

Department of Veterans Affairs

Clinical Video Teleconferencing (CVT) Scheduling

Requirements Specification Document



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Version 2.1

Revision History

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1. Introduction

1.1. Purpose

The purpose of this Requirements Specification Documentation (RSD) is to record the Clinical Video Teleconferencing (CVT) Scheduling requirements. This RSD will give the development team a high-level look at the specifications for the CVT project.

1.2. Scope

CVT Scheduling is a requirement of the following strategic initiatives:

- New Models of Healthcare (NMOC) Virtual “Real Time” Medicine Telehealth
- VHA Telehealth Task Force Report, dated January 2011. Recommendation 4, “*deploy a scheduling solution for CVT*”.

The VHA Telehealth Task Force assessed that current VA scheduling systems cannot support widespread expansion of CVT due to manual processes involved with the current inter-facility CVT consult and inability of the current VistA scheduling system to interface with other CVT scheduling technologies and resources.

Problems with the current “as is” interfacility CVT scheduling for consult processes are listed below:

- Manual scheduling must occur on the VistA system where the health care provider is located and the VistA system where the Veteran is located. This pair is not handled within and across VistA systems as a synchronized event and uses separate scheduling systems that do not link with VistA or various work-arounds. Therefore, it is difficult to create or modify CVT appointments.
- Inability to document all CVT activities including CVT event closure on both healthcare provider and Veteran’s local VistA systems.
- Potential for clerical error and improper tracking of workload capture. There is currently not a way to show a single listing of daily scheduled CVT patients across facilities and VISNs. Healthcare providers currently do not have a clear view of CVT scheduled patients.

The CVT project will address:

- Consistency and adaptability across all VISNs, VistAs and facilities
- Management of CVT resource availability
- Interfaces to existing systems to include VistA (utilizing MDWS or it’s current equivalent) and the TMS system.
- Ease of use through the use of Graphical User Interfaces (GUIs) and application wizards
- Recent advances in CVT technology
- Flexibility in scheduling healthcare providers, Veteran patients and CVT resources

The Office of Telehealth Services supports the development of an enterprise CVT scheduling system which will ensure that resources at both ends of a telehealth visit for the Veteran and the Healthcare Provider are coordinated with the patient possibly across different VISNs. The CVT scheduling system will also capture workload data.

The contractor will provide design, development and deployment consulting to advise and assist OI&T and VHA with the following activities around the Clinical Video Teleconferencing (CVT) application:

Overall objective: Develop and deploy standalone initial CVT Capability hosted on CRM Online and moved to Terremark. Using an Agile based approach, identify, prioritize and incorporate as many features as possible within two iterations and available hours.

CRM infrastructure and Solution Design

- The production version of the solution is expected to be hosted by the same hosting provider as other VRM projects, currently Terremark.
- The Iteration 1 prototype will be developed using CRM Online and will be moved to Terremark in between the first and second iterations.
- During the first phase of development, integration with other systems is not included.
- Business process discovery, analysis and modeling
 - Meet with representatives that perform these assessments to learn the desired business process flow. The goal is to incorporate national and VISN requirements into a comprehensive system.

Develop CRM prototype solution for “CVT”

- Create and customize CRM workflows, entities, forms, and relationships as needed for phase 1 of the CVT application.

Test and validate prototype CRM solution

- Integrate the solution into the Hosting Provider’s standards for Build and release management
 - At Present, Terremark hosts CRM 2012 at Update Rollup 11

Support Prototype Rollout

- The first phase of this project will be to get this prototype application rolled out to a small subset of users. This RSD includes hours to help support that initial effort.

Update and incorporate changes in a second iteration

- Incorporate feedback from first iteration testing into a second iteration

1.3. Scope Objectives

Work with VHA on the deployment of a CRM system to produce a CVT application. The goal of the application is to allow the scheduling of diverse CVT resource components (Personnel, Rooms, and Technologies). There are 2 main logistical facets to CVT which are the Patient Side Resources and the Provider Side Resources. Operationally, the system is again bifurcated into a configuration and resource management component and a rapid scheduling component. The system will help to facilitate scheduling by automating the selection of available time slots. This first phase will not have integration capabilities but will be built knowing that those capabilities will be added in future phases, and will account for that future requirement in the data structure.

The end result of the first phase of development will at a minimum be a working prototype which can be used by end users to validate the requirements as they are developed into a more integrated, robust CRM based-solution in later increments.

1.4. Acronyms and Definitions

1.4.1.Acronyms

Acronym	Acronym Meaning
BRD	Business Requirements Document
CEVN	Clinical Enterprise Video Conferencing Network
CVT	Clinical Video TeleConferencing
CVT	Clinical Video Telehealth
COTS	Commercial Off-The-Shelf
CVS	Conformance Validation Statement
COOP	Continuity of Operations
CRM	Customer Relationship Management
EA	Enterprise Architecture
XML	Extensible Markup Language
FTC	Facility Telehealth Coordinator
FIPS	Federal Information Processing Standard
FISMA	Federal Information Security Management Act
FY	Fiscal Year
GUI	Graphical User Interface
GBS	Green Beacon Solutions
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IT	Information Technology
IPT	Integrated Project Team
IP	Internet Protocol
LAN	Local Area Network
MTSA	Master Telehealth Service Agreement
MDWS	Medical Domain Web Services
MCS	Microsoft Consulting Services
NIST	National Institute Standards and Technology
NMOC	New Models of Care
OED	Office of Enterprise Development
OI&T	Office of Information and Technology
OMB	Office of Management and Budget
PwC	Pricewaterhouse Coopers
RSD	Requirements Specification Document
SIP	Session Initiation Protocol
SOAP	Simple Object Access Protocol
SDK	Software Development Kit

SQL	Structured Query Language
SDD	System Design Document
TRM	Technical Reference Model
TCT	Telehealth Clinical Technician
TSA	Telehealth Service Agreement
VISN	Veteran Integrated Service Network
VA	Veterans Affairs
VAMC	Veterans Affairs Medical Center
VHA	Veterans' Health Administration
VistA	Veterans Health Information Systems and Technology Architecture
WAN	Wireless Area Network

1.4.2. Definitions

Term	Definition
Create	In reference to user permissions in CRM, “Create” refers to the ability of a user to perform an Insert action in the database or to save a new record in the CRM UI
Read	In reference to user permissions in CRM, “Read” refers to the ability of a user to perform a Read action on a database row, or to ‘see’ a record in the CRM UI
Write	In reference to user permissions in CRM, “Write” refers to the ability of a user to perform an Update action on a database row, or to change the values of specific fields and save the record in the CRM UI
Delete	In reference to user permissions in CRM, “Delete” refers to the ability of a user to perform a Delete action on a database row or to delete record in the CRM UI – This is a separate UI permission from Deactivation.
Append	In reference to user permissions in CRM, “Append” refers to the ability of a user to perform an Update action on a database field set for the CRM UI field type, “Lookup.” In the CRM UI, Append permission on a given entity, X, refers to the ability of a user to select X as a value for a lookup field on a different entity, Y, and save record Y. This can be thought of as the ability to “Attach” entity Y to entity X.
Append To	In reference to user permissions in CRM, “Append To” refers to the ability of a user to perform an Update action on a database field set for the CRM UI field type, “Lookup.” In the CRM UI, Append permission on a given entity, X, refers to the ability of a user to select a value for a lookup field on entity X for another given entity, Y and save record X. This can be thought of as the ability to “Attach” entity X to entity Y.

1.5. References

- VHA Telehealth Task Force Report, January 2011
- NMOC Telehealth Operating Plan
- CVT Pathways, September 28, 2010
- CVT Scheduling GUI
- CVT System Design Document (SDD)

2. Overall Specifications

In outlining the requirements that are being provided below for VA OI&T to provide the basis upon which the necessary information and telecommunications platform is negotiated to support the care of Veteran patients, the following assumptions/caveats are understood:

- All CVT services are provided on VA's clinical enterprise video conferencing network (CEVN)
- CVT services into the homes of Veteran patients provided via IP video are undertaken as an associated service to CEVN
- As of September 2, 2010, care via CVT is provided annually to 70,000 Veteran patients in 110 VA Medical Centers and 450 Patient-side Vista Clinics
- Levels of CVT activity are set to rise by 50% in FY2013 and a further 50% in FY2014
- The technology and associated peripheral attachments that constitute clinical video teleconferencing technologies are classified as "medical care technologies" that are standardized units purchased from VA's medical care appropriation
- VA OI&T supplies the telecommunications infrastructure, gatekeeper, local area network, wide area network, IT backbone and associated routing, cyber security, firewalls, and channels through which organizations and individuals outside VA connect; VA OI&T also provides the systems whereby scheduling takes place
- Requirements to define national contracts for clinical video conferencing units that connect to CEVN are defined by the Office of Telehealth Services (OTS) with input from VA OI&T. OTS is the business owner for clinical video conferencing units. OTS provides the expertise for the clinical review of these technologies and VA OI&T provides the IT expertise in contracting reviews.

2.1. Accessibility Specifications

The CVT Scheduling tool is minor application on the CRM UD platform and is currently a "stand-alone" prototype that is being released only as an initial pilot system. The need for submission of a Conformance Validation Statement (CVS) form still exists.

2.2. Business Rules Specifications

Scheduling:

In order to schedule a medical appointment, a Telehealth Service Agreement will need to be in place.

All resources, sites and equipment must be available in order to secure an available slot at the desired appointment time.

Pilot Business Requirements

- Enter in summary TSA information including
 - Resources required for the Patient clinic
 - Resources required for the Physician clinic
- Create Service Sites
- Enter in work hours for all resources
 - Work hours are daily schedules sometimes referred to as free/busy time.
- The TSA becomes a CRM Service – this is the mechanism that is actually scheduled and ties all of the resources together.
- This CRM Service can then be scheduled by a TCT utilizing the CRM Service Scheduling capabilities. This mainly involves the users selecting the Patient's service Site and then which Service (TSA) that they wish to schedule. When prompted the system will then provide the user with a list of times when all of the required Resources for both the patient and physician will be available. Once a time is selected, a Service Activity is created for the Veteran and the related Resources will be blocked off from other appointments within CVT.
- A TCT would then have to manually schedule the same resources in VistA.

2.3. Design Constraints Specifications

The initial phase of prototype development has been completed. No substantive design constraints were imposed on that prototype development. Additional functionality development may be constrained when the code has been imported into the Terremark cloud environment and/or once integrated with the VA VistA network via MDWS.

2.4. Disaster Recovery Specifications

CVT Disaster Recovery procedures will follow those currently in force for CRM UD.

2.5. Documentation Specifications

System documentation includes descriptions of the system hardware, software, policies, standards, procedures, and approvals related to the system life cycle and system's security controls. VA requires that sufficient documentation exists to provide an operating reference to effectively use software and hardware, and formal security and operational procedures have been documented, including the adequate completion of certification and accreditation processes. Documentation must include, but is not limited to, all documentation of the security planning, certification and accreditation process, and configuration management of the hardware and software associated with the system.

2.6. Functional Specifications

This solution will save the Telehealth units considerable time and expense as well as increase the utilization of the Telehealth equipment. The CVT Pilot will include the following application functions:

- Service Activity Management
 - Service Scheduling
 - VA CVT Resource Management
 - VA CVT TSA Management
 - VA CVT Site Management
-
- Clinical video teleconferencing units that provide CVT services in VHA link onto the LAN, WAN and IT backbone structures necessary to support the CEVN via RJ45 Ethernet Jacks.
 - VA OI&T will provide the necessary Internet Protocol (IP) addresses, static or dynamic, as necessary.
 - IP addressing and connectivity on the CEVN will take place using IPv4 until an agreed transition to IPv6 can take place.
 - VA OI&T will provide a minimum of 384 kb/s rate of data transfer at all points on the CEVN for routine applications, and higher level as agreed for specific applications.
 - The telecommunications infrastructure upon which CEVN-based services are provided in VHA use session initiation protocol (SIP). CEVN will adhere to agreed and explicit quality of services standards.
 - All gatekeepers, routers, telecommunication connections and servers associated with routine CEVN-based services will have agreed basic back-up and redundancy requirements.
 - Specific applications that are mission critical that are associated with particular risk in the event of failure e.g. Tele-ICU will have enhanced standards that are explicitly agreed.
 - Although the CEVN and EVTN may share common elements of infrastructure the CEVN will have higher priority than EVTN, excepting elements of EVTN that are used for emergency management and national security purposes by VHA.
 - Connectivity and common protocols for clinical video teleconferencing will exist between VHA and VBA to enable disability assessments.
 - There will be an agreed division of roles and responsibilities between VA OI&T and Biomedical Engineering at the CBOC, VAMC, VISN and National levels.
 - VA OI&T will provide a suitable system to enable the scheduling of patient, provider, rooms at both ends, equipment and associated telecommunications connectivity.
 - VA OI&T will provide the necessary help-desk and associated support services to maintain continuity of operations (COOP) for CVT services on the CEVN.
 - VA OI&T will develop and maintain a COOP plan for CEVN with OTS.
 - VA OI&T will provide the linkages to e-mail systems, scheduling systems, secure means to traverse the VA firewalls and telecommunications technology to conduct routine IP video connectivity between VA clinicians in VA facilities and patient in their homes, other non-VA

health care settings and other approved sites at which telehealth-mediated care can occur through VHA.

- VA OI&T will ensure that specific cyber security requirements for CEVN –related activities are defined and evaluate upon request any VA or non-VA components of CEVN that are used to provide care.
- When establishing CEVN services with outside organizations to VHA for the purposes of delivering clinical services VHA will ensure adherence occurs with VHA clinical, technology and business requirements before connectivity occurs.
- VA OI&T will provide routine network activity data, including trending, to show usage and problems with inadequate telecommunications connectivity between VA sites at the CBOC, VAMC, VISN and national level.
- VA OI&T will work at the facility, VISN and national levels to undertake needs assessments of telecommunications capacity in relation to anticipated telehealth developments in strategic planning.
- VA OI&T will support OTS in developing systems to classify CEVN activity to differentiate bona fide clinical and administrative video teleconferencing from social connectivity and prioritize which element/s are undertaken, as required.
- VA OI&T will provide cost data, as required to ensure the costs and cost-effectiveness of VA's CVN, when required.
- VA OI&T will ensure that satellite assets that are expected to meet telehealth purposes meet clinical requirements.
- VA OI&T will provide input into the creation of solicitations and review of offerings for all CVT technologies to ensure compatibility with VA IT standards, practices and to ensure cost-effectiveness.

2.7. Graphical User Interface (GUI) Specifications

In general, MS Dynamics CRM 2012 provides a primary console interface that has been configured for CVT. When configuring entities within MS Dynamics for CVT, the MS Dynamics system generates GUIs for users to interact with the data. The user interfaces include lists with customizable views, find, advanced find, editors for all entities, lookup dialogues, and various multiple user interfaces. Please refer to the System Design Document (SDD) for further GUI specifications.

2.8. Multi-Divisional Specifications

Data accessibility with the Dynamics CRM system is based on segmentation of permissions at multiple levels. The deployment is first organized into a Business Unit hierarchical structure, defining the business divisions at a top-level. At CVT, business units have been established for each VISN to segment their individual data, where appropriate. Users can be members of a specific business unit, enabling access to specific levels within and without that unit or Users may be members of the Parent Business Unit (VHA Telehealth Services), enabling cross-unit access.

At the next level down, records can be directly tied to Users or to Teams. The CVT system was designed to avoid individual ownership and instead attribute all ownership at the Team level in order to standardize divisional data access. Teams, in the case of CVT are actually VHA Facilities, within which, it is

assumed that roles will be standardized. Members of the team will be granted specific access levels to records owned by – or not owned by – that team based on their User Roles.

User Roles tie together the divisional specification by determining the specific access permissions (Create, Read, Write, Delete, Append, Append To) for any given entity at the User, Team, Business Unit, or Organizational level. This multi-tiered approach to divisional structuring enables CRM to fully meet both accessibility and security requirements while providing a seamless user experience.

2.9. Performance Specifications

This document section is currently under development and will be finalized pending closure of a hosting agreement for the eventual production environment.

2.10. Quality Attributes Specifications

MS Dynamics CRM 2012 contains native service scheduling capabilities perfectly suited to the needs of the CVT Scheduling process; allowing for the specified location tracking at facility and site levels, as well as the integration of diverse resource types from User to Room to Technology without any significant customization. The specific data points which must be tracked and the dichotomy between Patient Site and Provider Site determination, however, mandate the creation of a sort of ‘facade structure’ for the end-user interface which allows for the custom fields and divergent work processes of Individual and Group service activities.

In practice, this entails the duplication of certain system entities such as Facility, Site, and Service as ‘custom’ entities which then leverage plugins to create their corresponding system components.

By effectively wrapping the existing CRM Scheduling functionality in a CVT-specific layer the system is able to provide an effectively tailored environment for users, structured according to familiar conventions and systems while minimizing the degree of necessary custom coding by leveraging existing structure and capabilities.

This approach maximizes the future extensibility of the system by allowing for the greatest degree of configurability within those CVT entities. It also supports system supportability and maintainability through a bi-directional approach; minimizing custom code dependency on the technical end, and providing a context-tailored experience on the functional end to provide a familiar and intuitive interface to end users who will require reduced support assistance to work within it. Instructions in Section A.19

2.11. Reliability Specifications

This document section is currently under development and will be finalized pending closure of a hosting agreement for the eventual production environment.

- Creation of new Telehealth Service Agreement (TSA) - Save of new TSA data shall be no longer than five second ~~must occur within two to three seconds~~ response time from the production server.
- TSS program user shall not be presented with any SSL certificate errors in usage or at logon throughout the application.

2.12. Scope of Integration

For this pilot release of the CVT system, no external system integrations have been planned or developed. It is anticipated that as part of future releases, the CVT system will be integrated with constituent VistA systems and perhaps other external data sources, but this functionality has yet to be fully scoped and is not documented here.

2.13. Security Specifications

As noted in the SDD, no specific security or privacy considerations or requirements were outlined in the CVT Business Requirements Document (BRD). Details on the general security model of CRM, including Business Unit, Team, User, and Role construction as well as field-level security is available from the Microsoft Developer Network (MSDN) Library article, “The Security Model of Microsoft Dynamics CRM.” At [http://\[REDACTED\]](http://[REDACTED])

As addressed in section 2.8 above, system records are segmented by Business Unit, Team, and User, with the specific permissions for their data intersections determined by User Security Roles. The table below provides a general overview of the security roles currently established for the CVT system and their general functional permissions.

Role	Primary Job Functions	Additive Roles
VISN Lead	<ul style="list-style-type: none"> Manages Facilities, Sites, Resource Groups, Resources, Resource Calendars General Application Administration, Updates Metadata Libraries 	<ul style="list-style-type: none"> CVT User CVT Application Administrator
Facility Telehealth Coordinator	<ul style="list-style-type: none"> Manages Facilities, Sites, Resource Groups, Resources, Resource Calendars Manages Master TSAs and TSAs 	<ul style="list-style-type: none"> CVT User Facility Telehealth Coordinator
Telehealth Clinical Technician	<ul style="list-style-type: none"> Manages Facilities, Sites, Resource Groups, Resources, Resource Calendars Schedules Service Activities (appointments) Creates and Edits Patients 	<ul style="list-style-type: none"> CVT User Telehealth Clinical Technician CVT Scheduler
CVT Scheduler	<ul style="list-style-type: none"> Schedules Service Activities Creates and Edits Patients 	<ul style="list-style-type: none"> CVT User CVT Scheduler
Telehealth Provider/Clinician	<ul style="list-style-type: none"> Provides telehealth clinical services 	<ul style="list-style-type: none"> CVT User
Telepresenter	<ul style="list-style-type: none"> Clinical presenter of patient 	<ul style="list-style-type: none"> CVT User
CVT User	<ul style="list-style-type: none"> A User of the CVT Application Owns calendar 	<ul style="list-style-type: none"> CVT User (base role)

2.14. System Features

Please refer to the SDD, sections 2.2: *Overview of the Business Process*, 3.3.4.2: *Conceptual Production String Diagram* and 6.2: *Software Detailed Design* for highly detailed breakdowns of the system features and operations.

2.15. Usability Specifications

Usability of the CVT system is ensured by presenting the entire UI through the Microsoft Dynamics CRM COTS interface, which conforms to Microsoft's Standards of Graphical User Interface style and design, further elaborated within the CRM 2012 sdk downloadable files, "The Microsoft Dynamics CRM UI Style Guide."

3. Applicable Standards

The following standards and regulations may apply to the design of this system:

- C.5 VAAR 852.219-10 VA NOTICE OF TOTAL SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS SET-ASIDE (DEC 2009)
- Federal Information Security Management Act (FISMA) of 2002
- Federal Information Processing Standard (FIPS) Pub 201, Personal Identity Verification for Federal Employees and Contractors, February 25, 2005
- VA Directive 6102, Internet/Intranet Services
- VA Handbook 6102, Internet/Intranet Services
- Electronic and Information Technology Accessibility Standards (36 CFR 1194)
- Office of Management and Budget (OMB) Circular A-130
- Sections 504 and 508 of the Rehabilitation Act (29 U.S.C. § 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), August 7, 1998
- VA Directive 6500, Information Security Program
- VA Handbook 6500.3, Certification and Accreditation
- VA Handbook 6500.5, Incorporating Security and Privacy into the System Development Life Cycle
- Office of Enterprise Development (OED) ProPath Process Methodology [http://\[REDACTED\]](http://[REDACTED])
- PMAS portal [http://\[REDACTED\]](http://[REDACTED])
- Technical Reference Model (TRM)
- National Institute Standards and Technology (NIST) Special Publications
- VA Information Technology (IT) Program Management (VA Handbook 6062), no date
- VA Facility Directory [http://\[REDACTED\]](http://[REDACTED])
- VA Enterprise Architecture (EA) - The P/PMS Contractor shall ensure that all projects adhere to the one VA EA [http://\[REDACTED\]](http://[REDACTED])
- The Program Managers' Guide to the Integrated Baseline Review Process (Office of the Undersecretary of Defense), April 2003 [G]

- FISMA <http://www.fis.gov>

Any regulations related to security may impose access restrictions or other protection related limitations on the system.

4. Interfaces

The CRM COTS product is the only User interface leveraged by this solution. No external systems currently interface with the CVT product. For detailed descriptions of the current solution architecture and anticipated future architecture in subsequent releases, please refer to the SDD.

4.1. Communications Interfaces

MS Dynamics CRM uses web services to access and manipulate data resources from outside data repositories and interact with enterprise tiered platform services. These services allow implementers to write applications using MS Visual Studio or other development tools by referencing the platform's web services. The MS Web Services are interoperable with non-MS platforms. The MS Dynamics CRM Software Development Kit (SDK) includes the following Web Services:

- Discovery Web Service - The Discovery Web Service is a mechanism to find the correct endpoint for the organization web service.
- Metadata Web Service - The Metadata web services provide methods to read and write metadata for an organization including definitions for entities, attributes, and relationships.

Extensible Markup Language (XML) Web and Software Services:

- Simple Object Access Protocol (SOAP) - SOAP is the communication protocol for XML Web Services. SOAP defines the XML format for messaging. SOAP also enables MS Dynamics CRM to perform remote procedure calls for applications built on COM or CORBA instead of the latest and more flexible document style messaging where SOAP is a wrapper around an XML document.
- XML Web Services - MS Dynamics CRM uses XML Web Services as a building block for distributed computing. XML Web Services are a flexible and interoperable vehicle to integrate and communicate with other applications regardless of the language or platform and is a key ingredient in a SOAP-based web-services environment.
- XML/SOAP Security - MS Dynamics CRM uses Web Services (WS) Security while using SOAP to exchange data via XML documents supporting various security models and encryption technologies. In brief, SOAP Security Web Services provide a vehicle for security related information targeted at a specific receiver using WS Routing.
- WSDL

Client Side Scripting

- Java Script - Client-side scripting includes the capabilities to perform business logic and actions from the MS Dynamics CRM Web or Outlook clients. It also includes capabilities to add the user interface elements to integrate MS Dynamics CRM with other applications.

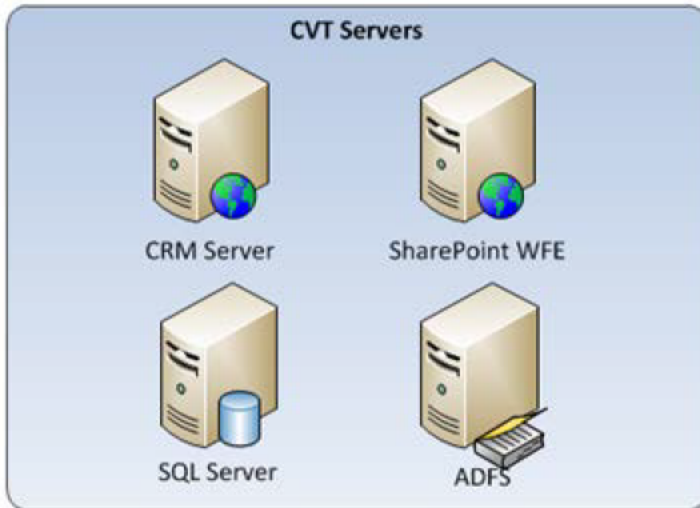
Other Protocols

- Hypertext Transfer Protocol (HTTP)/Hypertext Transfer Protocol Secure (HTTPS) - HTTP functions as a request-response protocol in the client-server computing model. HTTPS is a secure HTTP connection. Instructions in Section A.27

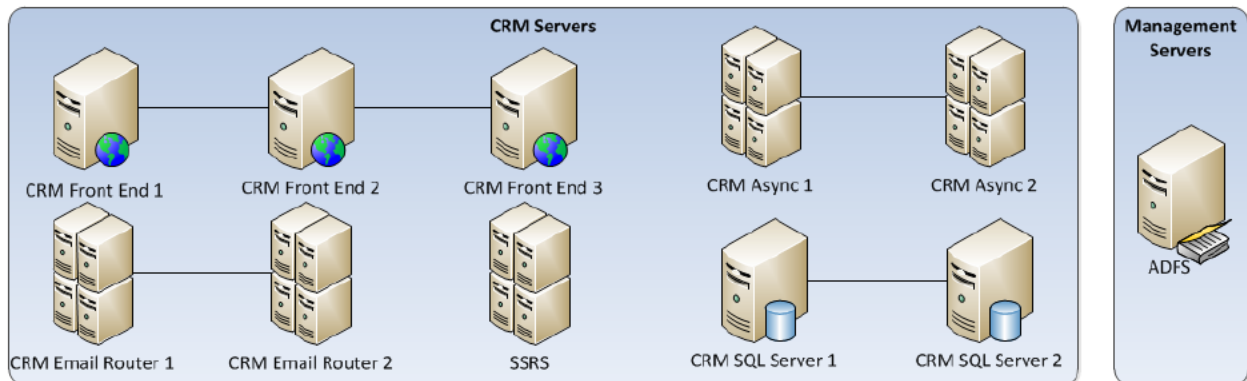
4.2. Hardware Interfaces

This document section is currently under development. The current, development & production environments are reflected in the diagrams below:

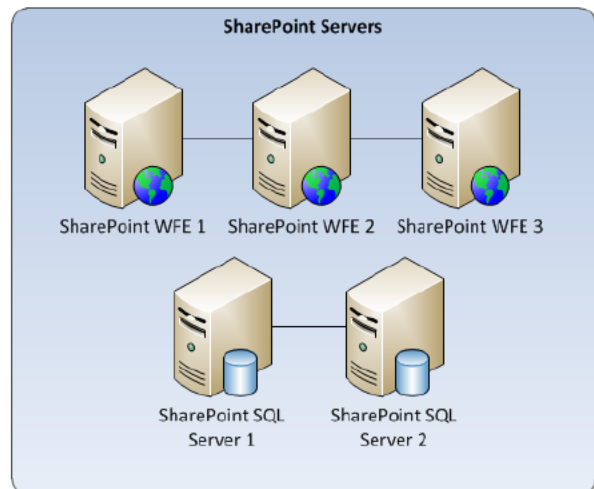
CRM Development Environment:



CRM Production Environment:



Name	Type	RAM (GB)	CPU	HD (GB)
	CRM Front End 1	32	8	140
	CRM Front End 2	32	8	140
	CRM Front End 3	32	8	140
	CRM Async 1	32	8	140
	CRM Async 2	32	8	140
	CRM Email Router 1	8	1	100
	CRM Email Router 2	8	1	100
	CRM SQL Server 1	128	16	2000
	CRM SQL Server 2	128	16	2000
	SSRS	32	4	140
	ADFS	8	1	100
	SharePoint WFE 1	28	8	170
	SharePoint WFE 2	28	8	170
	SharePoint WFE 3	28	8	170
	SharePoint SQL Server 1	32	8	2000
	SharePoint SQL Server 2	32	8	2000
Total		620	119	9650



4.3. Software Interfaces

The following is an approximate list of software that will be utilized with the CVT solution, but the list will be built by our selected developer during our design and integration sessions:

- MS Dynamics CRM 2012
 - MS CRM Sales Standard/Professional
 - MS CRM Customer Service Standard/Professional
 - MS CRM Suite Standard/Professional
 - MS Dynamics CRM SDK
- MS Internet Explorer (v9)
- MS Windows 7
- MS Office Suite 2010
- MS SQL Server 2008 R2
- MS Windows Server

4.4. User Interfaces

In general, MS Dynamics CRM 2012 provides a primary console interface based on the look and feel of Internet Explorer that will be configured for VA CRM. When configuring entities within MS Dynamics for VA CRM, the MS Dynamics system generates GUIs for Users to interact with the data. The user interfaces include lists with customizable views, find, and advanced find, editors for all entities, lookup dialogs, and various multiple user interfaces.

The following list presents a few of the highlight user interface features of the CRM 2012 system:

- Seven user categories:
 - VISN Lead
 - FTC
 - TCT
 - CVT Scheduler
 - Telehealth Provider / Clinician
 - Telehealth Presenter
 - CVT User
- Types of interactions:
 - CVT Resource administration
 - Administering Facilities and Sites
 - Administering Resources and Resource Groups
 - Administering MTSAs and TSAs
 - CVT Scheduling
 - Service Activity Creation
 - Scheduling
- Reporting
 - Users are able to create their own Dashboards and Reports
- Office Productivity
 - MS Dynamics CRM integrates with MS Outlook, Word, Excel, etc.
- Advanced Find:

- User-creatable ad-hock queries
- Option to save these queries as personal views with configurable columns and sorting criteria
- Option to share these personal views with other users
- User indicators on forms
 - Red asterisks denote required fields
 - Blue plus signs denote recommended fields
 - Magnifying glass icon indicates a lookup field
- Administrative User capabilities
 - Create/Modify system forms, views, charts, dashboards
 - Create/Modify Workflows and Dialog Processes

5. Legal, Copyright, and Other Notices

Not Applicable.

6. Purchased Components

TBD

7. User Class Characteristics

The specifications of the CVT solution, as defined in the SDD, are authored to be directly compliant with User Class characteristics set forth as guidelines by the VA Handbook 6102. The specific directives that are used to define the general characteristics of intended users of the CVT solution are as follows:

1. VA websites must be designed, developed, and tested for a broad range of visitors, including those with lower-end hardware and software capabilities, e.g., browsers that are one version older than current version (http://[REDACTED], checklist item 9).
2. VA Web sites should be organized in a logical and useful way by subject (topic, tasks, services, life events), by audience group, by geographic location, or any combination of these factors as the primary navigation (http://[REDACTED], checklist item 10).
3. VA Web sites must focus on helping the Web site's target audience(s) to efficiently find the services and information they seek from VA. VA home pages must help Web site visitors to get to the content they need and want most, with minimal complexity of navigation and the fewest drilldowns. Content must be easy to read and without excessive text and/or graphics. Web content managers must ensure that all VA Web content is spell-checked and grammatically correct prior to posting that content (http://[REDACTED] checklist item 11).
4. VA Web managers must ensure that all home pages, all major entry points, and all navigational elements of their VA Web sites are written in plain language, which is language designed so a Web site's typical visitor can easily understand the material presented in one reading. Internet Web pages should be written at a seventh grade level whenever possible; all Web pages must be written at the most elementary level of understanding for the subject matter presented to the Web site's target audience. VA Web

page content should be spell-checked and grammatically correct prior to posting that content ([http://\[REDACTED\]](http://[REDACTED]), checklist item 12).

5. VA Web sites must include common terminology and placement where specified, using wording that is simple, straight forward, and concise to optimize comprehension of VA Web content and to ease use of navigational pathways. Pages must share common branding attributes such as agency logos, official seals, and other recognized attributes that identify the Department. Material relevant only to the intranet must not appear on Internet pages; e.g., non-public information about VA employees, Intranet links on the Internet, links to internal VA resources ([http://\[REDACTED\]](http://[REDACTED]), checklist item 13).

8. Estimation

A Function Point Analysis was requested and closed on January 17, 2014. Per Chad Lynch, Project Management Service/Program Planning & Oversight Software Metrics & Estimation Team, function point sizing for a stand-alone COTS package that does not require modification to existing VistA applications is not needed. A second request will be submitted in the future once the CVT scheduling tool is integrated with VistA.

Function Point Analysis Results Table

Project Software Functional Size and Size-based Effort and Duration Estimate						
	Application					
Item	A	B	C	D	E	Total
Counted Function Points						
Estimated Scope Growth						
Estimated Size At Release						
Size-based Effort Estimates					Labor Hours	Probability
Low Effort estimate – with indicated probability, project will consume no more than:						
High Effort estimate -- with indicated probability, project will consume no more than:						
Size-based Duration Estimates					Work Days	Probability
Low Duration estimate – with indicated probability, project will consume no more than:						
High Duration estimate -- with indicated probability, project will consume no more than:						

[Insert Cumulative Probability (“S-curve”) Charts here]

Attachment A - Approval Signatures

This section is used to document the approval of the Requirements Specification Document during the Formal Review. The review should be ideally conducted face to face where signatures can be obtained 'live' during the review however the following forms of approval are acceptable:

1. Physical signatures obtained face to face or via fax
2. Digital signatures tied cryptographically to the signer
3. /es/ in the signature block provided that a separate digitally signed e-mail indicating the signer's approval is provided and kept with the document

The Chair of the governing Integrated Project Team (IPT), Business Sponsor, IT Program Manager, and the Project Manager are required to sign. Please annotate signature blocks accordingly.

REVIEW DATE:

SCRIBE:

Signed:

, IT Project Manager

Date:

Integrated Project Team (IPT) Chair & Project Manager

Signed:



Date:

VHA Office Of Telehealth Services (Business Sponsor)

Signed:



Date:

IT Program Manager

Template Revision History

Date	Version	Description	Author
Sept 2012	1.8	Changed Function Point Counting Mail Group (A34)	Process Management
January 2012	1.7	Added 508 office information	Process Management
August 2011	1.6	Update to current ProPath documentation standards	Process Management
May 2011	1.5	Amended Approval Signature instructions	Process Management
November 2010	1.4	Minor changes to Approval Signatures page, corrected Template Revision History	Process Management
October 2010	1.3	Updated the help text for the Business Rules, Disaster Recovery Specifications, Document Specifications, and Accessibility Specifications sections and added the last two sentences of the last paragraph in blue on page i.	Process Management Service
October 2010	1.2	Updated Approval Signatures to comply with PMAS 2.0	Process Management Service
February 2010	1.1	Updated signature blocks	OED Process Management Service
July 2009	1.0	Initial OED ProPath release	OED Process Management Service