**Mental Health Checkup Service Design Document (SRVDD) Addendum v1.x**

**Mental Health Checkup Addendum v1.x**

**Service Design Document (SRVDD)**

[Mobile Service Information](#_bookmark0)

[General Information](#_bookmark1) [Persistence Information](#_bookmark2)

[Conceptual Design Perspective](#_bookmark3) [System Context](#_bookmark4)

[Application Architecture](#_bookmark5)

[Middle Tier and Data Tier Processing](#_bookmark6)

[Initial Data Load for Assessment Configuration](#_bookmark7) [Interface Design](#_bookmark8)

[Swagger definition for MH Checkup Service:](#_bookmark9) [VAMF Interfaces Used](#_bookmark10)

[Provider Process: Overview](#_bookmark11)

[Provider Process: Create Assessment Assignments](#_bookmark12) [Provider Process: View Assigned Assessments](#_bookmark13) [Provider Process: View Completed Assessments](#_bookmark14)

[Veteran Process: Overview](#_bookmark15)

[Veteran Process: Take Assessment](#_bookmark16) [Veteran Process: Completed Assessments](#_bookmark17)

[Provider Sequence Diagrams](#_bookmark18) [Provider Assign Assessment](#_bookmark19)

[View Assigned Assessments](#_bookmark20)

[View Completed Assessments](#_bookmark21) [Patient Sequence Diagrams](#_bookmark22)

[Take Assessment](#_bookmark23)

[View Completed Assessments](#_bookmark24) [Physical Design Perspective](#_bookmark25)

[Network Design](#_bookmark26) [Deployment Diagrams](#_bookmark27)

[Data Architecture](#_bookmark28)

[Data Dictionary](#_bookmark29) [Capacity Planning](#_bookmark30)

[Expected concurrent and maximum size of the user base](#_bookmark31) [Project Dependencies](#_bookmark32)

The Service Design Document (SRVDD) provides three chief design perspectives: Conceptual, Logical, and Physical for processes and data. This document will be updated during the implementation life cycle.

# Mobile Service Information

This document provides detailed information for mhpro-resources (veteran and staff), the service components of the Mental Health Checkup mobile apps.

### General Information

Project Name: Mental Health Checkup (MH Checkup) Service Version: Version 1.x

Service Description: The Mental Health Checkup Web Services provides REST services to veteran and provider facing web clients to assign

/submit/view assessments. The Mental Health Checkup services are developed using Spring MVC framework that uses a Java Servlet implementation to expose the REST Services. The Mental Health Checkup Services applies the Data Access Object (DAO) Design Pattern to interface with a back-end MH Checkup Mongo database for the storage of patient / provider events, assignments, assessments, feedback, etc. Assessments taken by the veteran are sent to VistA to be scored and stored via VistaLink. The scores and answers are also stored in the Mental Health Checkup MongoDB database. This SRVDD provides information about the Mongo Database configuration process and the backend service that provides assessment information to the veteran and provider-facing MH Checkup applications.

### Persistence Information

Check the proper boxes to answer the questions.



|  |  |
| --- | --- |
| **Question** | **Response** |
| Persists data in VAMF? | Yes No  **Database Type**  Mongo Oracle Other  **Type of Data in VAMF**  Application-Specific PGD  Other Shared Data |
| Reads/Writes data from VA Enterprise source directly? | **VistA**  Reads Writes  Both - The service use VistA to get provider information, assessment details, retrieve scores, and store assessment results for patients  **MVI**  Reads - This service calls MVI to get patient traits and corresponding identifiers for assignments and assessments being created and taken.  Writes Both  **Type of Data:**  PII SPI  Non-sensitive |

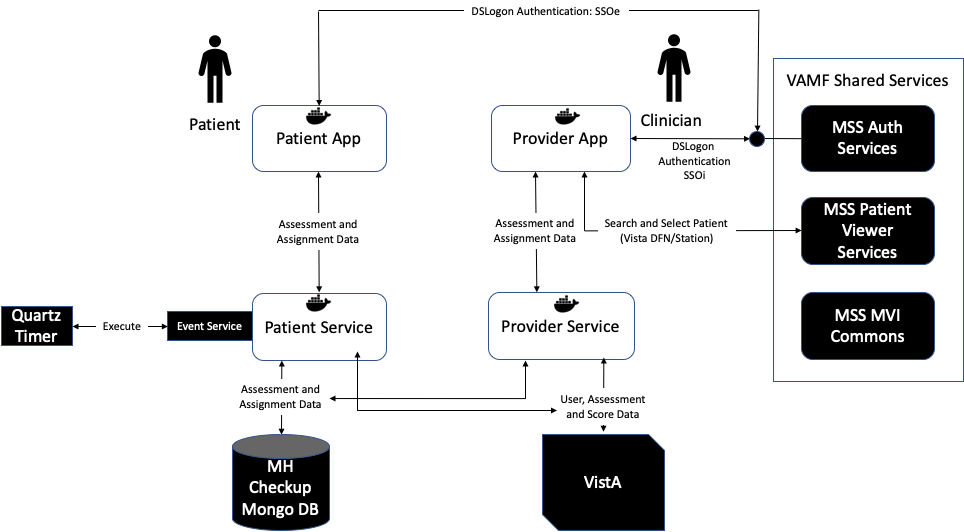
**Conceptual Design Perspective**



This section addresses the interaction among design components and provides information abut the over all system design.

**System Context**

The following context diagram shows the major external system interfaces, the actors/users, and the flow of data.



There are two different MH Checkup web apps. One for patients and one for for providers (clinicians). Authentication occurs prior to reaching the MH Checkup applications via the API Gateway. The JWT token is received by the apps after the gateway redirects the user, and provides the app with the user's ICN. Separate services provide REST base services to each of the apps.

The data tier consists of two facets: the Mongo database storing patient generated data and the integration with the VistA EHR platform. Mongo is utilized for local storing of PGD (patient generated data) for assessments and assignments. VistA provides the content for each assessment, stores the assessment results, and provides assessment result scoring.

## Application Architecture

As depicted in the above figure, the application architecture includes an app for Patients and its corresponding service, an app for Providers and its corresponding service, and the MH Checkup MongoDB database. The major components of the solution are described below. The MH Checkup database is initially populated with configuration information including values for available whitelist assessments, recurrence options, assessment voice information, and facility information. This is performed using data load scripts and a manual process executed by a DBA.

MH Checkup offers distinct web apps for the patient and the provider. Both apps share access to the MH Checkup MongoDB Database. MH Checkup uses MVI to get the Station and DFN for a patient's ICN whenever a user access Vista. It also uses MVI to get corresponding patient traits to assign to assessments. MH Checkup also uses Vistalink to access VistA to retrieve content for each assessment, store the assessment results, and get assessment result scoring. The Quartz scheduler is used to automatically update events, marking assessments as past due or missed in the Mongo database. Finally, the Vista Service provides a list of patients associated with a given station for the provider web app.

### Middle Tier and Data Tier Processing

The following section describes details of the data tier processing of the assessments.

#### Initial Data Load for Assessment Configuration

The MH Checkup database is initially populated with configuration information including values for available whitelist assessments, recurrence options, assessment voice information, and facility information. This is performed using data load scripts and a manual process executed by a DBA. As a provider assigns assessments to patients and patients complete assessments, events and audit logs are recorded in the database along with the provider assessment assignments and the patient assessment responses.

**Audit Logging**

The MH Checkup database includes an audit log collection. The audit log provides an audit trail for government auditors and others with a need to know when a patient’s healthcare record is accessed in VistA. The audit log supports Security and Privacy and maintains a record of all accesses to VistA from MH Checkup, both authorized and unauthorized, so that a record of that access is available. The audit log supports this VistA access information and is not intended to show error logging or performance statistics.

# Logical Design Perspective

This section depicts the interaction and interface between the service design components (service, related consumers, affiliated data sources, and used VA services.)

### Interface Design

#### Swagger definition for MH Checkup Service:

{

"swagger" : "2.0", "info" : {

"version" : "v1",

"title" : "Mental Health Checkup Service"

},

"paths" : {

"/v\*\*/public/resource-directory" : { "get" : {

"operationId" : "createResourceDirectory",

"produces" : [ "application/json", "application/xml" ], "responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/ResourceSupport"

}

}

}

}

},

"/v1/patient/assessment" : { "get" : {

"operationId" : "getPatientCompletedAssessments", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "status",

"in" : "query", "required" : false, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

}

},

"/v1/patient/assessment/{assessment-id}" : { "get" : {

"operationId" : "getPatientAssessment",

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assessment-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation",

"schema" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

},

"put" : {

"operationId" : "updatePatientAssessment", "consumes" : [ "application/json" ], "produces" : [ "application/json" ], "parameters" : [ {

"name" : "assessment-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"in" : "body",

"name" : "body", "required" : false, "schema" : {

"$ref" : "#/definitions/Assessment"

}

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

},

"/v1/patient/assessmentVoicedInfo/{assessment-id}" : { "get" : {

"operationId" : "getPatientAssessmentVoicedInfo", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assessment-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/GenericResourceSupportAssessmentVoiceInfo"

}

}

}

}

},

"/v1/patient/assigned" : { "get" : {

"operationId" : "getFutureAssignmentsForPatient", "produces" : [ "application/json", "application/xml" ], "responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

}

},

"/v1/patient/event" : { "get" : {

"operationId" : "getPatientEvents",

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "type",

"in" : "header", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportEvent"

}

}

}

}

}

},

"/v1/provider/patient/{assigning-authority}/{patient-id}/assigned" : { "get" : {

"operationId" : "getFutureAssignmentsForPatientOnProviderSide", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "patient-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssignmentDue"

}

}

}

}

}

},

"/v1/provider/{assigning-authority}/{patient-id}/assignment" : { "get" : {

"operationId" : "getAssignmentsForPatient",

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "patient-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssignment"

}

}

}

}

}

},

"/v1/provider/{assigning-authority}/{provider-id}/assessment" : { "get" : {

"operationId" : "getProviderAssessmentsForAssessmentName", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assessmentName", "in" : "query",

"required" : true, "type" : "string"

}, {

"name" : "completed",

"in" : "query", "required" : false, "type" : "boolean"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

}

},

"/v1/provider/{assigning-authority}/{provider-id}/assessmentVoicedInfo" : { "get" : {

"operationId" : "getProviderAssessmentVoicedInfoForAssessmentName", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assessment-name", "in" : "query",

"required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssessmentVoiceInfo"

}

}

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/assessment/{assessment-id}/feedback" : { "put" : {

"operationId" : "updateAssessmentFeedback", "consumes" : [ "application/json" ],

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assessment-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"in" : "body",

"name" : "body", "required" : false, "schema" : {

"$ref" : "#/definitions/FeedbackRequestPayload"

}

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/assignment/duplicates" : { "get" : {

"operationId" : "getAssignmentDuplicates",

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "assignment-id[]", "in" : "query",

"required" : true, "type" : "array", "items" : {

"type" : "string"

},

"collectionFormat" : "multi"

}, {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/AssignmentDuplicates"

}

}

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/assignment/{assessment-name}" : { "get" : {

"operationId" : "getAssignmentsForAssessment", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assessment-name", "in" : "path",

"required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssignment"

}

}

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/assignment/{assignment-id}" : { "post" : {

"operationId" : "postAssignments", "consumes" : [ "application/json" ],

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assignment-id",

"in" : "path", "required" : false, "type" : "string"

}, {

"in" : "body",

"name" : "body", "required" : false, "schema" : {

"$ref" : "#/definitions/AssignmentSet"

}

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssignment"

}

}

}

}

},

"put" : {

"operationId" : "putAssignment", "consumes" : [ "application/json" ],

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assignment-id",

"in" : "path", "required" : false, "type" : "string"

}, {

"in" : "body",

"name" : "body", "required" : false, "schema" : {

"$ref" : "#/definitions/AssignmentSet"

}

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssignment"

}

}

}

}

},

"delete" : {

"operationId" : "deleteVirtual", "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assignment-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"default" : {

"description" : "successful operation"

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/event" : { "get" : {

"operationId" : "getProvider",

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "type",

"in" : "header", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportEvent"

}

}

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/event/{\_id}" : { "get" : {

"operationId" : "getEvent",

"produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "\_id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/GenericResourceSupportEvent"

}

}

}

},

"put" : {

"operationId" : "updateEventStatus", "consumes" : [ "application/json" ], "produces" : [ "application/json" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "\_id",

"in" : "path", "required" : true, "type" : "string"

}, {

"in" : "body",

"name" : "body", "required" : false, "schema" : {

"$ref" : "#/definitions/Event"

}

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/GenericResourceSupportEvent"

}

}

}

},

"delete" : {

"operationId" : "delete", "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "\_id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"default" : {

"description" : "successful operation"

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/patient/{assigning-authority}/{patient-id}

/assessment" : {

"get" : {

"operationId" : "providerGetAllPatientAssessment", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "patient-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "completed",

"in" : "query", "required" : false, "type" : "boolean"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

}

},

"/v1/provider/{provider-assigning-authority}/{provider-id}/patient/{assigning-authority}/{patient-id}

/assessment/{assessment-id}" : { "get" : {

"operationId" : "getProviderPatientAssessment", "produces" : [ "application/json", "application/xml" ], "parameters" : [ {

"name" : "provider-assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "provider-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assigning-authority", "in" : "path",

"required" : true, "type" : "string"

}, {

"name" : "patient-id",

"in" : "path", "required" : true, "type" : "string"

}, {

"name" : "assessment-id",

"in" : "path", "required" : true, "type" : "string"

} ],

"responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"$ref" : "#/definitions/GenericResourceSupportAssessment"

}

}

}

}

},

"/v1/public/instrument" : { "get" : {

"operationId" : "getInstruments",

"produces" : [ "application/json", "application/xml" ], "responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/Whitelist"

}

}

}

}

}

},

"/v1/public/recurrence" : { "get" : {

"operationId" : "getRecurrences",

"produces" : [ "application/json", "application/xml" ], "responses" : {

"200" : {

"description" : "successful operation", "schema" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/Recurrence"

}

}

}

}

}

}

},

"definitions" : { "Answer" : {

"type" : "object", "properties" : {

"answerDate" : { "type" : "string"

},

"answerText" : { "type" : "string"

},

"choiceId" : {

"type" : "string"

},

"choiceText" : { "type" : "string"

},

"questionId" : { "type" : "string"

},

"questionText" : { "type" : "string"

},

"responseType" : { "type" : "string"

}

}

},

"Assessment" : { "type" : "object", "properties" : {

"docCreatedDate" : { "type" : "string", "format" : "date-time"

},

"docUpdatedDate" : { "type" : "string",

"format" : "date-time"

},

"docCreatedBy" : { "type" : "string"

},

"docLastModifiedBy" : { "type" : "string"

},

"get\_id" : {

"type" : "string"

},

"get\_assignedEventId" : { "type" : "string"

},

"get\_assignmentId" : { "type" : "string"

},

"get\_pastDueEventId" : { "type" : "string"

},

"get\_dueEventId" : { "type" : "string"

},

"get\_missedEventId" : { "type" : "string"

},

"get\_completedByAssessmentId" : { "type" : "string"

},

"archived" : {

"type" : "boolean"

},

"assessmentName" : { "type" : "string"

},

"recurrenceFrequency" : { "type" : "string"

},

"completed" : {

"type" : "boolean"

},

"startDate" : { "type" : "string",

"format" : "date-time"

},

"dueDate" : {

"type" : "string", "format" : "date-time"

},

"endDate" : {

"type" : "string", "format" : "date-time"

},

"feedback" : { "type" : "array", "items" : {

"$ref" : "#/definitions/Feedback"

}

},

"format" : {

"$ref" : "#/definitions/Format"

},

"instructions" : { "type" : "string"

},

"notTaken" : {

"type" : "boolean"

},

"patientDfn" : { "type" : "string"

},

"patientAssignAuth" : { "type" : "string"

},

"patientId" : {

"type" : "string"

},

"providerAssignAuth" : { "type" : "string"

},

"providerId" : { "type" : "string"

},

"station" : {

"type" : "string"

},

"response" : {

"$ref" : "#/definitions/Response"

},

"errorMessage" : { "type" : "string"

},

"severity" : {

"type" : "string"

},

"score" : {

"type" : "integer",

"format" : "int32"

},

"providerDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"patientFirstName" : { "type" : "string"

},

"patientLastName" : { "type" : "string"

}

}

},

"AssessmentVoiceInfo" : { "type" : "object", "properties" : {

"scope" : {

"type" : "string"

},

"assessmentName" : { "type" : "string"

},

"lowScore" : {

"type" : "integer",

"format" : "int32"

},

"highScore" : { "type" : "integer",

"format" : "int32"

},

"severity" : {

"type" : "string"

},

"text" : {

"type" : "string"

},

"gender" : {

"type" : "string"

},

"otherNotes" : { "type" : "array", "items" : {

"type" : "string"

}

},

"comparisonText" : { "type" : "string"

}

},

"xml" : {

"name" : "assessmentVoiceInfo", "namespace" : "https:// DNS.URL

}

},

"Assignment" : { "type" : "object",

"required" : [ "assessmentName", "clinicId", "clinicName", "get\_whitelistId", "numberOccurrences", "patientAssignAuth", "patientId", "recurrenceFrequency", "startDate" ],

"properties" : { "get\_whitelistId" : {

"type" : "string"

},

"get\_assessmentIds" : { "type" : "array", "items" : {

"type" : "string"

}

},

"assessmentName" : { "type" : "string"

},

"clinicId" : {

"type" : "string"

},

"clinicName" : { "type" : "string"

},

"completed" : {

"type" : "boolean"

},

"instructions" : { "type" : "string"

},

"lastTaken" : { "type" : "string",

"format" : "date-time"

},

"nextDueDate" : { "type" : "string",

"format" : "date-time"

},

"numberOccurrences" : { "type" : "integer",

"format" : "int32", "minimum" : 1

},

"numberRemaining" : { "type" : "integer",

"format" : "int32"

},

"patientAssignAuth" : { "type" : "string"

},

"patientId" : {

"type" : "string"

},

"displayName" : { "type" : "string"

},

"patientDfn" : { "type" : "string"

},

"providerAssignAuth" : { "type" : "string"

},

"providerId" : { "type" : "string"

},

"recurrenceEarly" : { "type" : "integer",

"format" : "int32"

},

"recurrenceFrequency" : { "type" : "string"

},

"recurrenceLate" : { "type" : "integer",

"format" : "int32"

},

"recurrenceOffset" : { "type" : "integer",

"format" : "int32"

},

"startDate" : { "type" : "string",

"format" : "date-time"

},

"station" : {

"type" : "string"

},

"systemError" : { "type" : "string"

},

"totalCompleted" : { "type" : "integer",

"format" : "int32"

},

"validationErrors" : { "type" : "array", "items" : {

"$ref" : "#/definitions/ValidationError"

}

},

"providerDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"virtualDeleted" : { "type" : "boolean"

}

},

"xml" : {

"name" : "assignment",

"namespace" : "https:// DNS.URL"

}

},

"AssignmentDue" : { "type" : "object", "properties" : {

"patientId" : {

"type" : "string"

},

"assessmentName" : { "type" : "string"

},

"dueDate" : {

"type" : "string", "format" : "date-time"

},

"providerName" : { "type" : "string"

},

"recurrenceFrequency" : { "type" : "string"

},

"numberRemaining" : { "type" : "integer",

"format" : "int32"

},

"numberOfOccurances" : { "type" : "integer",

"format" : "int32"

}

}

},

"AssignmentDuplicates" : { "type" : "object", "properties" : {

"assignmentId" : { "type" : "string"

},

"duplicates" : { "type" : "array", "items" : {

"$ref" : "#/definitions/GenericResourceSupportAssignment"

}

}

}

},

"AssignmentSet" : { "type" : "object",

"required" : [ "assignmentSet" ], "properties" : {

"assignmentSet" : { "type" : "array", "items" : {

"$ref" : "#/definitions/Assignment"

}

}

},

"xml" : {

"name" : "assignments",

"namespace" : "https:// DNS.URL"

}

},

"Choice" : {

"type" : "object", "properties" : {

"choiceId" : {

"type" : "string"

},

"text" : {

"type" : "string"

},

"legacyValue" : { "type" : "string"

}

}

},

"Event" : {

"type" : "object", "properties" : {

"get\_assessmentId" : { "type" : "string"

},

"get\_assignmentId" : { "type" : "string"

},

"assessmentName" : { "type" : "string"

},

"recurrenceFrequency" : { "type" : "string"

},

"dueDate" : {

"type" : "string", "format" : "date-time"

},

"errorMessage" : { "type" : "string"

},

"eventType" : {

"type" : "string"

},

"patientAssignAuth" : { "type" : "string"

},

"patientId" : {

"type" : "string"

},

"patientMessage" : { "type" : "string"

},

"patientVirtualDeleted" : { "type" : "boolean"

},

"providerAssignAuth" : { "type" : "string"

},

"providerId" : { "type" : "string"

},

"providerMessage" : { "type" : "string"

},

"providerDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"providerVirtualDeleted" : { "type" : "boolean"

},

"numberRemaining" : { "type" : "integer",

"format" : "int32"

},

"endedByProviderAuth" : { "type" : "string"

},

"endedByProviderId" : {

"type" : "string"

},

"endedByProviderDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"endedOn" : {

"type" : "string", "format" : "date-time"

},

"severity" : {

"type" : "string"

},

"score" : {

"type" : "integer",

"format" : "int32"

},

"providedByProviderAssignAuth" : { "type" : "string"

},

"providedByProviderId" : { "type" : "string"

},

"completedDate" : { "type" : "string", "format" : "date-time"

},

"status" : {

"type" : "string"

},

"alertedByAssessmentId" : { "type" : "string"

},

"patientFirstName" : { "type" : "string"

},

"patientLastName" : { "type" : "string"

}

},

"xml" : {

"name" : "event",

"namespace" : "https:// DNS.URL},

"Feedback" : { "type" : "object", "properties" : {

"providerId" : { "type" : "string"

},

"assigningAuth" : { "type" : "string"

},

"dateAdded" : { "type" : "string",

"format" : "date-time"

},

"feedbackText" : { "type" : "string"

},

"dateRead" : { "type" : "string",

"format" : "date-time"

},

"providerName" : { "type" : "string"

}

}

},

"FeedbackRequestPayload" : { "type" : "object",

"required" : [ "feedback", "id" ], "properties" : {

"id" : {

"type" : "string"

},

"feedback" : {

"type" : "string"

}

}

},

"Format" : {

"type" : "object", "properties" : {

"assessmentName" : { "type" : "string"

},

"copyrightText" : { "type" : "string"

},

"displayName" : { "type" : "string"

},

"scoreDescriptionPatient" : { "type" : "string"

},

"scoreDescriptionProvider" : { "type" : "string"

},

"scoreMetaDataList" : { "type" : "array", "items" : {

"$ref" : "#/definitions/ScoreMetaData"

}

},

"sections" : { "type" : "array", "items" : {

"$ref" : "#/definitions/FormatSection"

}

}

}

},

"FormatSection" : { "type" : "object", "properties" : {

"dummy" : {

"type" : "boolean"

},

"firstQuestionId" : { "type" : "string"

},

"questions" : { "type" : "array", "items" : {

"$ref" : "#/definitions/Question"

}

},

"sectionCaption" : { "type" : "string"

}

}

},

"GenericResourceSupport" : { "type" : "object", "properties" : {

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"GenericResourceSupportAssessment" : { "type" : "object",

"properties" : { "docCreatedDate" : {

"type" : "string", "format" : "date-time"

"docUpdatedDate" : { "type" : "string", "format" : "date-time"

},

"docCreatedBy" : { "type" : "string"

},

"docLastModifiedBy" : { "type" : "string"

},

"get\_id" : {

"type" : "string"

},

"get\_assignedEventId" : { "type" : "string"

},

"get\_assignmentId" : { "type" : "string"

},

"get\_pastDueEventId" : { "type" : "string"

},

"get\_dueEventId" : { "type" : "string"

},

"get\_missedEventId" : { "type" : "string"

},

"get\_completedByAssessmentId" : { "type" : "string"

},

"archived" : {

"type" : "boolean"

},

"assessmentName" : { "type" : "string"

},

"recurrenceFrequency" : { "type" : "string"

},

"completed" : {

"type" : "boolean"

},

"startDate" : { "type" : "string",

"format" : "date-time"

},

"dueDate" : {

"type" : "string", "format" : "date-time"

},

"endDate" : {

"type" : "string", "format" : "date-time"

},

"feedback" : { "type" : "array", "items" : {

"$ref" : "#/definitions/Feedback"

}

},

"format" : {

"$ref" : "#/definitions/Format"

},

"instructions" : { "type" : "string"

},

"notTaken" : {

"type" : "boolean"

},

"patientDfn" : { "type" : "string"

},

"patientAssignAuth" : { "type" : "string"

},

"patientId" : {

"type" : "string"

},

"providerAssignAuth" : { "type" : "string"

},

"providerId" : { "type" : "string"

},

"station" : {

"type" : "string"

},

"response" : {

"$ref" : "#/definitions/Response"

},

"errorMessage" : { "type" : "string"

},

"severity" : {

"type" : "string"

},

"score" : {

"type" : "integer",

"format" : "int32"

},

"providerDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"patientFirstName" : { "type" : "string"

},

"patientLastName" : { "type" : "string"

},

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"GenericResourceSupportAssessmentVoiceInfo" : { "type" : "object",

"properties" : { "scope" : {

"type" : "string"

},

"assessmentName" : { "type" : "string"

},

"lowScore" : {

"type" : "integer",

"format" : "int32"

},

"highScore" : { "type" : "integer",

"format" : "int32"

},

"severity" : {

"type" : "string"

},

"text" : {

"type" : "string"

},

"gender" : {

"type" : "string"

},

"otherNotes" : { "type" : "array", "items" : {

"type" : "string"

}

"comparisonText" : { "type" : "string"

},

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"GenericResourceSupportAssignment" : { "type" : "object",

"required" : [ "assessmentName", "clinicId", "clinicName", "get\_whitelistId", "numberOccurrences", "patientAssignAuth", "patientId", "recurrenceFrequency", "startDate" ],

"properties" : { "get\_whitelistId" : {

"type" : "string"

},

"get\_assessmentIds" : { "type" : "array", "items" : {

"type" : "string"

}

},

"assessmentName" : { "type" : "string"

},

"clinicId" : {

"type" : "string"

},

"clinicName" : { "type" : "string"

},

"completed" : {

"type" : "boolean"

},

"instructions" : { "type" : "string"

},

"lastTaken" : { "type" : "string",

"format" : "date-time"

},

"nextDueDate" : { "type" : "string",

"format" : "date-time"

},

"numberOccurrences" : { "type" : "integer",

"format" : "int32", "minimum" : 1

},

"numberRemaining" : { "type" : "integer",

"format" : "int32"

},

"patientAssignAuth" : { "type" : "string"

},

"patientId" : {

"type" : "string"

},

"displayName" : { "type" : "string"

},

"patientDfn" : { "type" : "string"

},

"providerAssignAuth" : {

"type" : "string"

},

"providerId" : { "type" : "string"

},

"recurrenceEarly" : { "type" : "integer",

"format" : "int32"

},

"recurrenceFrequency" : { "type" : "string"

},

"recurrenceLate" : { "type" : "integer",

"format" : "int32"

},

"recurrenceOffset" : { "type" : "integer",

"format" : "int32"

},

"startDate" : { "type" : "string",

"format" : "date-time"

},

"station" : {

"type" : "string"

},

"systemError" : { "type" : "string"

},

"totalCompleted" : { "type" : "integer",

"format" : "int32"

},

"validationErrors" : { "type" : "array", "items" : {

"$ref" : "#/definitions/ValidationError"

}

},

"providerDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"virtualDeleted" : { "type" : "boolean"

},

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"GenericResourceSupportAssignmentDue" : { "type" : "object",

"properties" : { "patientId" : {

"type" : "string"

},

"assessmentName" : { "type" : "string"

},

"dueDate" : {

"type" : "string", "format" : "date-time"

},

"providerName" : { "type" : "string"

},

"recurrenceFrequency" : {

"type" : "string"

},

"numberRemaining" : { "type" : "integer",

"format" : "int32"

},

"numberOfOccurances" : { "type" : "integer",

"format" : "int32"

},

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"GenericResourceSupportEvent" : { "type" : "object",

"properties" : { "get\_assessmentId" : {

"type" : "string"

},

"get\_assignmentId" : { "type" : "string"

},

"assessmentName" : { "type" : "string"

},

"recurrenceFrequency" : { "type" : "string"

},

"dueDate" : {

"type" : "string", "format" : "date-time"

},

"errorMessage" : { "type" : "string"

},

"eventType" : {

"type" : "string"

},

"patientAssignAuth" : { "type" : "string"

},

"patientId" : {

"type" : "string"

},

"patientMessage" : { "type" : "string"

},

"patientVirtualDeleted" : { "type" : "boolean"

},

"providerAssignAuth" : { "type" : "string"

},

"providerId" : { "type" : "string"

},

"providerMessage" : { "type" : "string"

},

"providerDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"providerVirtualDeleted" : { "type" : "boolean"

},

"numberRemaining" : {

"type" : "integer",

"format" : "int32"

},

"endedByProviderAuth" : { "type" : "string"

},

"endedByProviderId" : { "type" : "string"

},

"endedByProviderDetails" : {

"$ref" : "#/definitions/ProviderDetails"

},

"endedOn" : {

"type" : "string", "format" : "date-time"

},

"severity" : {

"type" : "string"

},

"score" : {

"type" : "integer",

"format" : "int32"

},

"providedByProviderAssignAuth" : { "type" : "string"

},

"providedByProviderId" : { "type" : "string"

},

"completedDate" : { "type" : "string", "format" : "date-time"

},

"status" : {

"type" : "string"

},

"alertedByAssessmentId" : { "type" : "string"

},

"patientFirstName" : { "type" : "string"

},

"patientLastName" : { "type" : "string"

},

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"IENAndStationNumber" : { "type" : "object",

"required" : [ "ien", "stationNumber" ], "properties" : {

"ien" : {

"type" : "string"

},

"stationNumber" : { "type" : "string"

}

},

"xml" : {

"name" : "ienAndStationNumber", "namespace" : "https:// DNS.URL"

}

},

"Link" : {

"type" : "object",

"properties" : { "rel" : {

"type" : "string", "xml" : {

"attribute" : true

}

},

"href" : {

"type" : "string", "xml" : {

"attribute" : true

}

}

}

},

"ProviderDetails" : { "type" : "object", "properties" : {

"id" : {

"$ref" : "#/definitions/IENAndStationNumber"

},

"fullName" : {

"type" : "string"

}

},

"xml" : {

"name" : "providerDetails", "namespace" : "https:// DNS.URL"

}

},

"Question" : { "type" : "object", "properties" : {

"choices" : { "type" : "array", "items" : {

"$ref" : "#/definitions/Choice"

}

},

"choiceType" : { "type" : "string"

},

"introText" : {

"type" : "string"

},

"questionId" : { "type" : "string"

},

"questionText" : { "type" : "string"

},

"responseType" : { "type" : "string"

},

"rules" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/Rule"

}

}

}

},

"Recurrence" : { "type" : "object", "properties" : {

"frequency" : {

"type" : "string"

},

"offset" : {

"type" : "integer",

"format" : "int32"

},

"early" : {

"type" : "integer",

"format" : "int32"

},

"late" : {

"type" : "integer",

"format" : "int32"

},

"errorMessage" : { "type" : "string"

}

},

"xml" : {

"name" : "recurrence",

"namespace" : "https:// DNS.URL"

}

},

"ResourceSupport" : { "type" : "object", "properties" : {

"links" : {

"type" : "array", "xml" : {

"name" : "link",

"namespace" : ["http://www.w3.org/2005/Atom"](http://www.w3.org/2005/Atom)

},

"readOnly" : true, "items" : {

"xml" : {

"name" : "link"

},

"$ref" : "#/definitions/Link"

}

}

}

},

"Response" : { "type" : "object", "properties" : {

"assessmentName" : { "type" : "string"

},

"clinicId" : {

"type" : "string"

},

"clinicName" : { "type" : "string"

},

"dateSubmitted" : { "type" : "string", "format" : "date-time"

},

"numberOfQuestionsAnswered" : { "type" : "integer",

"format" : "int32"

},

"scores" : {

"type" : "array", "items" : {

"$ref" : "#/definitions/Score"

}

},

"sections" : { "type" : "array", "items" : {

"$ref" : "#/definitions/ResponseSection"

}

},

"vistaAdministrationId" : { "type" : "string"

}

}

},

"ResponseSection" : { "type" : "object", "properties" : {

"answers" : { "type" : "array", "items" : {

"$ref" : "#/definitions/Answer"

}

},

"dummy" : {

"type" : "boolean"

},

"sectionCaption" : {

"type" : "string"

}

}

},

"Rule" : {

"type" : "object", "properties" : {

"indexOperator" : { "type" : "string"

},

"indexQuestionId" : { "type" : "integer",

"format" : "int32"

},

"indexValue" : { "type" : "integer",

"format" : "int32"

},

"ruleId" : {

"type" : "integer",

"format" : "int32"

},

"skippedQuestionIds" : { "type" : "array", "items" : {

"type" : "integer",

"format" : "int32"

}

}

}

},

"Score" : {

"type" : "object", "properties" : {

"rawScore" : {

"type" : "string"

},

"scaleName" : {

"type" : "string"

},

"maxScorePossible" : { "type" : "string"

}

}

},

"ScoreMetaData" : { "type" : "object", "properties" : {

"scaleName" : {

"type" : "string"

},

"defaultScore" : { "type" : "boolean"

},

"symptomMonitoring" : { "type" : "boolean"

},

"highRiskAlertValue" : { "type" : "string"

},

"maxPossibleScore" : { "type" : "integer",

"format" : "int32"

}

},

"xml" : {

"name" : "event",

"namespace" : "https:// DNS.URL"

}

},

"ValidationError" : { "type" : "object", "properties" : {

"fieldName" : {

"type" : "string"

},

"message" : {

"type" : "string"

}

}

},

"Whitelist" : { "type" : "object", "properties" : {

"assessmentName" : { "type" : "string"

},

"assessmentVistaName" : { "type" : "string"

},

"displayName" : { "type" : "string"

},

"assessmentDescription" : { "type" : "string"

},

"scoreDescriptionPatient" : { "type" : "string"

},

"scoreDescriptionProvider" : { "type" : "string"

},

"scoreMetaDataList" : { "type" : "array", "items" : {

"$ref" : "#/definitions/ScoreMetaData"

}

},

"errorMessage" : { "type" : "string"

}

},

"xml" : {

"name" : "whitelist",

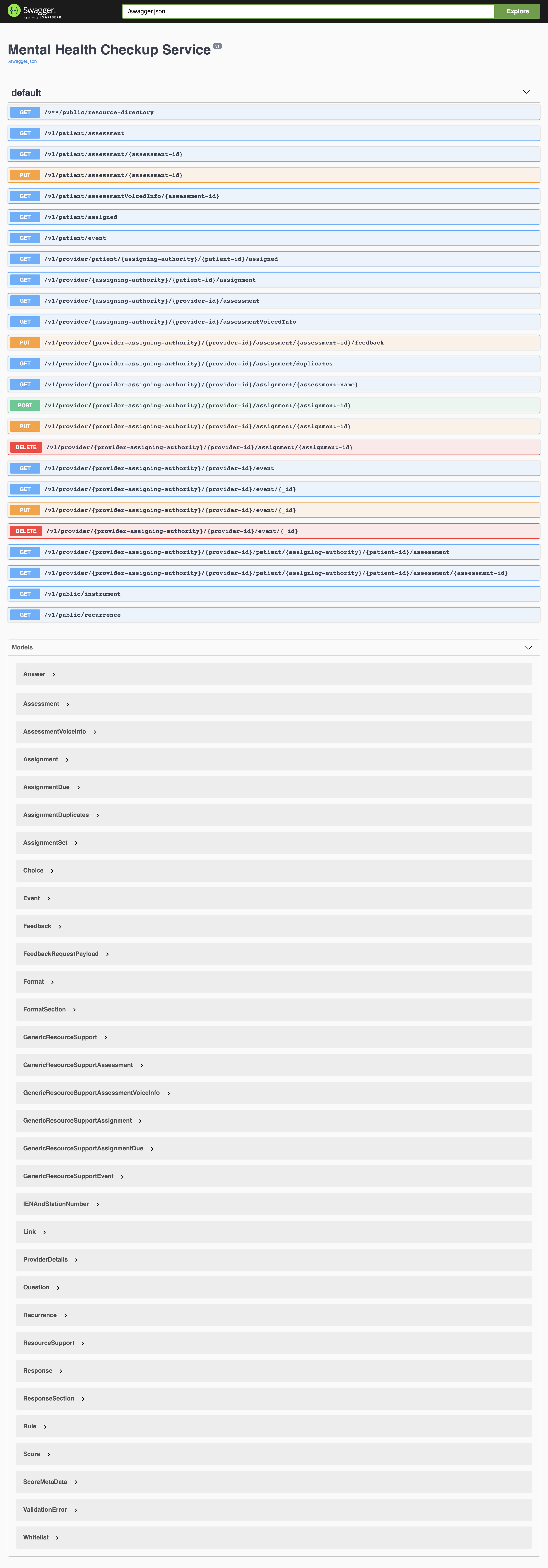
"namespace" : "https:// DNS.URL"

}

}

}

}



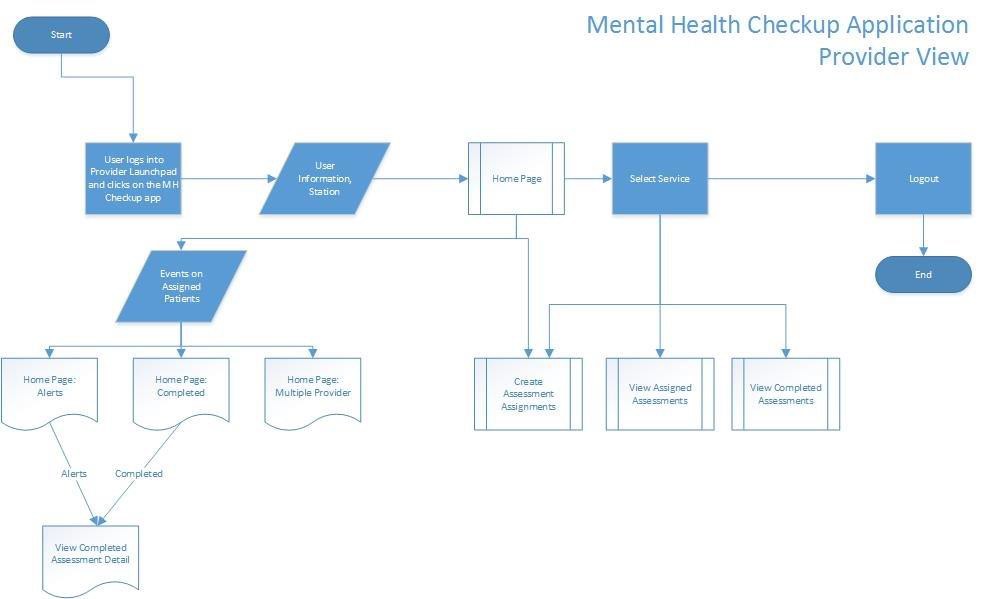
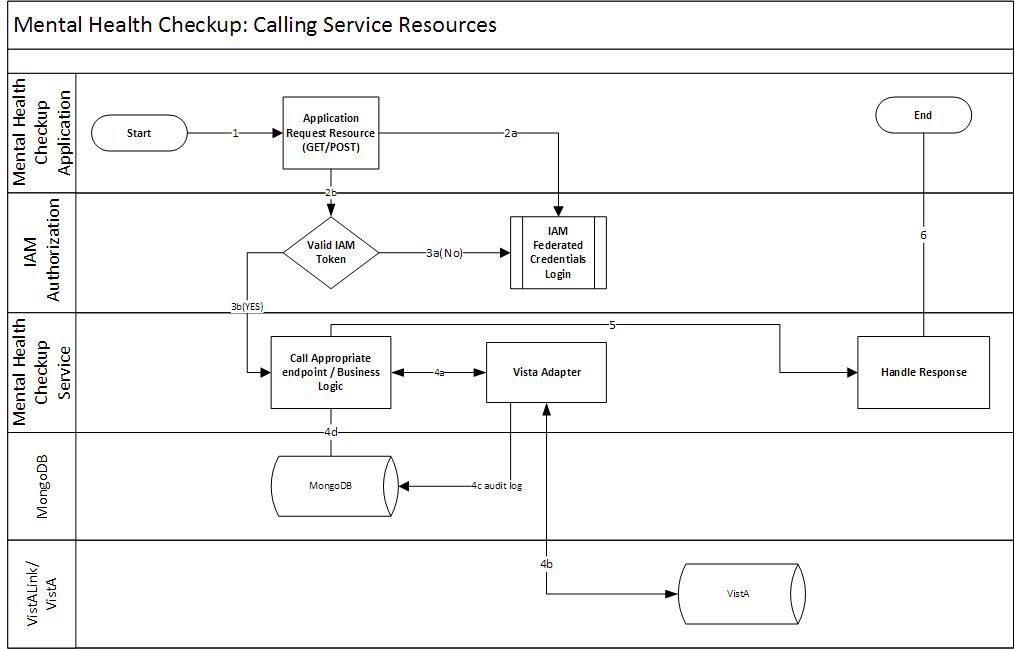
### VAMF Interfaces Used

|  |  |  |
| --- | --- | --- |
| **Interface Name (incl. version number)** | **Data Used by Mobile App** | **Data Retrieved - provide specific data elements used by this app** |
| **API Gateway** | GET /jwt | JWT |
| **User Service** | GET /users/v1/landing/?redirect\_uri=/mhc- provider/  GET /users/v1/logout | Redirect to login  Redirect to logout and Deletes Session User details |
| **Vista Data Services** | GET /VistaDataServices/v1/patients/site/  {facility}?searchstring={input} | Patients |
| **MVI** | getPatientIds() searchPersonByIdentifier() | For an MVI identifier passed in, get patient IDs  For an MVI identifier, search for patient IDs and traits |
| **Vista** | RPC use via Vistalink  YTQ TSLIST1 YTQ SECTION YTQ QUESTALL YTQ CHOICES YTQ RULES YTQ SKIP  YTQ SAVE ADMIN  YTQ SET ANSWER ALL YTQ SCORE ADMIN YTQ GET SCALES  YTQ USERQ  Patches required include:   1. MBAD\*1\*1 MAP2 MH Checkup VISTA support for initial release. 2. MBAD\*1\*2, an information patch for the release for MH Checkup. 3. YS\*5.01\*132 Allow Application Proxy access to Mental Health RPCs.   Two RPCs that are associated to MH Checkup are available and can be accessed through VIA.   1. ICR-6827, YTQ Save Admin. 2. ICR-4677, Application Proxy for Mental Health Checkup. | To retrieve user, assessment, and score information |

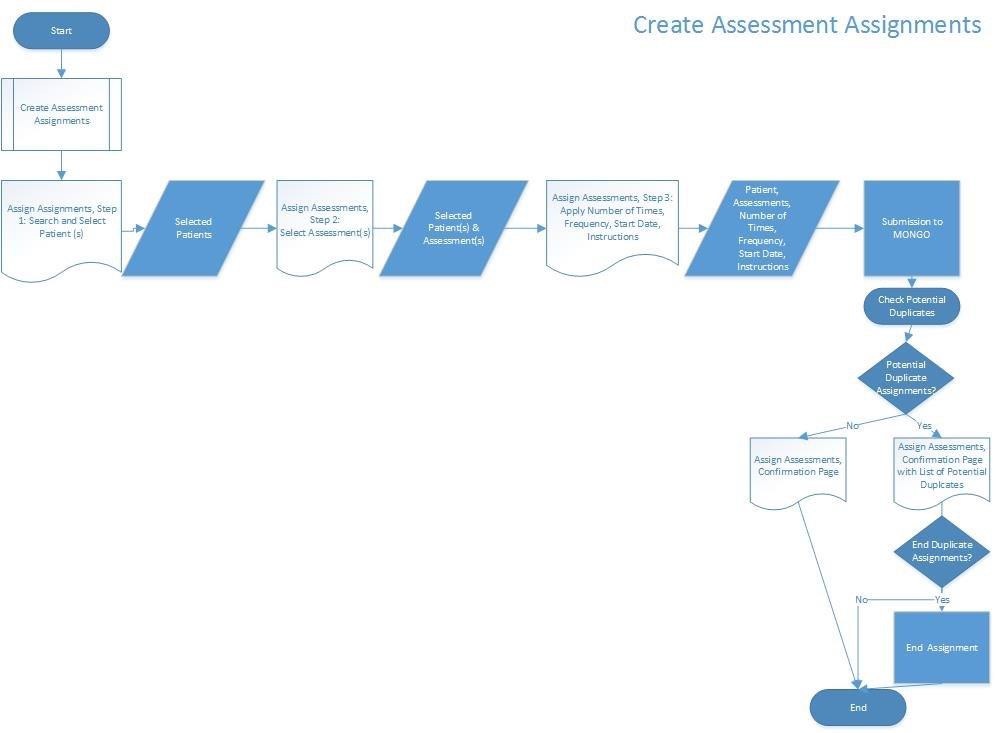
### Logical Diagram (optional)

The diagram below shows how Mental Health Checkup application works. This diagram shows the hypothesized relationships among sources. Once the Mental Health Checkup application has been launched, the user is redirected to login and Mental Health Checkup redirects the request to AuthServices shared services to establish a token that is required to be able to access resources on behalf of the provider using API Gateway. Once a valid JWT token is established, the provider app accesses the endpoints established by MH Checkup staff service application to assign and manage assessments assigned to a patient, view completed assessments, and provide

feedback to a patient based on completed assessments. All information is exchanged via a REST interface, and data is is stored in the MH Checkup Mongo database. Similarly, the patient app accesses the endpoints established by the MH Checkup veteran service application to allow the patient to retrieve and complete assigned assessments, review completed assessments, and view provider feedback on completed assessments. The Mental Health Application also communicates with VistA via Vistalink to retrieve the assessments to be taken, get scores and assessment results, and persist the assessments to VistA as part of the patients record.

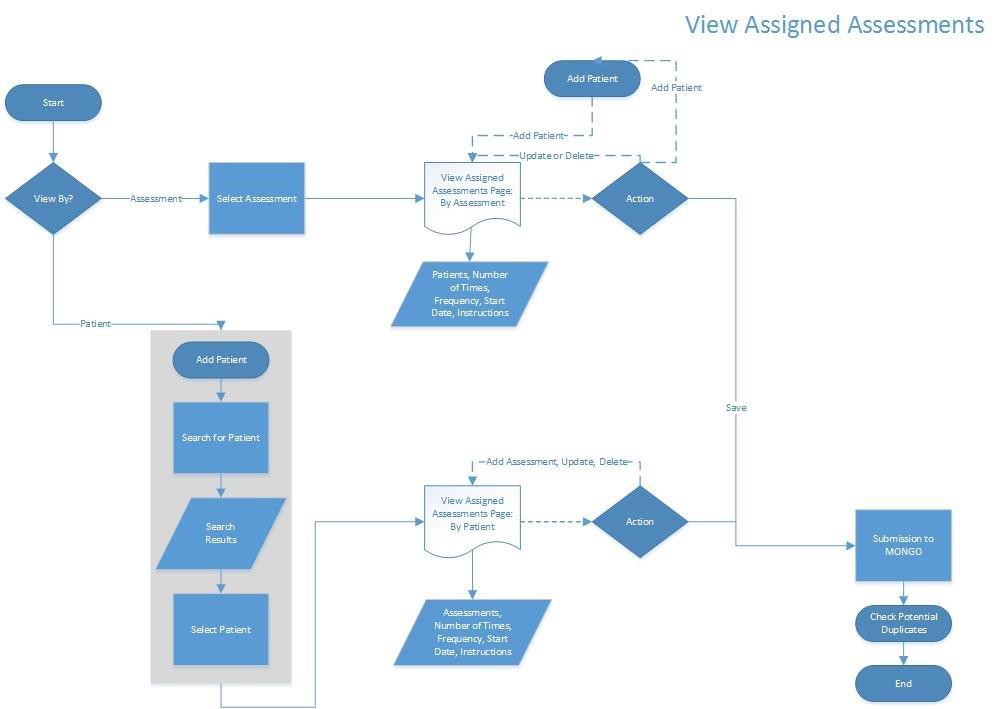


#### Provider Process: Overview

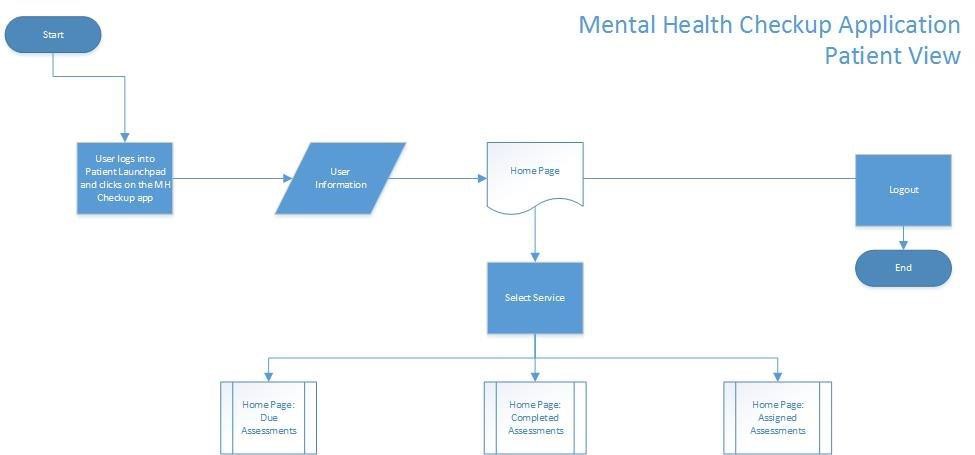
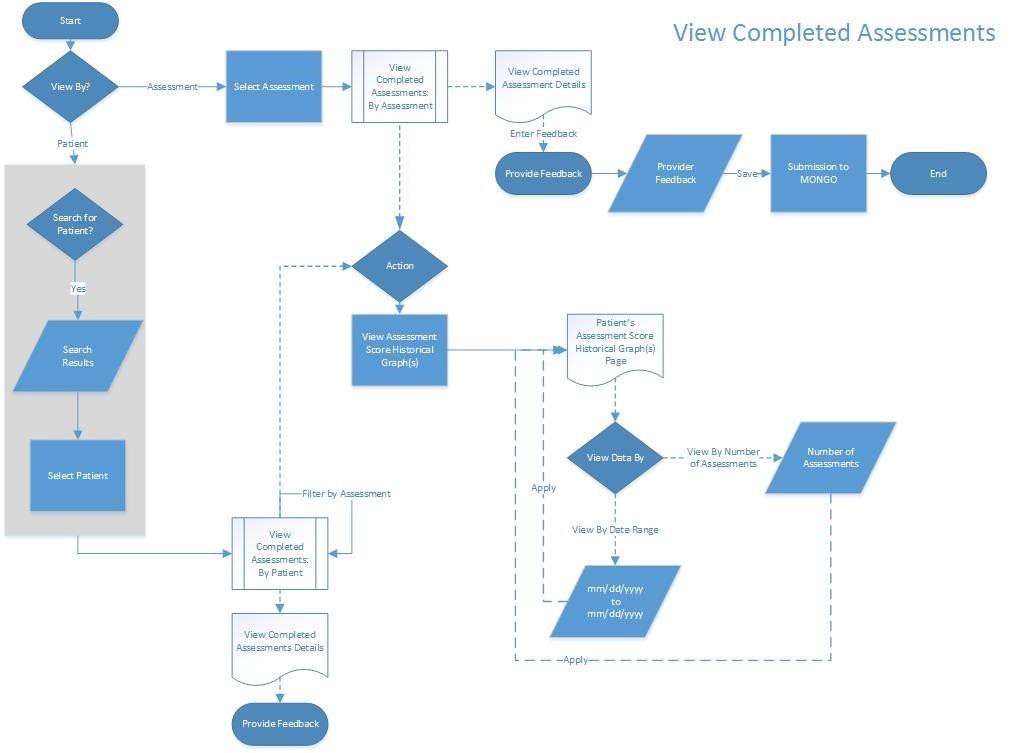


**Provider Process: Create Assessment Assignments**

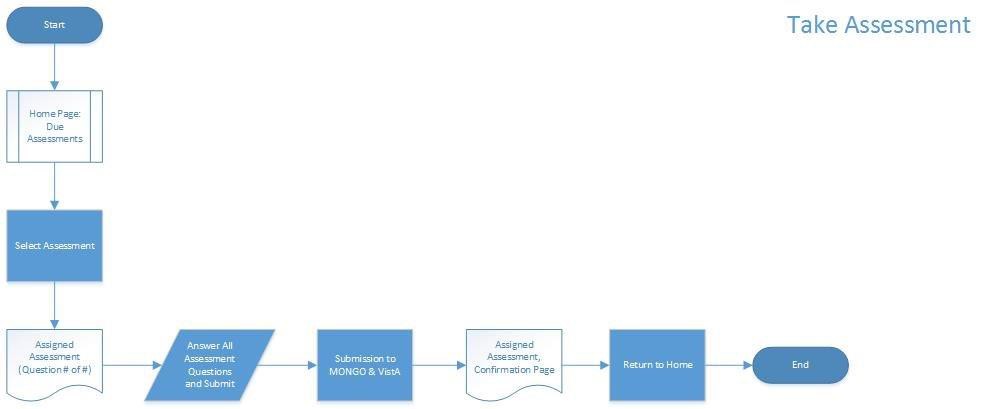
**Provider Process: View Assigned Assessments**



**Provider Process: View Completed Assessments**

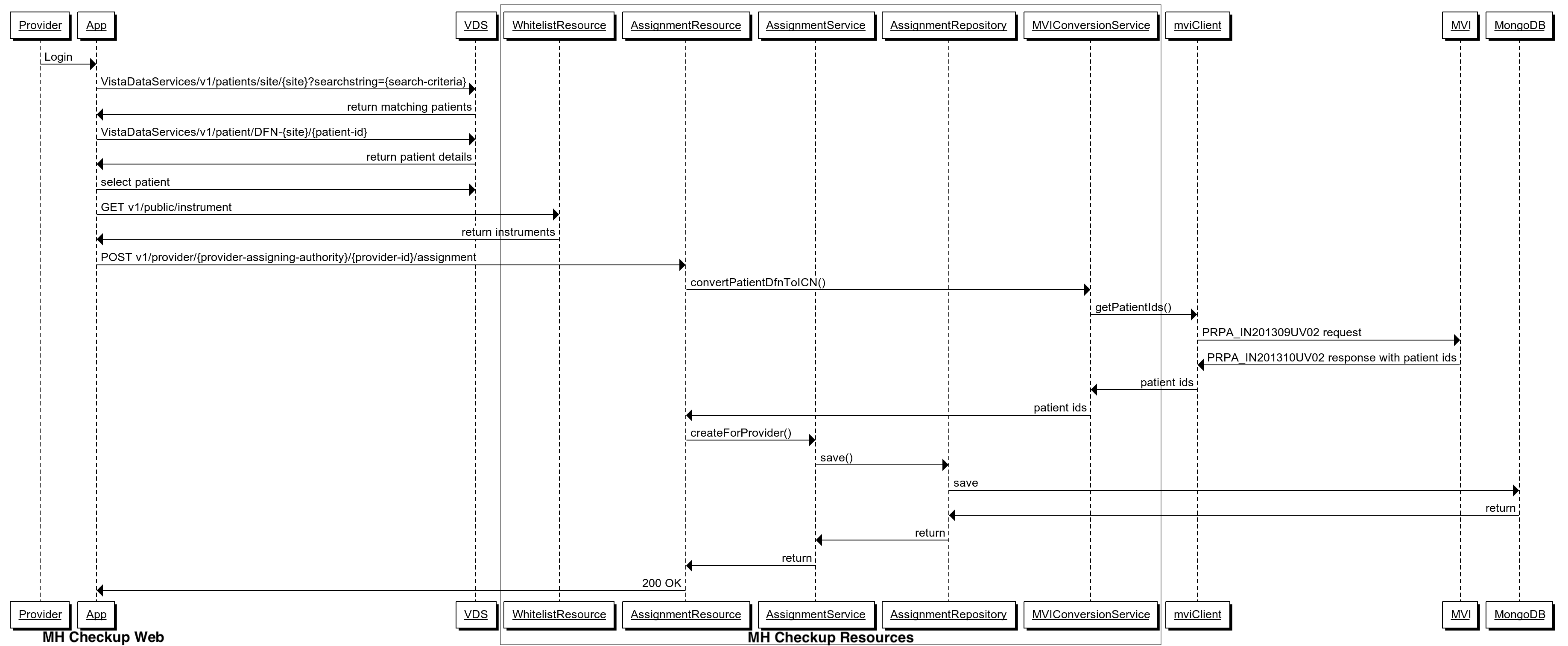
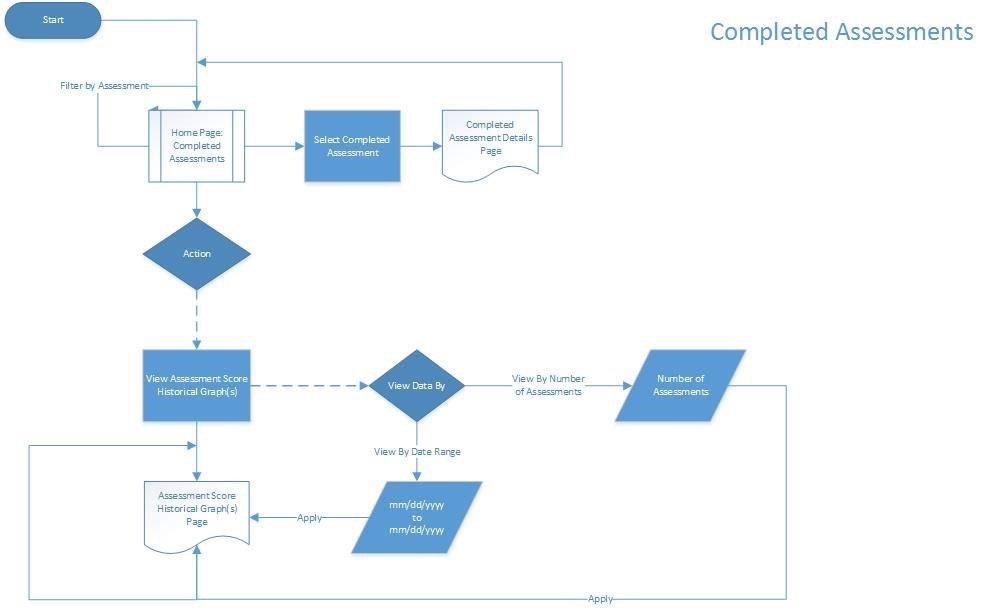


**Veteran Process: Overview**



**Veteran Process: Take Assessment**

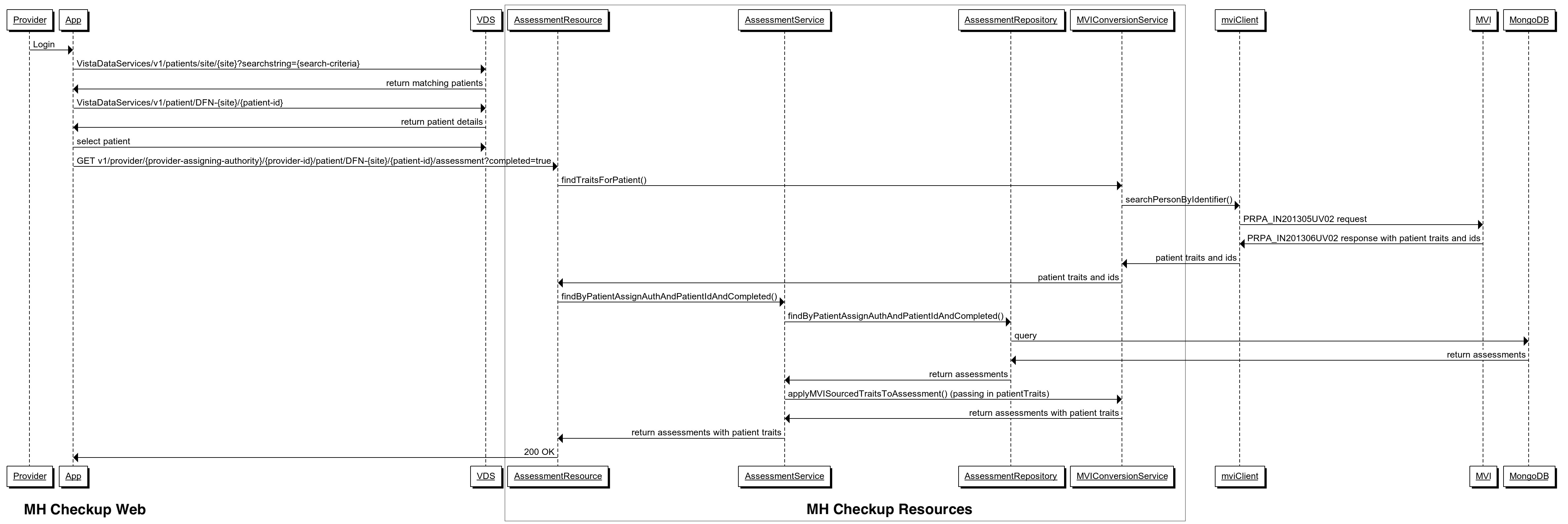
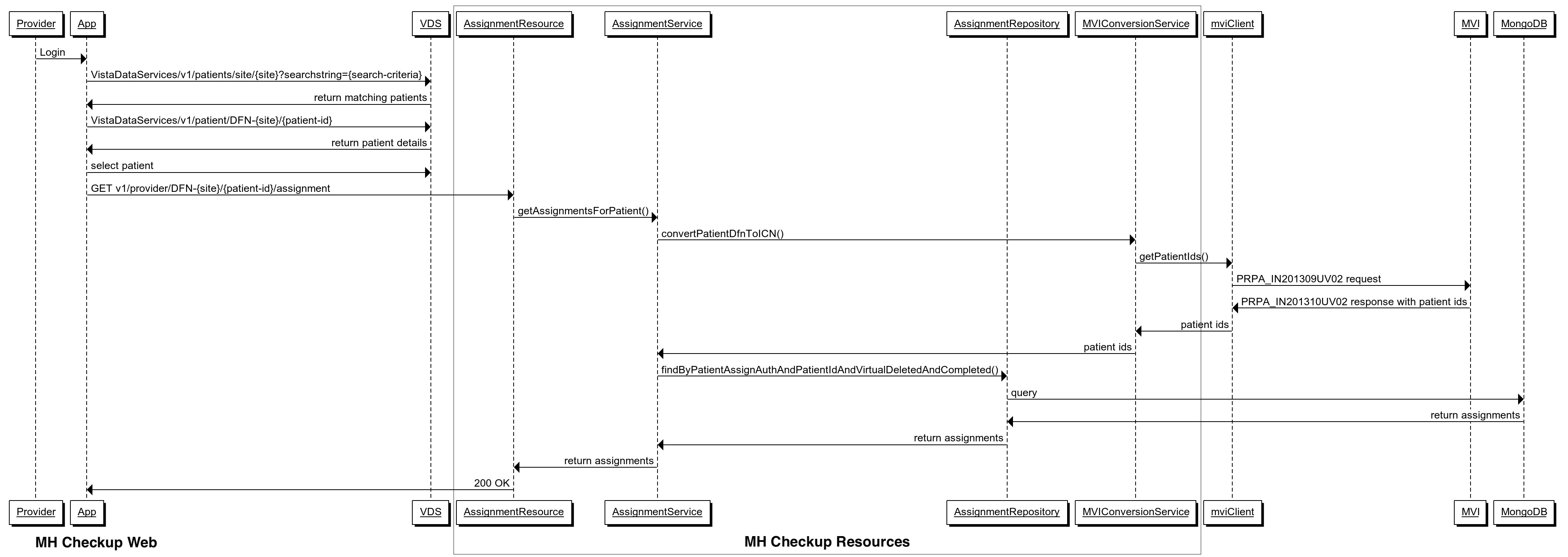
**Veteran Process: Completed Assessments**



**Provider Sequence Diagrams**

**Provider Assign Assessment**

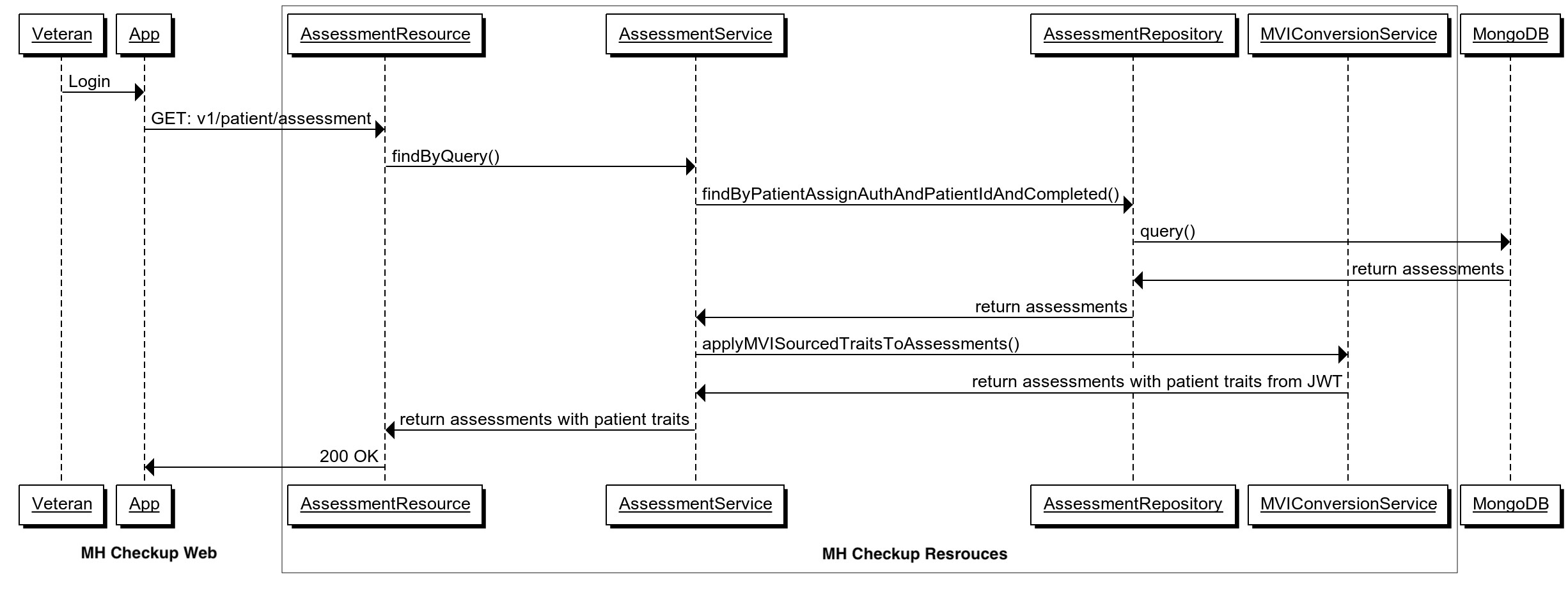
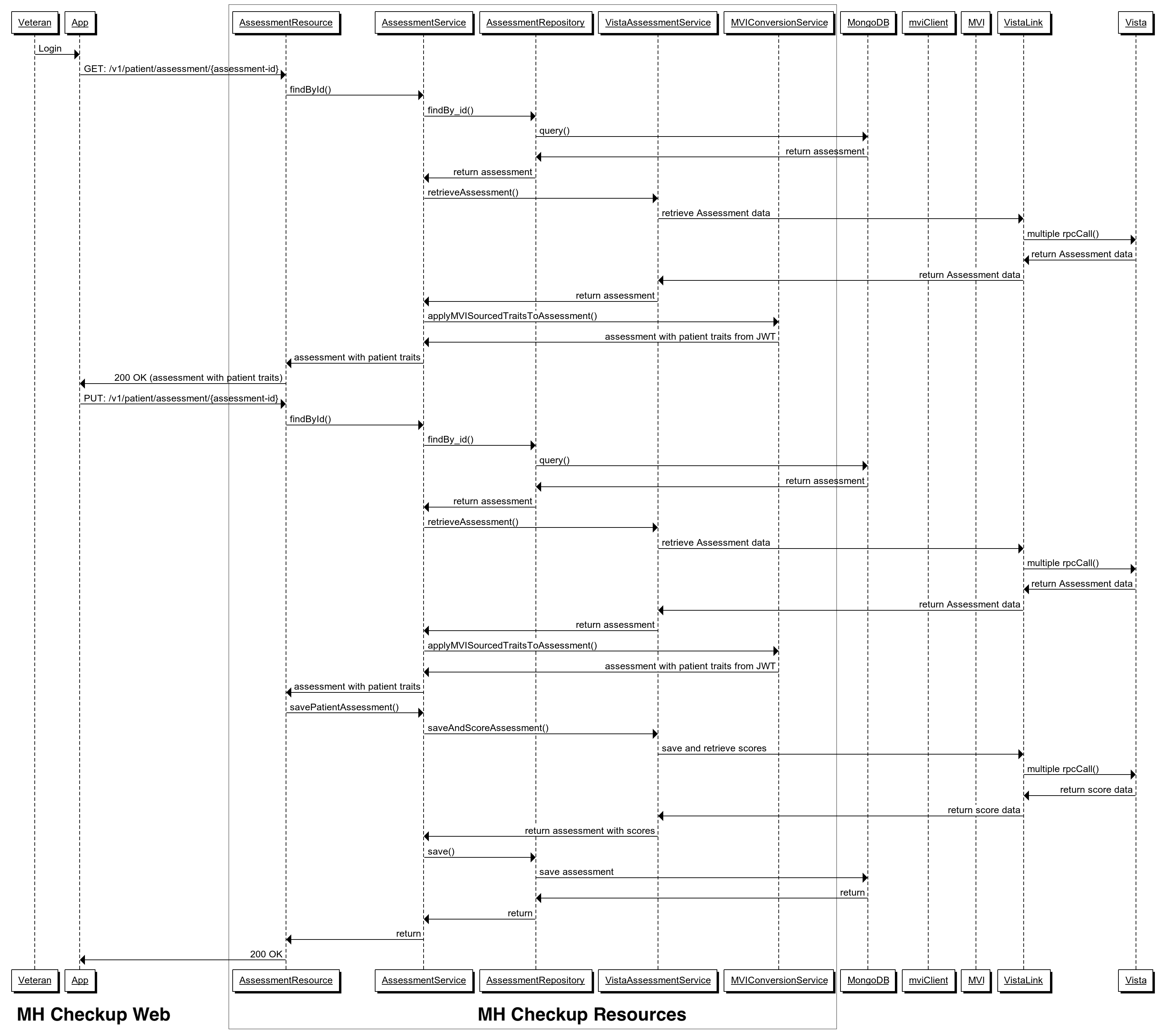
**View Assigned Assessments**



**View Completed Assessments**

**Patient Sequence Diagrams**

**Take Assessment**



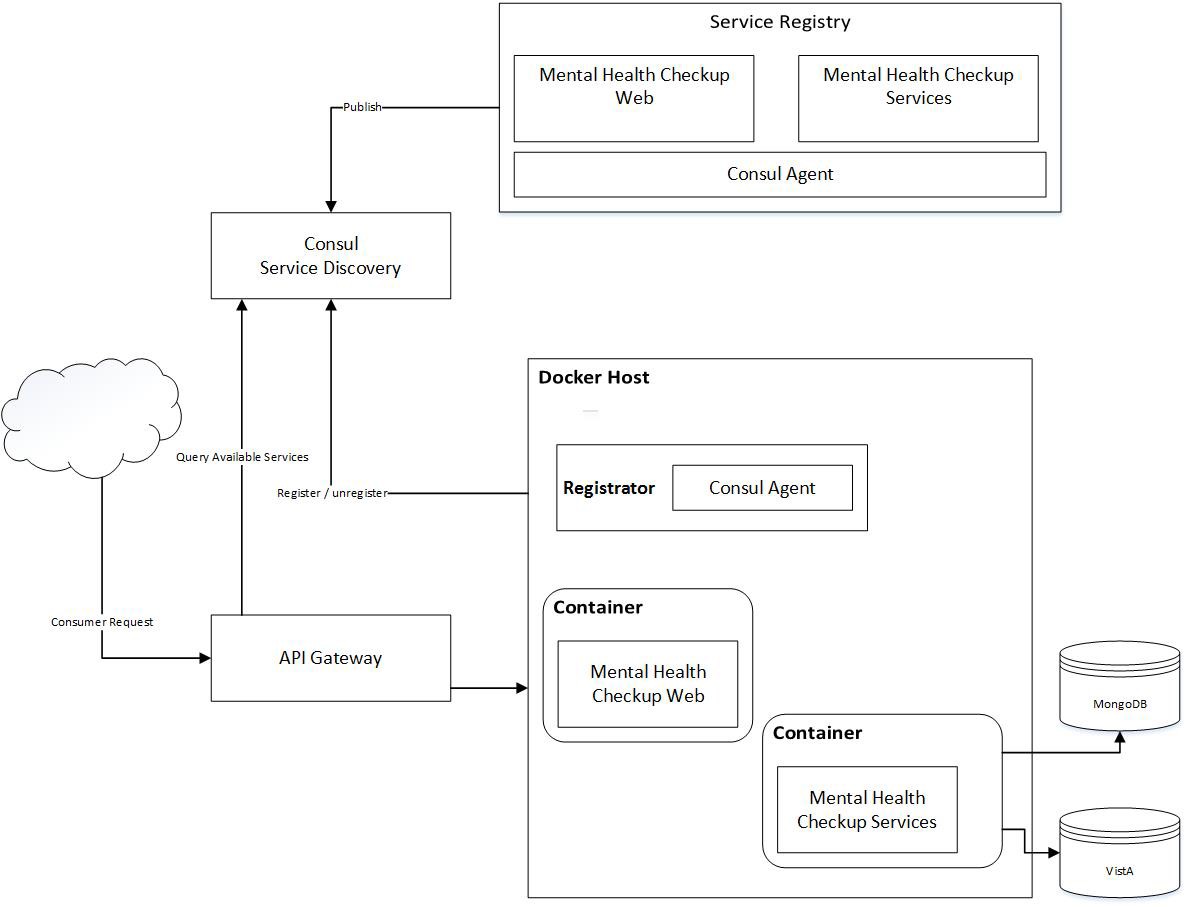
**View Completed Assessments**

**Physical Design Perspective**

This design view describes how and where a service is deployed to one or more environments, such as test, dev-int, production, etc. The physical view illustrates how the deployed entity is packaged, with which entities it is integrated and exchanges messages, and the physical environment in which the implementation is installed and configured.

|  |  |
| --- | --- |
| **Artifact** | **URL** |
| Dockerfile | DNS.URL |
| Repository | DNS.UR |

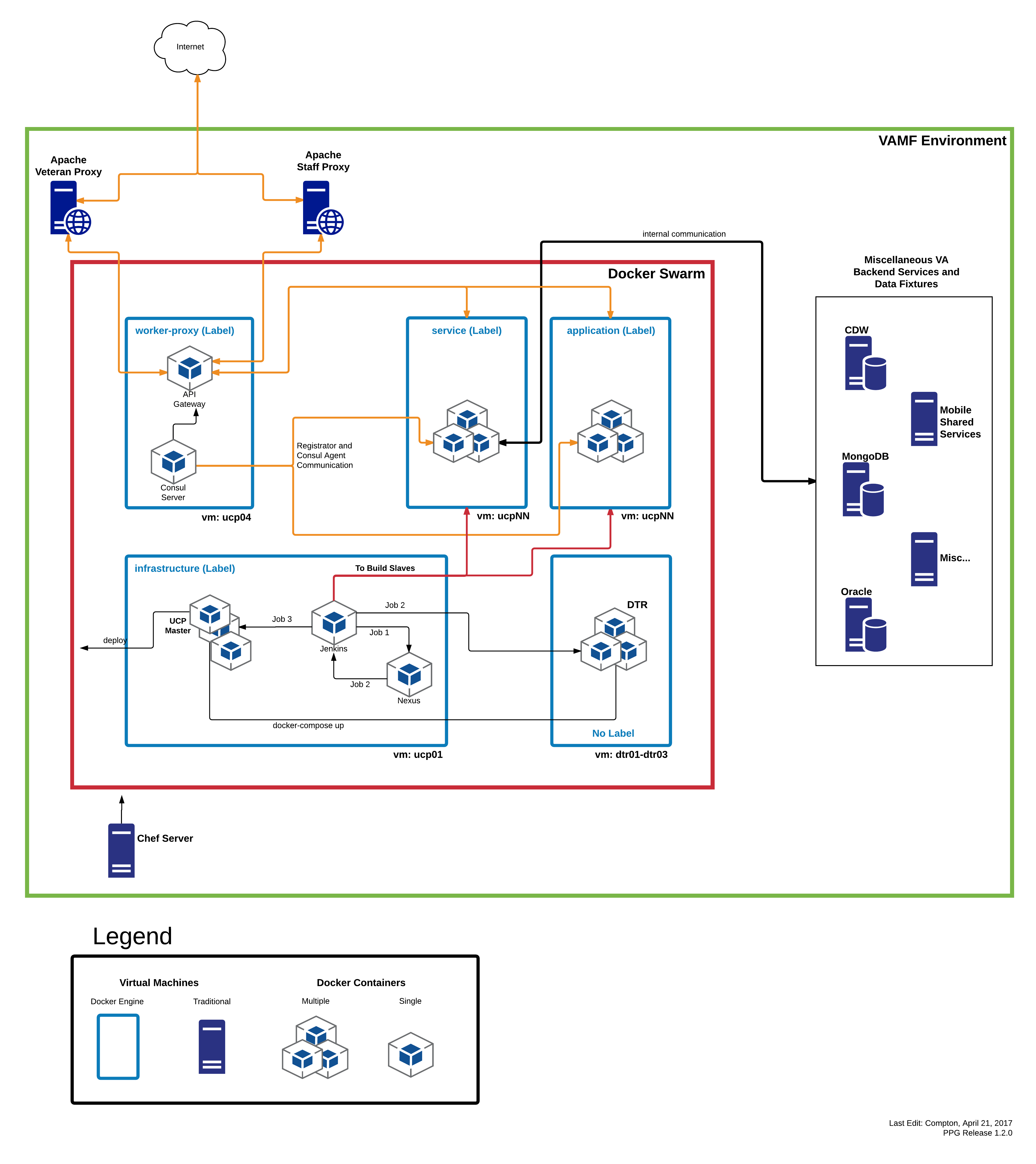
### Network Design



The Mental Health Checkup application is deployed as multiple docker containers (4 total, 2 front-end web applications, and 2 back-end web services for veteran and staff applications). The web application is rendered in the web browsers and uses REST services to communicate to the back end web services.

### Deployment Diagrams

This diagram provides a high-level view of the Deployment components that Mental Health Checkup is dependent upon in vet/staff environment. The Mental Health Checkup web client is deployed on an Apache web server. The Mental Health Checkup back end service is an autonomous service that is deployed on application server container using a RHEL6 Weblogic container as its base image.



**Data Architecture**

### Data Dictionary

A detailed Data Dictionary Definition (DDD) is provided in a separate document: [Mental Health Checkup Data Dictionary Definitions (DDD) v1.x](https://wiki.mobilehealth.va.gov/display/MHPRO/Mental%2BHealth%2BCheckup%2BData%2BDictionary%2BDefinitions%2B%28DDD%29%2Bv1.x)

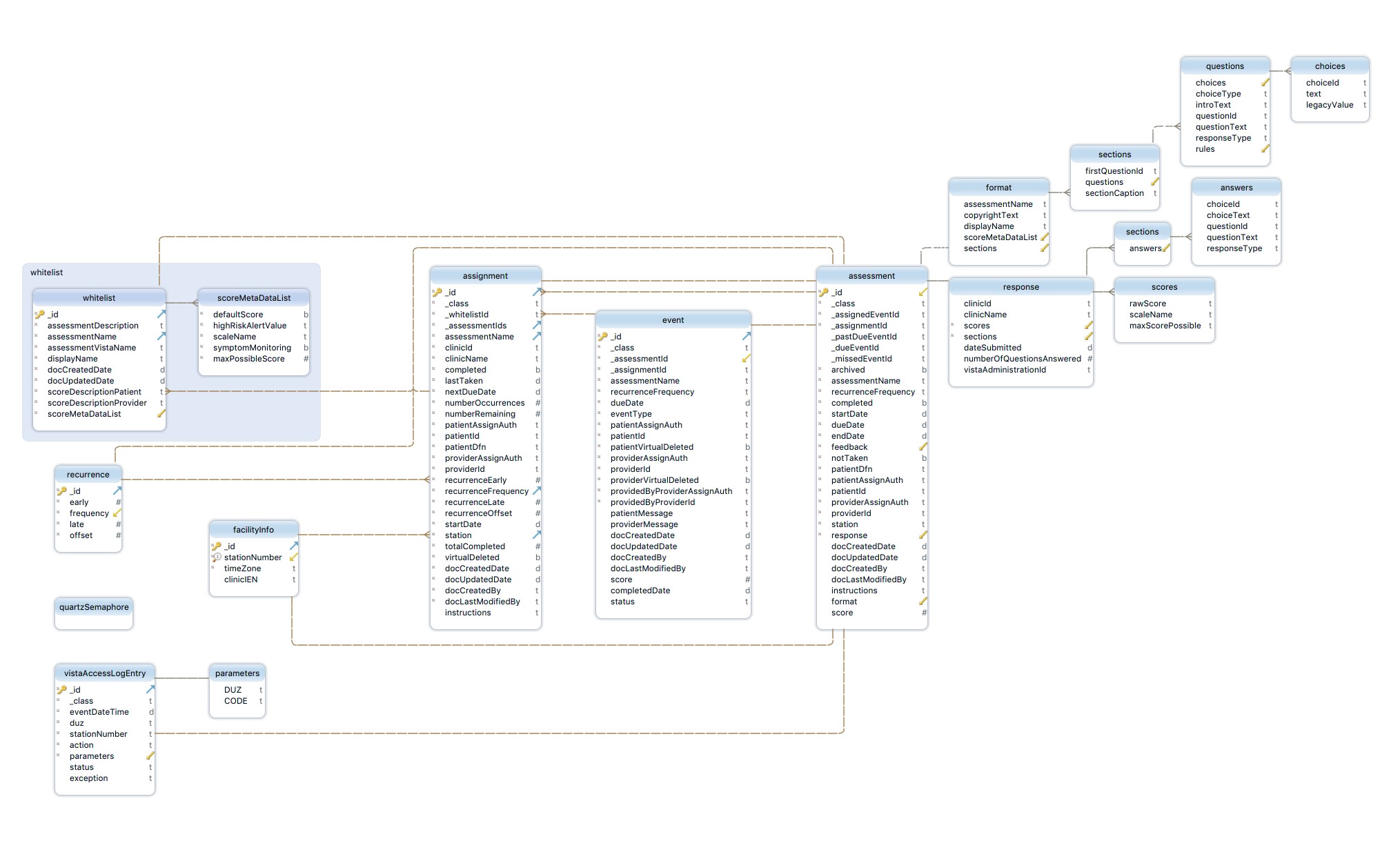
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ref #** | **NoSQL Collection** | **Description of data collection** | **Source of data** | **Structure** |
| 1 | mhprodb.recurrence | This collection contains the recurrence metadata needed for scheduling within the Mental Health Checkup Mobile Applications. |  | {  "recurrence": {  "\_id":  "String",  "frequency": "String", "offset": "Integer",  "early": "Integer",  "late":  "Integer",  "docCreatedDate": "DateTime",  "docUpdatedDate": "DateTime"  }  } |
| 2 | mhprodb.whitelist | This collection contains metadata related to Mental Health Assessments (also known as Instruments) that are approved for use within the Mental Health Checkup Mobile Applications. |  | {  "whitelist": {  "\_id":  "String",  "assessmentName": "String",  "displayName": "String",  "assessmentDescription": "String",  "scoreMetadata": { ["scaleName": "String", "default":"Boolean",  "symptomMonitoring":" Boolean",  "hishRiskAlertValue": "String"]  },  "scoreDescriptionPatient ": "String",  "scoreDescriptionProvide r": "String",  "docCreatedDate": "DateTime",  "docUpdatedDate": "DateTime"  }  } |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3 | mhprodb.event | This collection contains patient and provider events relating to alerts, past due, completed, and assigned assessments. |  | {  "event": { "\_id": "String",  "providerAssignAuth": "String",  "providerId": "String", "patientAssignAuth":  "String",  "patientId": "String", "\_assignmentId":  "String", "\_assessmentId":  "String",  "eventType": "String", "dueDate": "String", "providerMessage":  "String", "patientMessage":  "String",  "patientVirtualDeleted": "Boolean",  "providerVirtualDeleted"  : "Boolean", "assessmentName":  "String", "docCreatedDate":  "DateTime", "docUpdatedDate":  "DateTime"  }  } |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 4 | mhprodb.assignment | This is the main collection used by the Patient and Staff Mental Health Checkup mobile applications. It contains  the metadata providers specify when creating patient assignments. |  | {  "assignment": {  "\_id":  "String",  "providerAssignAuth": "String",  "providerId": "String",  "patientAssignAuth": "String",  "patientId":  "String",  "clinicId":  "String",  "clinicName": "String",  "\_whitelistId": "String",  "recurrenceFrequency": "String",  "recurrenceOffset": "Integer",  "recurrenceEarly": "Integer",  "recurrenceLate": "Integer",  "startDate":  "Date",  "nextDueDate": "Date",  "numberOccurrences": "Integer",  "numberRemaining": "Integer",  "\_assessmentIds": "Array",  "assessmentName": "String",  "totalCompleted": "Integer",  "instructions": "String",  "lastTaken":  "DateTime",  "completed":  "Boolean",  "virtualDeleted": "Boolean",  "docCreatedDate": "DateTime",  "docUpdatedDate": "DateTime"  }  } |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5 | mhprodb.assessment | The assessments collection contains one document for each assessment assigned to a patient. This document specifies the due date for the assessment, along with the patient's responses, and a snapshot of the assessment (format) as retrieved from VistA at the time of assignment. This model is unique as the data saved must rely on data being retrieved from the VistA Mental Health Package and saved within the Mental Health Package so that data can be viewed within legacy applications. Ids associated  within pointers to VistA Files and fields must be stored within the collection. |  | {  "assessment": {  [  "\_id": "String", "patientAssignAuth": "String",  "patientId": "String", "providerAssignAuth": "String",  "providerId": "String", "providerName": "String",  "dueDate": "Date", "archived": "Boolean", "completed": "Boolean", "notTaken": "Boolean", "feedback": "String", "\_pastDueEventId": "String", "\_assignedEventId": "String", "\_assignmentId": "String", "assessmentName": "String",  "format": “Object”, "instructions": "String", "response": “Object”  ]  }  } |
| 6 | mhprodb.vistaAccessLogEntry | The audit log provides an audit trail for government auditors and others with a need to know when a patient’s healthcare record is accessed in VistA. It represents a record of all Vista accesses by each user from Mental Health Checkup, including the RPCs that were called and the parameters to those RPCs. It is not intended to show error logging or performance statistics. |  | {  "vistaAccessLogEntry":{ "\_id" : "String",  "stationNumber" : "String", "duz" : "String", "actionDate" : Date, "params" : { String, String}, "status" : "String",  "action" : "String"  "exception" : "String"  }  } |
| 7 | mhprodb.quartzSemaphore | This semaphore, as implied by the collection name, is a semaphore referenced by the quartz scheduler on each server. The collection contains ONLY ONE DOCUMENT. All quartz schedulers use this document to keep themselves under check such that more than one scheduler is not allowed to run the nightly batch process. The scheduler that "locks" this semaphore is the only one allowed to run the batch process. The remaining schedulers exit gracefully upon discovering that this semaphore is locked. |  | {  "quartzSemaphore":{  "\_id":"String",  "pidAtHostname":" String",  "jobIdentifier":" String"  }  } |
| 8 | mhprodb.assessmentVoiceInfo | Lookup data containing the patient voiced text and severity for different assessments, given a specific score. |  | {  "\_id" : "String,  "scope" : "String", "assessmentName" : "String", "lowScore" : Integer, "highScore" : Integer, "severity" : "String",  "text" : "String"  } |
| 9 | mhprodb.facilityInfo | Lookup data containing information about each facility (e.  g. its timezone) |  | {  "\_id" : "String", "stationNumber" : "String", "timeZone" : "String"  } |

Entity Relationship Diagram representation of collections is provided below:



## Capacity Planning

This section provides capacity planning parameters such as concurrent number of user-base, which is the business requirement for what the service app is supporting, Include other appropriate metrics such as transaction per second, and required response time.

### Expected concurrent and maximum size of the user base

|  |  |  |  |
| --- | --- | --- | --- |
| **Metric** | **At Startup** | **Within 6 Months** | **Full Load** |
| Number of Users - Total | 500 | 10,000 | 40,000 - 100,000 |
| Number of Users - Veteran/Caregiver | 250 | 10,000 | 20,000 - 50,000 |
| Number of Users - Staff/Provider | 250 | 10,000 | 20,000 - 50,000 |
| Number of Concurrent Users - Total | 100 | 500 | 1000 |
| Number of Concurrent Users - Veteran/Caregiver | 50 | 250 | 500 |
| Number of Concurrent Users - Staff/Provider | 50 | 250 | 500 |

**Project Dependencies**

Reliant dependency on a VA system. Use the table below to list these dependencies.

|  |  |  |
| --- | --- | --- |
| **Project Dependency** | **Point of Contact Information** | **Describe Dependency** |
| MVI |  | getPatientIds() - For an MVI identifier passed in, get patient IDs  searchPersonByIdentifier() - For an MVI identifier, search for patient IDs and traits |

|  |  |  |
| --- | --- | --- |
| VistA Data Services |  | GET /VistaDataServices/v1/patients/site/  {facility}?searchstring={input} - For the Provider app, VistA is used to get a list of patients based on the Provider's Station and a search string to filter the list |
| Vista |  | RPCs for retrieving user, assessment, and score information |

# Developer & PM Contact Information

|  |  |  |
| --- | --- | --- |
| **Developer Name/Point of Contact (POC)** | **VA E-Mail Address** | **Phone Number** |
| Ken Fang | [PII](mailto:mailtoPII) | PII |
| **Developer Organization/Company** | **Contract Start Date** | **Contract End Date** |
| Ironbow / Mobomo, LLC | April 26, 2018 | February 28, 2019 |
| **Web and Mobile Solutions PM or POC** | **VA E-Mail Address** | **Phone Number** |
| Eric Guidash | [PII](mailto:PII) | PII |
| **VA Product Development PM or POC** | **VA E-Mail Address** | **Phone Number** |
| Mark Ennis | [PII](mailto:PII) | PII |