Department of Veterans Affairs (VA)

Benefits Claims Decision Support System (BCDSS)

System Administration Manual



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Revision History

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# Introduction

This document describes the system administration functions required to install, deploy, and maintain the BCDSS application which is to be used for ingestion of VA historical claims data.

## Purpose

The purpose of this guide is to provide instructions for preparing platforms on the BCDSS software build and for deploying the BCDSS application to a point where the application can be successfully run.

The application deployments described in this document is for a standalone instance of the BCDSS software. The application server and database installation instructions are covered in the separate installation guide.

## Scope

The scope of information in this document is to explain BCDSS application deployments and maintenance of all BCDSS components (Ex: database, web application, and related servers). This document will be kept current for the software produced in each sprint of the development cycle, as well as for each release of the product.

This guide assumes baseline virtual machines have been created with the appropriate Operating System (OS) (Ex: Windows Server 2012, Red Hat Enterprise Server etc.,) and application software (e.g., Apache Tomcat, Oracle database, and so on). The instructions in this guide deal with the configuration of the baseline VMs and the deployment of the BCDSS application.

The installation of required application software components are explained in a separate Installation guide document.

## Assumptions and Dependencies

Users of this document are assumed to have a working knowledge of the target platform OSs and their native editors (Ex: VI, Eclipse, Putty etc.,), and the COTS software applications used by the application.

# System Overview

## System Application

The Veterans Affairs (VA) established the BCDSS project to demonstrate the feasibility of using automation and predictive models to calculate the combined disability determination (CDD) for specific conditions contained within Veteran claims for disability compensation. Such capabilities could help the VA improve the quality and consistency of its current claims adjudication decisions, and potentially could provide Veterans with the ability to obtain the likely outcome of their claims for benefits at the time of filing. Both outcomes could significantly improve the veteran experience and the efficiency of VA’s claims adjudication process

The BCDSS system is responsible for the ingestion of VA historical claims data and the current claim for the application of a predictive model for the automated claim adjudication and rating. The current pilot scope addresses ear and knee predictive models stored within a managed library, to claims with related historical claimant data to produce issue-specific CDDs for supplemental claims for increases.

## System Organization

This following table describes the organization of the BCDSS system components and the interactions.

**Dev Integration Environment**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **Operating System** | **Server Name** | **Description** |
| Application server | Windows 2012 server | 96.127.74.35 | Apache tomcat 8.0.x |
| Database server | Windows 2012 server | 96.127.74.35 | Oracle 11g |

**Pilot Environment**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **Operating System** | **Server Name** | **Description** |
| Application server | Windows 2012 server |  | Apache tomcat 8.0.x |
| Database server | Windows 2012 server |  | Oracle 11g |

## Information Inventory

As part of pilot project scope, the BCDSS project maintains Dev and Pilot environments on the FTL sandbox server. Each environment consists of a Tomcat application server and Oracle database.

### Resource Inventory

TBD

### Report Inventory

TBD

## Processing Overview

The BCDSS system is a web-based application that will utilize an approved and modern framework of technologies. The modeling engine performs the analysis of the Claim data utilizing the models.

The application has three user roles and responsibilities such as Rater, Modeling Agent and Administrator.

The BCDSS pilot implementation uses the VA’s FTL-GC Sandbox (Amazon-based) cloud environment. BCDSS application will not integrate with the real-time VBMS web services as part of the pilot implementation. Instead, Mock web services will be developed by the BCDSS team to test the service integration.

## Communications Overview

The application users connected to the BCDSS Web Application with a web browser. The web browser uses Hypertext Transfer Protocol (HTTP) with TLS/SSL. The certificate of the server is provided to the browser which enables the user to verify the identity of the server as well as provide encrypted communication between the browser and the server.

## Security

BCDSS system uses Spring Security to implement a Role Based Access Control model based upon HTTP Session Authentication. BCDSS system uses both a username and password as the credential set. This state-full mechanism uses a token system stored within the server’s session context that is provided by the client’s cookie store.

# Systems Administration

The system administrators are able to manage user access and user permissions to the BCDSS application.

## User and Group Accounts

The Application has the following user roles and responsibilities.

|  |  |
| --- | --- |
| User Group | Description |
| Model Agent | Executes routine that verifies that a new model conforms to system specifications  Makes controlled edits to existing models within the system |
| Rater | Applies the models under the control of the system |
| Administrator | Creates new users  Provides user permissions.  Defines what formats and destinations are available for predictive models. |

### Adding/Deleting Users

TBD

### Setting User Permissions

TBD

### Adding/Deleting User Groups

TBD

### Setting User Roles/Responsibilities

TBD

## Server Administration

The BCDSS application has two Tomcat servers and 2 Oracle database server instances to serve the Dev and Pilot environments.

### Creating Directories

TBD

### Building Drive Mappings

TBD

## System Backup Procedures

TBD

### Maintenance Schedule (Daily, Weekly)

TBD

### Off-Site Storage Procedures

TBD

### Maintaining Backup Log

TBD

## System Maintenance

TBD

### Monitoring Performance and System Activity

TBD

### Installing Programs and Operating System Updates

As part of the pilot scope, the BCDSS application is running on a Windows 2012 server which is located in VA’s FTL (Amazon-based) cloud environment. FTL team is responsible for OS patches and system updates.

### Maintaining Audit Records of System Operation

TBD

### Maintenance Reports

TBD

## Security Procedures

TBD

### Issuing IDs and Passwords

TBD

### License Agreements

FTL team is responsible for software licenses.

## Network Maintenance

FTL team maintains the network.

### LAN Design

N/A

### Communications Equipment

N/A.

## Inventory Management

FTL Team is going to maintain inventory management.

### Maintaining Hardware and Software Configurations

N/A.

### Installing Software/Hardware (New, Upgrades)

N/A.

### Maintaining Lists of Serial Numbers

N/A.

### Maintain Property Inventory

N/A.

## Training Backup Administrator

N/A

### End-User Support - Procedures for Support and Contract Information

N/A

### Escalation Procedures

TBD.

## Documentation

System administrators can refer installation guide for application software installation process.

### Troubleshooting Issues

TBD.

## Database Maintenance

TBD.

### Database User/Group Access

TBD

### Adding/Deleting Users to Database

TBD

### Setting User Permissions for Database

TBD

### Adding/Deleting Groups for Database

TBD

### Re-indexing Database

**TBD**

### Packing/Compressing Database

TBD

### Data Entry/Modification/ Deletion

TBD

### Database Reporting

TBD

### Database Backup and Restore

TBD

## Application Maintenance

### Application User/Group Access

TBD

### Adding/Deleting Application users

TBD

### Setting User Application Permissions

TBD

### Adding/Deleting Application Groups

TBD

### Procedures to Start and Stop the Application

The Developers are responsible to start and stop the application on the Dev environment server for startups and shutdowns. The Dev leads are responsible for Pilot environment server startups and shutdowns. The Development team is responsible to resolve application deployment issues.

### Application Flow Chart

TBD

### Description of Major Program or Sub-program Modules

TBD

# Appendices

The following appendices supply additional information about this document.

1. Terminology

The following table lists the terminology used in this document.

|  |  |
| --- | --- |
| **Acronym** | **Definition** |
|  |  |

1. References

The following documents are referenced in this document and/or provide information that augments the information in this document:

|  |  |
| --- | --- |
| [BCDSS\_Installation Guide and Release Plan.docx](https://bcdssteam.atlassian.net/wiki/download/attachments/13959189/BCDSS_Installation%20Guide%20and%20Release%20Plan.docx?api=v2) |  |

# Attachments

1. Approval Signatures

This section is used to document the approval of the BCDSS System Administration Manual during the Formal Review. The review should be conducted face to face where signatures can be obtained “live” during the review.

If unable to conduct a face-to-face meeting then it should be held via LiveMeeting and concurrence captured during the meeting. The Scribe should add /es/name by each position cited.

The Business Sponsor and Project Manager are required to sign.

REVIEW DATE:

SCRIBE:

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Signed: Date:

< Business Sponsor >

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Signed: Date:

< Project Manager >