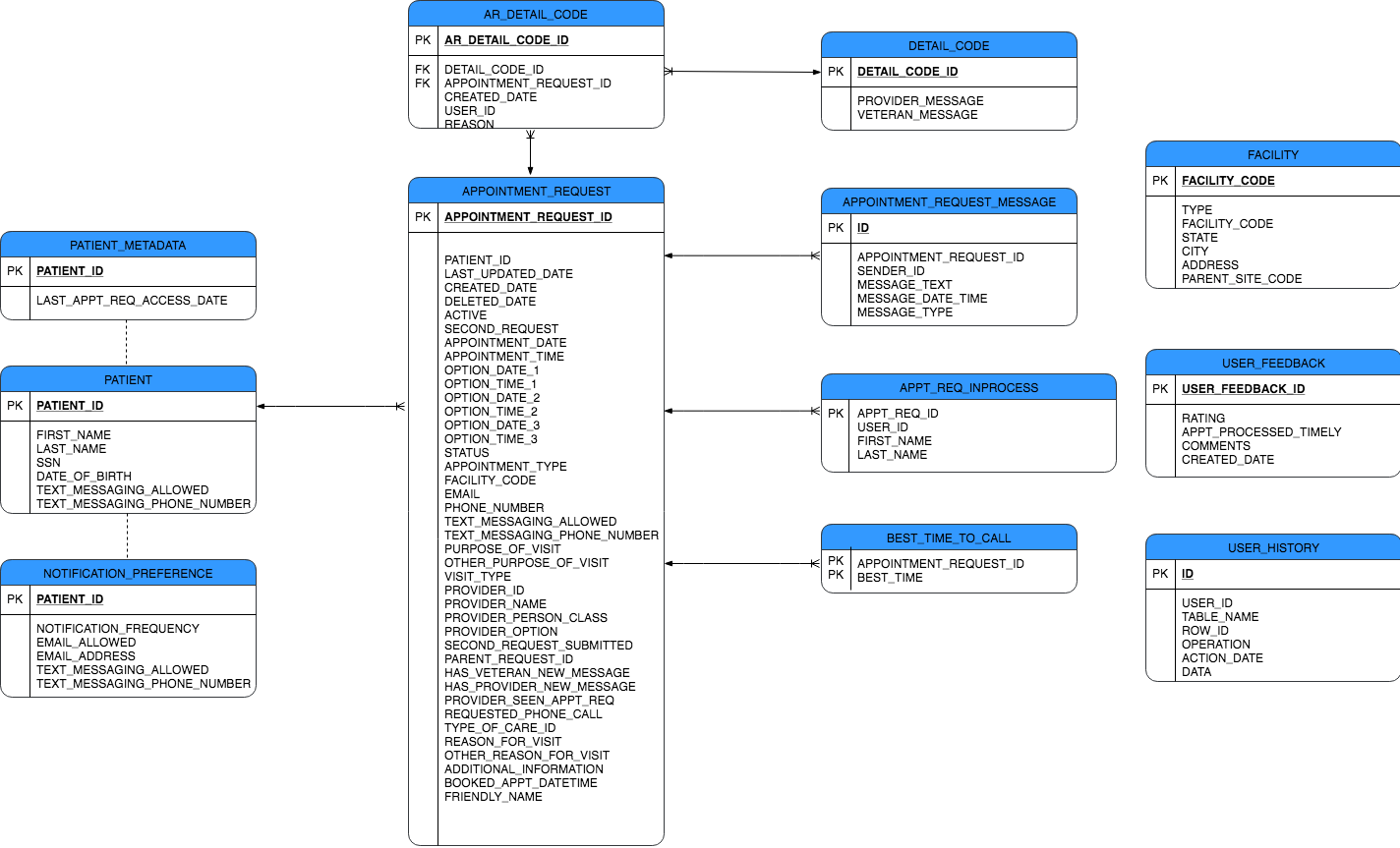
Data models for Oracle and MongoDB are described below.

## Oracle Data Architecture

Scheduling Manager Service operates on the Oracle database schema VARDB which is connected to the Veteran Appointment Request (VAR) application. The Entity Relationship Diagram is shown below. Details of each Oracle table in the database are provided in the following tables.

***TODO****: add information for LOCATION*

### Entity Relationship Diagram



**APPOINTMENT\_REQUEST**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| APPOINTMENT\_REQUEST\_ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| PATIENT\_ID | VARCHAR2(255 BYTE) | No |  | 2 |  |  |
| LAST\_UPDATED\_DATE | TIMESTAMP(6) | No |  | 3 |  |  |
| CREATED\_DATE | TIMESTAMP(6) | No |  | 4 |  |  |
| DELETED\_DATE | TIMESTAMP(6) | Yes |  | 5 |  |  |
| ACTIVE | NUMBER(1,0) | No |  | 6 |  |  |
| SECOND\_REQUEST | NUMBER(1,0) | No |  | 7 |  |  |
| APPOINTMENT\_DATE | VARCHAR2(50 BYTE) | Yes |  | 8 |  |  |
| APPOINTMENT\_TIME | VARCHAR2(50 BYTE) | Yes |  | 9 |  |  |
| OPTION\_DATE\_1 | VARCHAR2(50 BYTE) | No |  | 10 |  |  |
| OPTION\_TIME\_1 | VARCHAR2(50 BYTE) | No |  | 11 |  |  |
| OPTION\_DATE\_2 | VARCHAR2(50 BYTE) | No |  | 12 |  |  |
| OPTION\_TIME\_2 | VARCHAR2(50 BYTE) | No |  | 13 |  |  |
| OPTION\_DATE\_3 | VARCHAR2(50 BYTE) | No |  | 14 |  |  |
| OPTION\_TIME\_3 | VARCHAR2(50 BYTE) | No |  | 15 |  |  |
| STATUS | VARCHAR2(255 BYTE) | No |  | 16 |  |  |
| APPOINTMENT\_TYPE | VARCHAR2(255 BYTE) | No |  | 17 |  |  |
| FACILITY\_CODE | VARCHAR2(100 BYTE) | No |  | 18 |  |  |
| EMAIL | VARCHAR2(255 BYTE) | Yes |  | 19 |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PHONE\_NUMBER | VARCHAR2(255 BYTE) | No |  | 20 |  |  |
| TEXT\_MESSAGING\_ALLOWED | NUMBER(1,0) | No |  | 21 |  |  |
| TEXT\_MESSAGING\_PHONE\_NUMBER | VARCHAR2(255 BYTE) | Yes |  | 22 |  |  |
| PURPOSE\_OF\_VISIT | VARCHAR2(255 BYTE) | Yes |  | 23 |  |  |
| OTHER\_PURPOSE\_OF\_VISIT | VARCHAR2(100 BYTE) | Yes |  | 24 |  |  |
| VISIT\_TYPE | VARCHAR2(40 BYTE) | Yes |  | 25 |  |  |
| PROVIDER\_ID | VARCHAR2(255 BYTE) | Yes |  | 26 |  |  |
| PROVIDER\_NAME | VARCHAR2(255 BYTE) | Yes |  | 27 |  |  |
| PROVIDER\_PERSON\_CLASS | VARCHAR2(255 BYTE) | Yes |  | 28 |  |  |
| PROVIDER\_OPTION | VARCHAR2(100 BYTE) | Yes |  | 29 |  |  |
| SECOND\_REQUEST\_SUBMITTED | NUMBER(1,0) | No |  | 30 |  |  |
| PARENT\_REQUEST\_ID | VARCHAR2(32 BYTE) | Yes |  | 31 |  |  |
| HAS\_VETERAN\_NEW\_MESSAGE | NUMBER(1,0) | Yes | 0 | 32 |  |  |
| HAS\_PROVIDER\_NEW\_MESSAGE | NUMBER(1,0) | Yes | 0 | 33 |  |  |
| PROVIDER\_SEEN\_APPT\_REQ | NUMBER(1,0) | Yes | 0 | 34 |  |  |
| REQUESTED\_PHONE\_CALL | NUMBER(1,0) | Yes | 0 | 35 |  |  |
| TYPE\_OF\_CARE\_ID | VARCHAR2(50) | Yes |  | 36 |  |  |
| BOOKED\_APPT\_DATETIME | TIMESTAMP(6) | Yes |  | 37 |  |  |
| REASON\_FOR\_VISIT | VARCHAR2(50) | Yes |  | 38 |  |  |
| OTHER\_REASON\_FOR\_VISIT | VARCHAR2(255) | Yes |  | 39 |  |  |
| ADDITIONAL\_INFORMATION | VARCHAR2(255) | Yes |  | 40 |  |  |
| FRIENDLY\_NAME | VARCHAR2(255) | Yes |  | 41 |  |  |

**APPOINTMENT\_REQUEST\_MESSAGE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| APPOINTMENT\_REQUEST\_ID | VARCHAR2(32 BYTE) | No |  | 2 |  |  |
| SENDER\_ID | VARCHAR2(255 BYTE) | No |  | 3 |  |  |
| MESSAGE\_TEXT | VARCHAR2(255 BYTE) | No |  | 4 |  |  |
| MESSAGE\_DATE\_TIME | TIMESTAMP(6) | No |  | 5 |  |  |

**APPT\_REQ\_INPROCESS**

Used for locking an appointment while someone is working on a particular request

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| APPT\_REQ\_ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| USER\_ID | VARCHAR2(255 BYTE) | No |  | 2 |  |  |
| FIRST\_NAME | VARCHAR2(255 BYTE) | No |  | 3 |  |  |
| LAST\_NAME | VARCHAR2(255 BYTE) | No |  | 4 |  |  |

### AR\_DETAIL\_CODE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| AR\_DETAIL\_CODE\_ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| DETAIL\_CODE\_ID | VARCHAR2(32 BYTE) | No |  | 2 |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| APPOINTMENT\_REQUEST\_ID | VARCHAR2(32 BYTE) | No |  | 3 |  |  |
| CREATED\_DATE | TIMESTAMP(6) | No |  | 4 |  |  |
| USER\_ID | VARCHAR2(255 BYTE) | No |  | 5 |  |  |
| REASON | NVARCHAR2(100) | Yes |  | 6 |  |  |

**BEST\_TIME\_TO\_CALL**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| APPOINTMENT\_REQUEST\_ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| BEST\_TIME | VARCHAR2(40 BYTE) | No |  | 2 |  |  |

**DETAIL\_CODE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| DETAIL\_CODE\_ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| PROVIDER\_MESSAGE | VARCHAR2(2000 BYTE) | No |  | 2 |  |  |
| VETERAN\_MESSAGE | VARCHAR2(2000 BYTE) | No |  | 3 |  |  |

**FACILITY**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| NAME | VARCHAR2(100 BYTE) | No |  | 1 |  |  |
| TYPE | VARCHAR2(100 BYTE) | Yes |  | 2 |  |  |
| FACILITY\_CODE | VARCHAR2(100 BYTE) | No |  | 3 | Y |  |
| STATE | VARCHAR2(50 BYTE) | Yes |  | 4 |  |  |
| CITY | VARCHAR2(50 BYTE) | Yes |  | 5 |  |  |
| ADDRESS | VARCHAR2(100 BYTE) | Yes |  | 6 |  |  |
| PARENT\_SITE\_CODE | VARCHAR2(100 BYTE) | No |  | 7 |  |  |

**NOTIFICATION\_PREFERENCE**

Preferences for a Veteran to be notified

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| PATIENT\_ID | VARCHAR2(255 BYTE) | No |  | 1 | Y |  |
| NOTIFICATION\_FREQUENCY | VARCHAR2(255 BYTE) | Yes |  | 2 |  |  |
| EMAIL\_ALLOWED | NUMBER(1,0) | No |  | 3 |  |  |
| EMAIL\_ADDRESS | VARCHAR2(255 BYTE) | Yes |  | 4 |  |  |
| TEXT\_MESSAGING\_ALLOWED | NUMBER(1,0) | No |  | 5 |  |  |
| TEXT\_MESSAGING\_PHONE\_NUMBER | VARCHAR2(255 BYTE) | Yes |  | 6 |  |  |

### PATIENT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| PATIENT\_ID | VARCHAR2(255 BYTE) | No |  | 1 | Y |  |
| FIRST\_NAME | VARCHAR2(100 BYTE) | No |  | 2 |  |  |
| LAST\_NAME | VARCHAR2(100 BYTE) | No |  | 3 |  |  |
| SSN | VARCHAR2(20 BYTE) | No |  | 4 |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| DATE\_OF\_BIRTH | TIMESTAMP(6) | No |  | 5 |  |  |
| TEXT\_MESSAGING\_ALLOWED | NUMBER(1,0) | No |  | 6 |  |  |
| TEXT\_MESSAGING\_PHONE\_NUMBER | VARCHAR2(255 BYTE) | Yes |  | 7 |  |  |

**PATIENT\_METADATA**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| PATIENT\_ID | VARCHAR2(255 BYTE) | No |  | 1 | Y |  |
| LAST\_APPT\_REQ\_ACCESS\_DATE | TIMESTAMP(6) | Yes |  | 2 |  |  |

**USER\_FEEDBACK**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | PK? | **COMMENTS** |
| USER\_FEEDBACK\_ID | VARCHAR2(32 BYTE) | No |  | 1 | Y |  |
| RATING | NUMBER(3,0) | No |  | 2 |  |  |
| APPT\_PROCESSED\_TIMELY | VARCHAR2(32 BYTE) | No |  | 3 |  |  |
| COMMENTS | CLOB | Yes |  | 4 |  |  |
| CREATED\_DATE | TIMESTAMP(6) | No |  | 5 |  |  |

**USER\_HISTORY**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **DATA\_TYPE** | **NULLABLE** | **DATA\_DEFAULT** | **COLUMN\_ID** | **PK?** | **COMMENTS** |
| ID | RAW | No |  | 1 | Y |  |
| USER\_ID | VARCHAR2(255 BYTE) | Yes |  | 2 |  |  |
| TABLE\_NAME | VARCHAR2(255 BYTE) | Yes |  | 3 |  |  |
| ROW\_ID | RAW | Yes |  | 4 |  |  |
| OPERATION | VARCHAR2(255 BYTE) | Yes |  | 5 |  |  |
| ACTION\_DATE | TIMESTAMP(6) | Yes |  | 6 |  |  |
| DATA | CLOB | Yes |  | 7 |  |  |

* 1. **MongoDB Data Architecture**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ref #** | **NoSQL Collection** | **Description of Data** | **Source of Data** | **Structure** |
| 1 | **var-utility**.clinical-services | List of all clinical services supported by VAR and Scheduling Manager. | VA clinical service offerings | [**clinical-services.**](https://wiki.mobilehealth.va.gov/download/attachments/60524218/clinical-services.json?version=2&amp;modificationDate=1496082531000&amp;api=v2)[**json**](https://wiki.mobilehealth.va.gov/download/attachments/60524218/clinical-services.json?version=2&amp;modificationDate=1496082531000&amp;api=v2) |

**Clinical Services Collection**

Clinical services are stored in the **clinical-services** collection in MongoDB. Currently this collection is populated and maintained by importing a json document into MongoDB. No UI component is implemented. The **clinical-services** collection data structure is illustrated below. The **clinical**

**-services** collection stores the lexicon definition of clinic services. No growth is anticipated.

**Clinical Services Collection Structure**

{

\_id: Clinical Service ID Primary Key (String) name: Clinical Service Name (String) stopCodes: [

{

primary: Primary Stop Code (String) secondary: Secondary Stop Code (String)

},

...

...

]

submittedRequestLimit: Max number of Requests in Submitted status (Integer)

}

1. **Non-Functional Requirements**
   1. **Security**

Patient specific REST endpoints are secured and enforced using Spring Security. Access to REST services is granted to calls that contain the correct OAuth2.0 Access Token in the Authorization Header. User roles are checked against the configured roles using Access Decision Managers.

## Capacity Requirements

Expected concurrent and maximum size of the user base

|  |  |
| --- | --- |
| User Category | Concurrent Requests |
| Veterans/Patients | 1000 |

## Projected Database capacity

These numbers are possible when fully Nationally Released after a growing user base period, possibly 6 months after NR.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table or Collection** | **Number of Rows / Entries (per month)** | **Estimated Size per Entry** | **Total Disk (minus overhead for indexes, etc)**  **(per month)** |
| APPOINTMENT\_REQUEST | 180,000 | est 3.1MB per entry | .56GB |
| APPOINTMENT\_REQUEST\_MESS AGE | 360,000 | 580B | .02GB |
| APPT\_REQ\_INPROCESS | 360,000 | 574B | .02GB |
| AR\_DETAIL\_CODE |  | 357B |  |
| BEST\_TIME\_TO\_CALL | 180,000 | 72B | .01GB |
| DETAIL\_CODE | 360,000 | 4KB | 1.4GB |
| FACILITY | 150 (not monthly) | 700B | <1GB total |

|  |  |  |  |
| --- | --- | --- | --- |
| NOTIFICATION\_PREFERENCE | 50,000 | 1022B | .10GB |
| PATIENT | 50,000 (just new people) | 737B | .07GB |
| PATIENT\_METADATA | 180,000 | 261B | .04GB |
| USER\_FEEDBACK | 1000 | est 1KB per entry | <1GB |
| USER\_HISTORY | 200,000 | est 1KB per entry | .19GB |

# Developer and Program Manager (PM) Contact Information

|  |  |  |
| --- | --- | --- |
| **Developer Name/Point of Contact (POC)** | **VA E-Mail Address** | **Phone Number** |
| Doug Kurucz | [PII](mailto:douglas.kurucz@va.gov) | [PII](https://www.google.com/search?q=ablevets%2Bllc&amp;rlz=1C5CHFA_enUS692US692&amp;oq=ablevets%2Bllc&amp;aqs=chrome.0.0j69i61j69i60j0l2j69i61.1734j0j7&amp;sourceid=chrome&amp;ie=UTF-8) |
| **Developer Organization/Company** | **Contract Start Date** | **Contract End Date** |
| AbleVets, LLC |  |  |
| **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** |
|  |  |  |