Patient Statement Enhancement - Phase 2

Requirements Specification Document



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Department of Veterans Affairs

Revision History

Note: The revision history cycle begins once changes or enhancements are requested after the Requirements Specification Document has been baselined.

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| 12/15/2016 | 2.5 | Added Requirement ACJ007 to implement the correct missing transaction amount calculation; and ACJ015 to correctly fix Incomplete transactions for non-active bills. (CR# 432565)  Added US009 and Requirement AR001 to update the AR Adjustment menu option bill calculation. (CR# 414650)  Added US008 to include a new sort order version of the Auto-Correction Report  (CR #430031)  Added User Story US010 for FileMan spelling corrections. (CR #416592)  Added User Story US010 to account for data archiving requirements as discussed at the requirements elaboration meeting on 10/29/2015.  Updated requirement 3.1.2 to explicitly state that two CBS files are sent to AITC and that the file is sorted so that the primary site data is listed first.  Add detailed sub-requirements to AR reports requirements 8.1.1, 8.1.2, and 8.13 and updated AR Report mock ups in section 2.6.10.  Update requirement 2.1.2 to include DFN on the CBS account number  (CR# 440415). | Ray Matteson |
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| 02/16/2016 | 1.08 | Updated Figures 5 and 10, Section 2.10, and AITC descriptions throughout document. | Beth Easton |
| 02/11/2016 | 1.07 | Updated to reflect VA reviewer’s comments. | Erica Robertson/ Beth Easton |
| 01/21/2016 | 1.06 | Updated Figures and tables throughout RSD  Section Updates Include:  Section 1.2 Scope numbers 1 and 2.  Section 2 Overall Description, added new figure and table.  Section 2.6 added figures and description  Section 2.7 added and deleted tables  Updated descriptions in sections 2-9, 2-10, 2-12, 2-13, 2-14, 2-15, 2-16  Updated Section 3 Purchased Components Removed: global payment sections and text  Updated all subsections of section 2 to reflect latest business decisions | Erica Robertson/ Beth Easton |
| 01/06/2015 | 1.05 | Updates include cover page, version history and date.  Section updates include:  Section 1.2 -1.3, 2.4, 2.5 formatting and added specifications  Section 2.0 description updated  Tables 2-1, 2-3, 2-6 spelling and descriptions updated  Table 2-5 updated  Section 2.1 moved to Appendix A.2  Section 2.3 added verbiage for explanation  Section 2.4 updated and added enterprise requirement specification  Section 2.5- updated verbiage and added new table for PSE documentation  Figure 7- revised figure  2.6.1.1 added detail and a table for clarification  Section 2.6.1.3 spelling | Shawnee Blair/Heather Chatwin/Erica Robertson |
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| 10/29/2015 | 1.03 | Removed out of scope section and updated scope section. Updated cover page and footers. | Heather Chatwin |
| 10/18/2014 | 1.02 | The following sections were revised for the final draft:  Section 1.2.1: this section was added to address items that are out of scope for Phase 2 development.  Section 1.3: added additional reference material that was analyzed to create To-Be processes.  Section 2: updated the diagram and table descriptions,  Section 2.2: removed business rules but kept the place holder for the ten outstanding questions.  Section 2.6: Introduced and added workflows.  Section 2.7: Introduces functional specifications and revised requirements.  Section 3: added verbiage regarding the hardware and software components necessary for Phase 2 development. | Heather Chatwin |
| 10/1/2014 | 1.01 | Updated document per internal team review and requirement elaboration sessions. Updated cover page and footers. | Heather Chatwin |
| 9/16/2015 | 1.0 | Initial draft | Heather Chatwin  Tony Nixon |

Artifact Rationale

The Requirements Specification Document (RSD) records the results of the specification gathering processes carried out during the Requirements phase. The RSD is generally written by the functional analyst(s) and should provide the bulk of the information used to create the test plan and test scripts. It should be updated for each increment.

The level of detail contained in this RSD should be consistent with the size and scope of the project. It is not necessary to fill out any sections of this document that do not apply to the project. The resources necessary to create and maintain this document during the life cycle of a large project should be acknowledged and clearly reflected in project schedules. Do not duplicate data that is already defined in another document or a section in this document; note in the section where the information can be found.

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# Introduction

The remediation of the Veterans Health Information Systems Technology Architecture (VistA) Accounts Receivable (AR) process is required to provide a consolidated and easily readable patient statement from multiple treatment facilities during a monthly cycle. Enhancements to the AR system will increase Veteran satisfaction by mitigating concerns raised by Veterans Service Organizations (VSO) and individual Veterans, who have provided feedback to the Department of Veterans Affairs (VA) regarding poor customer service and poor business practices. Future development activities are dependent on Phase 1 and Phase 2 enhancements, as these enhancements will deploy best practices in financial and business processes, and align with the VA initiative to build Veterans Record Management (VRM) capability to enable convenient and seamless interactions.

The PSE project includes 3 development phases across 5 increments. Phase 1 will remediate existing payment cycle deficiencies and include an auto-correction job. Phase 1 will be coded and initial SQA testing will be performed in Increment 1. Phase 1 final Software Quality Assurance (SQA), User Functionality Testing (UFT), Initial Operability Capability (IOC), and deployment will be in Increment 3.

Phase 2 includes the creation of the Consolidated Patient Statement. Phase 2 will be coded and initial SQA testing will be performed in Increment 2. Phase 2 final SQA, UFT, IOC, and deployment will be in Increment 3.

Phase 3 includes making the Consolidated Billing Statement (CBS) available on-line through the HealtheVet portal and reporting capabilities. Phase 3 will be coded and initial SQA testing will be performed in Increment 4. Phase 3 final SQA, UFT, IOC, and deployment will be in Increment 5.

## Purpose

The purpose of this Requirements Specification Document (RSD) is to introduce the functional and technical requirements for Patient Statement Enhancements (PSE) for Phase 2. The intended audience for this document are PSE Office of Information and Technology (OI&T), the PSE Business Requirements Office, and other PSE stakeholders.

## Scope

This RSD focuses on the business rules and requirements for Phase 2 development. Items considered in scope for Phase 2 are listed below:

1. Enhance the Auto-Correction Batch process to include fixes for the Missing amount discrepancies. The enhancement detects the discrepancy and determines the appropriate dollar amount to use for the Auto-Correction logic when fixing missing amount discrepancies.
2. Enhance the Auto-Correction Batch process to include fixes for Incomplete transactions for non-active bills.
3. Update the Decrease/Increase Adjustment menu option so that bill calculations do not create account out of balance discrepancies, This is done by correctly including only incomplete transactions that should be considered for bill balance calculations.
4. Create a consolidated patient stamement across all VA Medical Center (VAMC) facilities. The Consolidated Billing Statement System (CBSS) will create a Consolidated Billing Statement (CBS), a data file for each Veteran that has visited one or more of the 150 VAMC sites. CBSS will receive patient statement data from the 150 VAMC sites and combine all of a Veteran’s monthly activity, including VAMCs visited, charges related to each visit, payments made toward debt and balance amounts (previous balance, current balance, and total amount due), and payment due date into a single monthly statement. Receiving statement data from the VAMCs will be accomplished through a scheduled batch process. Once the CBS data file is created, it is sent to Austin Information Technology Center (AITC) for formatting and sent to the print vendor for printing and mailing. When the AITC has sent the print vendor the statement print files, AITC/CCPC will send print acknowledgement to CBSS for processing of updates of the CBS status.
5. Existing VistA AR reports will be analyzed and modified as needed to work with the CBS processes.
6. Each VAMC will provide CBSS with the oldest bill balance and amount for each Veteran on a nightly basis. This information will be used to determine payment distribution. VistA AR will maintain the ability for VistA AR users to post Veteran payments at a site where the charge was incurred. Health Resource Center (HRC) personnel will continue to be able to post payments using pay.gov. CBSS will provide AITC/Lockbox the payment allocation for Lockbox payments.
7. As-Is and To-Be analysis of payment processing (the following interfaces will not be enhanced during the PSE project, but remain in-scope for integration and regression testing; to ensure that current processes are not impacted negatively and continue to work with the development of CBSS):
8. Customer Relations Management (CRM) As-Is payment processing will remain intact and not enhanced during Phase 2 development (see Performance Work Statement (PWS) requirement 5.12 in section 2.7.4)
9. Pay.gov As-Is payment processing will remain intact and not enhanced during Phase 2 development. (See PWS 5.13 in section 2.7.4)
10. Treasury Offset Program (TOP) As-Is payment processing will remain intact and not enhanced during Phase 2 development (see PWS 5.14 in section 2.7.4)
11. Debt Management System (DMS) As-Is payment will remain intact and not enhanced during Phase 2 development (see PWS 5.15 in section 2.7.4)
12. Consolidated Co-Payment Processing Center (CCPC) Print Vendor As-Is processing will remain intact and not enhanced during Phase 2 development (see PWS 5.16 in section 2.7.4)
13. Lockbox Bank of America As-Is payment processing (on-line and by mail) will remain intact and not be enhanced during Phase 2 development (see PWS 5.17 in section 2.7.4)
14. The Financial Management System (FMS) As-Is processes will not be enhanced during Phase 2 development
15. To-Be processes are introduced in section 2.6 (see sections 2.6.1 through 2.6.9)
16. Analysis of the statement data transferred to AITC/CCPC. To-be Consolidated Patient Statement file layout and additional technical requirements are available in the Phase 2 System Design Document (SDD).
17. Analysis and data mapping of the data transferred to the CBSS.

### Out of Scope

The following PWS requirements were determined to be out of scope.

| **PWS Reference** | **Requirement Test** | **Priority** |
| --- | --- | --- |
| PWS 5.5.1 BN 3.1 | The system shall assign a Veterans Health Administration (VHA)-wide, unique patient identifier for each customer. | High |
| PWS 5.5.1 BN 3.2 | The system shall assess a single, monthly administrative charge for a Veteran’s delinquent account on the consolidated patient statement. (Contact Chief Business Office (CBO) Revenue regarding the policy) | High |
| PWS 5.5.1  BN 3.4 | The system shall provide functionality to ensure that payments made by Veterans at a site are applied to the appropriate charges regardless of the VA facility at which the charge originated. This covers all payments and repayment plans made by Veterans in person at a VA facility. | High |
| PWS 5.5.1 BN 4.1 | The system shall interface with VistA AR to pass VHA-wide, unique, identifier to the Consolidated Co-payment Processing Center (CCPC). | High |

## References

The following documents were used reference material for creating this RSD and To-Be process diagrams:

* Patient Statement Enhancements (PSE) Project Work Scope (PWS), section 5.5
* Agent Cashier Manual, last updated May 2015
* AR User Manual, last updated March 1995
* Lockbox Training Guide, revised September 2007
* CCPC LBX system data flows
* Clerks AR Menu Part 1, last updated May 2015
* Clerks AR Menu Part 2, last updated November 1994
* MPI\_PD Technical Manual, last updated September 2015
* MPI\_PD User Manual, last updated September 2015
* VA-Financial Policy Volume XII Chapter01A

# Overall Description

The VHA CBO is requesting the development of CBSS to capture, store, and to process Facility Patient Statement (FPS) data received from all sites into a monthly CBS. The diagram below provides a high level overview of CBSS capabilities, interfacing systems, and affected user groups. The box in the center of the diagram illustrates the CBSS, the blue circles in the CBSS box are the high level capabilities of this new system under development during PSE Phase 2 (Load FPS data, Generate CBS, Manage Bill, Manage Batch, and Manage ICN processes are the high-level capabilities of CBSS). The actors to the right and to the left of the CBSS box illustrate the user groups and systems that are affected by the development of the new system; the actors to the left of the CBSS box will provide CBS data to CBSS. The actors to the right of the CBSS box will receive CBS data and manage scheduled job processes.

The ability to View the CBS will be delivered through enhancements to the HRC/CCPC application by the HRC team. It is represented in the RSD for integration testing. AITC will be making changes to the AITC/CCPC application, in support of the CBS, to provide the ability to send FPS files to CBSS. AITC will also be making changes to AITC/Lockbox in order to receive a file of bill information containing payment allocation for patients that visit multiple sites.

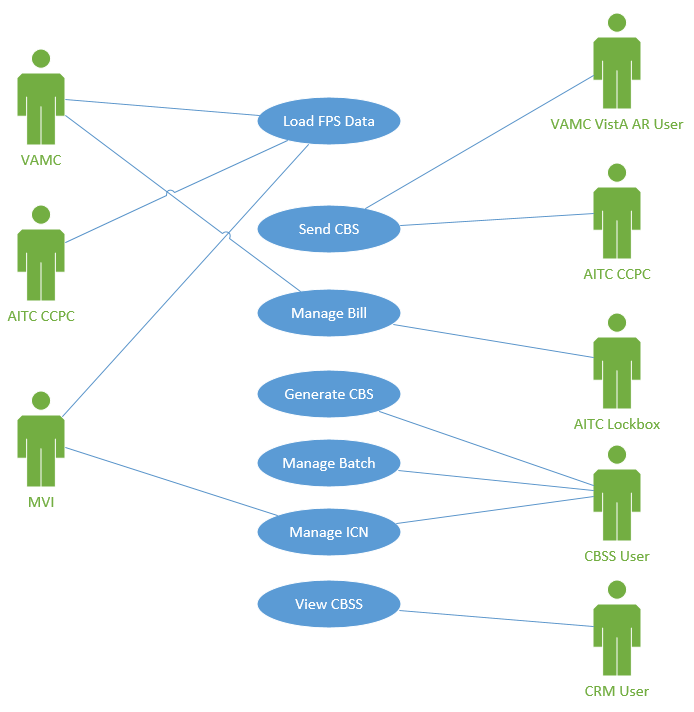


Figure ‑: CBSS New Processes and Interactions with Actors

The following table provides a list of user roles that correspond to each actor.

Table ‑: Actors and User Roles

| **Actors** | **User Roles** |
| --- | --- |
| AITC/Lockbox | System |
| VAMC/ VistA AR Users | Agent cashiers Located at the VAMC & Cash Management (Consolidated Patient Account Center (CPAC) |
| Facility revenue technicians |
| HRC |
| Veteran Service Technician – 1st party accounts receivable  (CPAC) |
| Financial Services Center (FSC) Exception Handling |
| CRM Users | Facility revenue technicians |
| HRC |
| Master Veteran Index (MVI) | System |
| AITC/ CCPC | System |

The following table provides a brief description of the actors that play a role in the CBSS Processes identified in [Figure 1](#CBSS_Use_Case_Digram).

Table ‑: CBSS Actor Descriptions

| **Actors** | **Description** | **As-Is or To-Be** |
| --- | --- | --- |
| Lockbox | First Party Lockbox (LBX) supports the centralized collection of checks and credit card payments (mail and on-line payments) at a lockbox bank (i.e., Bank of America) and automates the steps necessary to apply those funds to a patient’s account that resides at the VAMCs. The lockbox bank transmits the payment transactions electronically to AITC/Lockbox and these transactions are distributed to the appropriate VAMC for automatic posting to the patient’s account and subsequent reporting into the VA’s accounting system.  If for some reason a Lockbox payment cannot be processed as received, payment information is sent to the Exceptions Handling team to research and coordinate resolution and manual payment posting with VAMCs. | As-Is |
| VAMC/ VistA AR Users | There are 150 VA Medical Centers located across the U.S. These facilities use the VistA Accounts Receivable (AR) application to manage Veteran debt and payment transactions. VistA AR is the authoritative data source for all Veteran account information. | As-Is |
| CRM Users | The new CBS will be passed from AITC/CCPC to the HRC CCPC application, which will render a PDF for viewing in CRM. | To-Be |
| Master Veteran Index (MVI) | CBSS will register an interest with MVI all new DFN/Site combinations. MVI will send CBSS a notification when an ICN has been updated for any DFN/ICN for which CBSS has a registered interest. CBSS will retrieve the update from MVI through a HL7 interface engine (i.e., MIRTH) and update the Veteran record with new ICN. | To-Be |
| AITC/Lockbox | AITC/Lockbox receives first party lockbox payments, and will receive payment allocation from CBSS. AITC/Lockbox will then distribute payments to the VAMCs. Lockbox payments that cannot be processed are sent to the Exceptions Handling team for research and efforts to resolve errors are coordinated with the VAMCs. | To-Be |
| AITC/CCPC | CBSS sends AITC/CCPC CBS data files. AITC/CCPC confirms data was received, formats data and sends data to the print vendor for mailing, and to HRC/CCPC for PDF generation and display in CRM. AITC/CCPC sends print acknowledgement files to CBSS and VAMC (VistA). | To-Be |

The following table provides a brief description of the CBSS processes identified in [Figure 1](#CBSS_Use_Case_Digram).

Table ‑: CBSS Capabilities and Brief Descriptions

|  |  |  |
| --- | --- | --- |
| **CBSS Capability** | **Description** | **As-Is or To-Be** |
| Load FPS Data | This module provides the ability to receive and load FPS data into CBSS. | To-Be |
| Generate CBS | This module provides the ability to generate consolidated patient statements. During this process, CBSS will execute business rules to aggregate transactions and calculate totals to format a CBS for each unique patient/unique account number. | To-Be |
| Send CBS | This module provides the ability to create CBS data files and send to AITC/CCPC. | To-Be |
| Manage Bill | This module provides the ability to receive and load oldest bill information from each VAMC and send the payment allocation to AITC/Lockbox. | To-Be |
| Manage Batch | This module provides the ability to view batch jobs, configure the scheduling of a batch job, view job status, manually run a job, and view the status of a completed job. | To-Be |
| Manage ICN | This module provides the ability to register an interest in ICN changes with MVI and receive updates of Veteran identity from MVI. | To-Be |

The following diagram depicts the context of interactions of the systems, environments, and actors involved in the CBS processes.

Consolidated billing statement context diagram


Figure ‑: Consolidated Billing Statement Context Diagram

## Accessibility Specifications

The PSE project will adhere to all Section 508 requirements, which include compliance with the applicable requirements in the VHA Section 508 checklists (1194.21, 1194.22, 1194.24, 1194.31, and 1194.41) located at 508 Resources Link[[1]](#footnote-1) or as otherwise specified. Established checkpoints will ensure that accessibility is incorporated from the earliest possible design or acquisition phase and successfully implemented throughout the project.

The CBSS will include a new user role for managing batch processes and manually re-generating CBS data files. Section A.11 CBSS User of this document defines the role and responsibilities of this new user.

The table below defines the different levels of access to view the consolidated patient statement (as a form, or VistA AR data), and user access to CBSS.

Table ‑ User Access to Consolidated Patient Statement

| **Users** | **Transactions or PDF Version** | **Application** | **Consolidated Statement**  **Transactions** |
| --- | --- | --- | --- |
| Agent cashiers Located at the VAMC & Cash Management (CPAC)  Only users that can post payments | Transactions | VistA | No |
| Facility revenue technicians (Located at a site) | PDF | CRM | Yes |
| Health Resource Center (HRC) | PDF | CRM | Yes |
| Veteran Service Technician – 1st party accounts receivable  (CPAC) | Transactions | VistA | No |
| FSC Exception Handling | Transactions | VistA | No |

## Business Rules Specification

This section identifies the business rules for the PSE project.

### CBS Person Traits

CBSS shall use Person Traits from the FPS file with the most recent site visited. Each VAMC will send CBSS the most recent Date Bill Prepared (subject to change per VistA Maintenance Team review) in the FPS data. CBSS will use this date to determine, across sites, which one represents the most recent Veteran activity.

### CBS Veteran Mailing Address

CBSS shall use the Veteran Mailing Address from the FPS file with an AR Flag or the last site visited on the CBS. CBSS will use the most recent Date Bill Prepared (subject to change per VistA Maintenance Team review) from the FPS data to determine the site with the most recent Veteran activity. CBSS will use the following logic to determine the address.

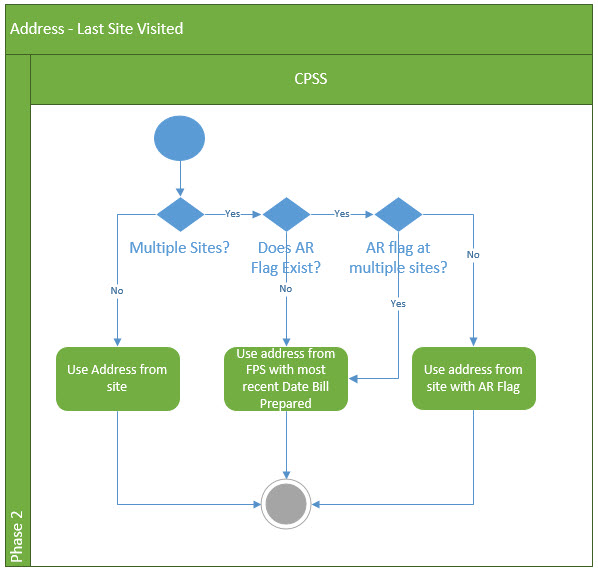


Figure ‑: Veteran Address - Last Site Visited Rules

### CBSS Payment Distribution

The CBSS shall determine payment distribution according to the oldest debt. Each VAMC will calculate and send CBSS a nightly update of the ICN, Site, DFN, oldest debt balance and date. CBSS will then send AITC/Lockbox the payment allocation for each Veteran who has visited multiple sites, the oldest debt date will be used to determine the payment allocation. The run frequency may be adjusted based on results of performance testing.

Multiple sites will be based on the Veteran having billing information from more than one site in the nightly payment files.

### CBSS User Access

The CBSS shall require two factor login access using the Personal Identity Verification (PIV). CBSS will interface with the Identity and Access services to authenticate and authorize access to the system.

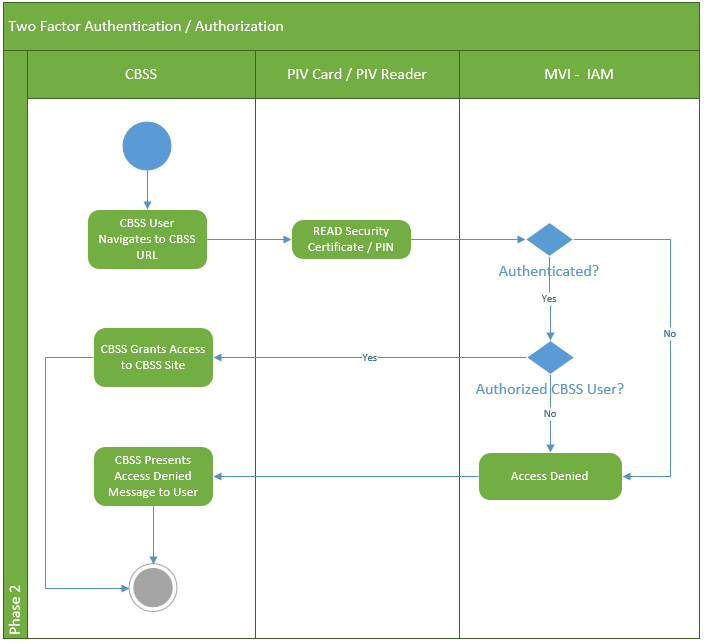


Figure ‑: Two Factor Authentication / Authorization

## Design Constraints Specification

PSE will adhere to all technical standards published in VA Handbook 6102, as well as all security standards described under the Security Specifications section of this document.

* Proposed design of the consolidated patient statement will comply with VistA, VHA Security, Privacy, Identity Management, business rules, and functional and non-functional requirements addressed in this document.
* The number of statements to be mailed during a month must not exceed 110,000 a day, as it would impact HRCs ability to manage call volume.

## Disaster Recovery Specification

The PSE development team shall utilize the existing Disaster Recovery Plan for the VistA AR application as there are no changes to this plan for the PSE project.

The PSE development team shall document the Disaster Recovery Plan including a rollback strategy prior to deployment (see enterprise requirement below).

|  |  |
| --- | --- |
| ENTR949 | Applications shall document a rollback strategy prior to deployment. |

The PSE Disaster Recovery Plan shall identify the activities that are necessary to execute temporary information system processing capabilities, repair damage to the original system, and restore operational capabilities at the original or new facility. Recovery strategies will include the sequence of activities as well as detailed procedures for the technical recovery of operations until the system can be reconstituted.

In compliance with the requirements established, the system is classified as “essential support” as defined in the AITC Disaster Recovery Services (Per AITC DR procedures this includes onsite tape backup/restore and Backup Server’s for PSE-CBSS Production Servers). PSE Team will work with AITC/Service Delivery and Engineering (SDE) on the Application Contingency Plan maintained by CDCO, for specifics on the Disaster Recovery (DR), and high availability procedures.

## Documentation Specifications

PSE project documentation will comply with existing PMAS policies and ProPath templates. PSE project documentation deliverables are listed in the PSE PWS. The PSE project requires updates to VistA documents and CBSS documents identified in the table below.

Table ‑ PSE Documentation Requirements

| **Document** | **Description** |
| --- | --- |
| VistA AR User Manual | The VistA AR User Manual will be updated to reflect enhancements made to the application. |
| VistA AR Technical Manual | The VistA AR Technical Manual will be updated to reflect enhancements made to the application. |
| VistA AR Security Guide | The VistA AR Security Guide will be updated to reflect enhancements made to the application. |
| VistA AR Installation Guide | The installation guide will be updated to include all requirements associated with initial installation/implementation. |
| VistA AR Deployment Plan | A new Deployment Plan will be created for VistA AR. |
| VistA AR Security Guide | The Security Guide will be updated to include all security related changes to VistA AR. |
| VistA AR Release Notes | A new Release Notes will be created for VistA AR. |
| CBSS User Manual | A new User Manual will be created for CBSS. |
| CBSS Security Guide | A new Security Guide will be created for CBSS. |
| CBSS Installation Guide | A new installation guide will be created for CBSS and include all technical and physical requirements for hosting, housing, operating and maintaining the system hardware and software, and all requirements associated with initial installation/implementation. |
| CBSS Deployment Plan | A new Deployment Plan will be created for CBSS. |
| CBSS Security Guide | A new Security Guide will be created for CBSS. |
| CBSS Release Notes | A new Release Notes will be created for CBSS. |
| CBSS Production Operations Manual (POM) | A new POM will be created for CBSS. |

## Functional Specifications

This section introduces the new CBSS system processes and VistA AR enhancements to be implemented during Phase 2 of the PSE project to support the functionality to produce a consolidated monthly patient billing statement.

### Load FPS Data

This CBSS process will be a scheduled batch job that when triggered will load the FPS data from AITC/CCPC. Prior to loading the file, CBSS will perform basic validation to ensure the data is not corrupt or the file is not empty. It is assumed that duplicate patient transaction data is not received per site. If data validation is successful, CBSS will save the data. If validation fails, an error message will be generated. A CBSS user will work with AITC to correct and retransmit the file. Upon completion of the job an email notification will be sent to the PII email distribution group along with a success or failure specific subject. The email will contain a list of all files processed and their status. The email subject and content will be defined during development.

The following figure illustrates the process by which FPS data is sent from all 150 VAMC locations 15 – 20 times a month, according to last name, to AITC/CCPC for processing and validation then on to CBSS for loading.

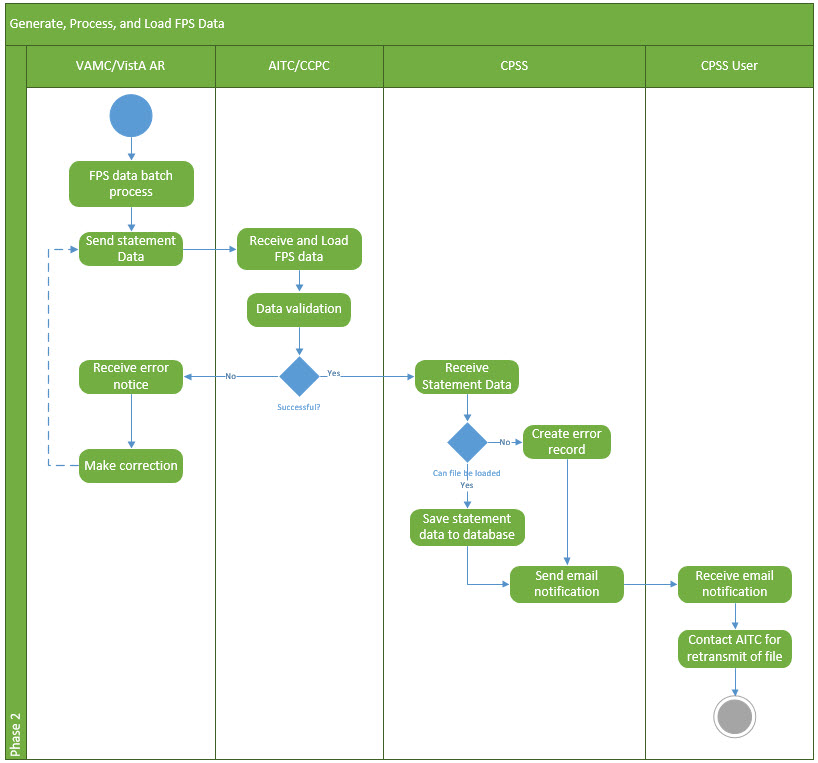


Figure ‑: Generate, Process and Load FPS Data

### Generate CBS

This module provides the ability to generate consolidated patient statements. The figure below illustrates the CBSS process of creating the CBS. The process begins when the Generate CBS batch job is executed. It includes the business logic to aggregate and calculate patient statement transactions into a consolidated monthly patient statement and stored in the database. The diagram below depicts the detailed process of selecting each new patient, consolidating that patient’s data, storing it in the database, and then repeating the process until no more new patients exist that need a consolidated patient statement.

CBSS will display a successful notice when the job is complete. CBSS will display an error notification if it is unable to generate a CBS. Upon completion of the job an email notification will be sent to the PII email distribution group along with a success or failure specific subject. The email will contain a count of statements processed and their status. The email subject and content will be defined during development.

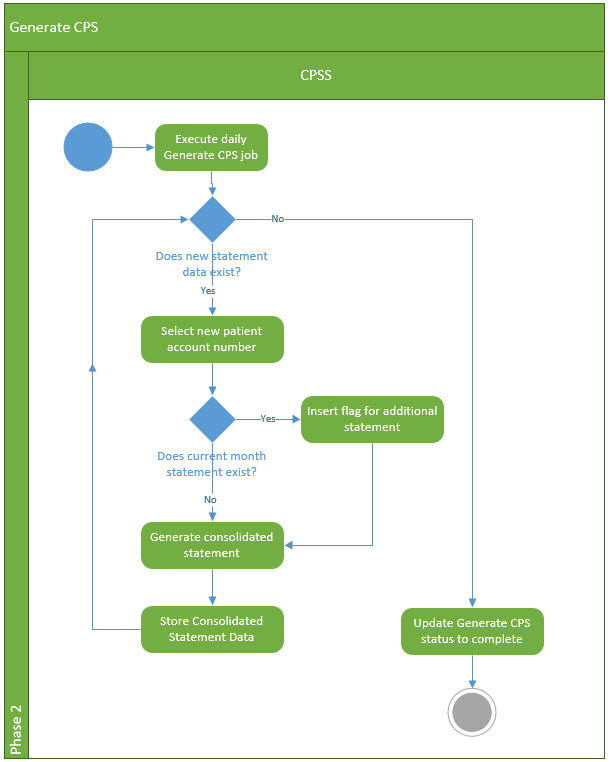


Figure ‑: Generate CBS

### Send CBS

This module provides the ability to create CBS data files and send them to AITC/CCPC. The process begins when the Generate CBS batch job is executed. Each CBS created in the Generate CBS batch job will be selected and inserted into a file located on the FTP server for pick up by AITC/CCPC. File size will be optimized during testing. Once all available CBS data has been written to a file, the job will save the files to the FTP server.

Upon completion of the job an email notification will be sent to the DNS email distribution group along with a success or failure specific subject. The email will contain a list of all files processed and their status. The email subject and content will be defined during development. AITC/CCPC will pick up the files, format them and send them to the print vendor for printing and mailing.

If an error occurs during the Send CBS process, no files will be saved to the FTP server. CBSS will display an error notification in the status.

When the Send CBS process is ran, CBSS will perform a check to see if the “Generate CBS" is actively running. If the Generate CBS process is running, the Send CBS batch job will not be started. CBSS will attempt a re-start every 15 minutes and will stop retrying after 2 hours. If it stops due to the 2 hour retry timeout, CBSS will send an email notification to the distribution group to notify that the job did not run and needs to be manually started.

### Update Print Acknowledgment

AITC/CCPC will send CBSS and VistA AR print acknowledgements (received from the billing statement print vendor). CBSS will load the print acknowledgement files received from AITC/CCPC and update the CBS status to complete for each statement in the received file.

The following screen mockup provides a visual of what the CBSS Update Print Acknowledgement status screens may look like and are not intended to represent the final approved screen layouts.

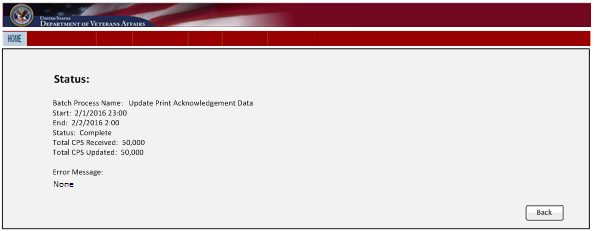


Figure ‑: Update Print Acknowledgement Status Screen (No errors)

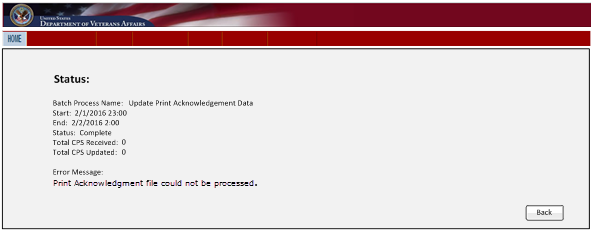


Figure ‑: Update Print Acknowledgment Status Screen (File Level Error)

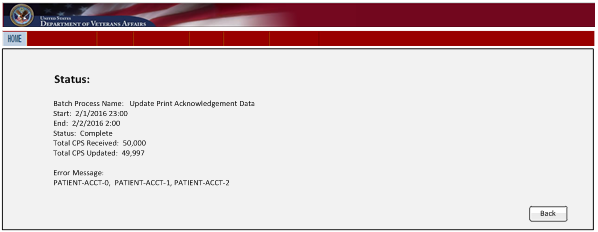


Figure ‑: Update Print Acknowledgement Status Screen (Record Level Errors)

### Manage Bill Data

This module provides the ability to receive and load oldest bill information from each VAMC and send payment allocations to AITC/Lockbox.

#### Load Bill Data

Each VAMC will send a nightly file of bill information to CBSS. The file will contain the ICN, oldest bill date, and oldest bill amount for each Veteran. CBSS will receive and load the data for each ICN. If an error occurs during the process, CBSS will display an error notification. Upon completion of the job an email notification will be sent to the DNS email distribution group along with a success or failure specific subject. The email will contain a list of all files processed and their status. The email subject and content will be defined during development.

Validations of the Bill Data file are identified in the Table 2‑6 below. If the file itself is corrupt or any validation fails in the Header record then the entire file will be rejected and no data records will be processed. If a validation check in the detail record fails, only that specific record will be rejected.

Table ‑: Validations for Bill Data File Load Process

|  |  |  |
| --- | --- | --- |
| **Message Header or Detail Record** | **Field Name** | **Validations** |
| Header | RECORD-TYPE | Must be the value “PU” |
| Header | TOT-NUM | Not Null  Max Length 10 |
| Header | FACILITY-NUM | Not Null  Max Length 5 |
| Header | PROCESS-DATE | Not Null  Must be in MMDDYYYY format |
| Detail | RECORD-TYPE | Must be the value “PD” |
| Detail | ICN | Not Null Max Length 18 |
| Detail | ACCT-NUM | Not Null Max Length 19 |
| Detail | SUB-TOTAL | Not Null |
| Detail | DATE-OLDEST-BILL | Not Null Must be in MMDDYYYY format |

#### Distribute Payment

CBSS will send AITC/Lockbox a nightly file of payment allocation for all Veterans who have a balance greater than zero. CBSS will use the oldest bill date and amount to generate the payment allocation. If an error occurs during the process, CBSS will display an error notification. Upon completion of the job an email notification will be sent to the DNS email distribution group along with a success or failure specific subject. The email subject will be defined during development.

### Manage Batch

This module provides the ability to view batch jobs, configure a batch job, view batch job status, manually run a batch job, and view the status of a completed batch job.

#### View Batch Jobs

This process assumes the CBSS user has successfully logged into the system. Upon entering the system, CBSS displays the landing page, which displays a list of available batch jobs and each batch job scheduled time, actual run start date/time, actual run end run date/time, and job status.

The following screen mockup provides a visual of what the CBSS Login screen and View Batch Job screens may look like and are not intended to represent the final approved screen layouts.

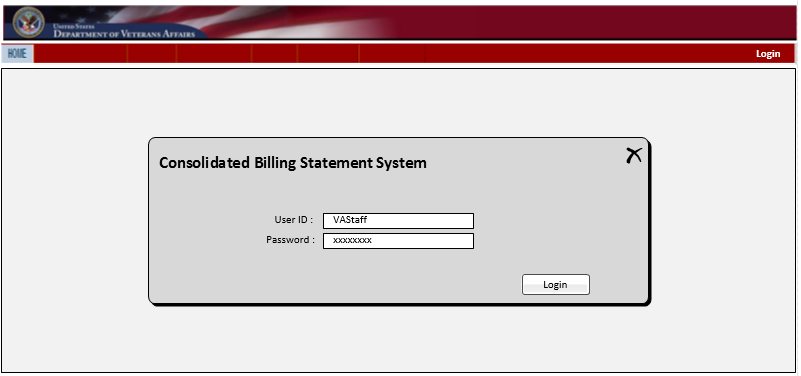


Figure ‑: Login Screen

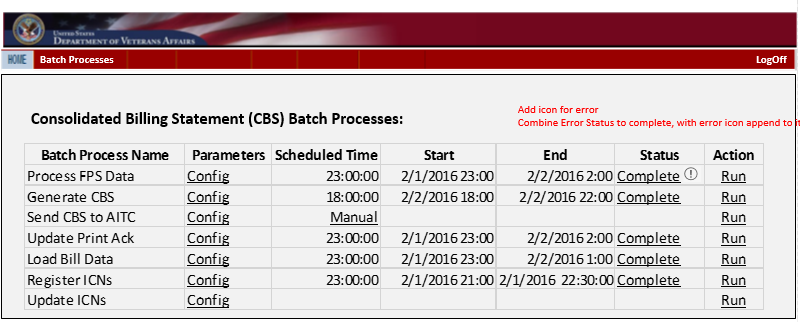


Figure ‑: View Batch Job Screen

#### Configure Batch Job

Each batch job can be configured to run automatically on a daily basis or manually. To configure a batch job, the CBSS User would select ‘Config’ on the appropriate batch job to be configured. If daily is selected, the user must enter a time the job will run. The following screen mockup provides a visual of what the Configure Batch Job screens may look like and is not intended to represent the final approved screen layout.

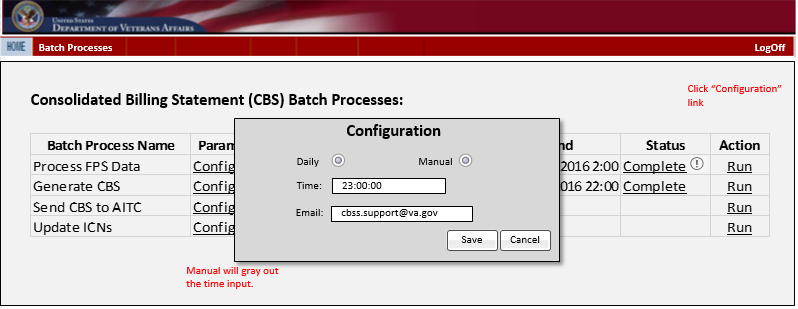


Figure ‑: Configure Batch Job screen

#### View Batch Job Status

To view the status of a completed batch job, select the Complete status hyperlink. The system will display the following Batch Job Status screen. The status screen will have specific information for each batch job as listed.



Figure ‑: Sample FPS Batch Job Status Screen

#### Manually Run Batch Job

To view a manually run batch job, select the Run hyperlink. The system will display a confirmation screen verifying the run. The confirmation screen will provide the ability to continue and run the job or to cancel. Selecting Continue will start the job and make the Run hyperlink become unavailable for selection. Selecting Cancel will stop the run action leaving the Run hyperlink available for selection.

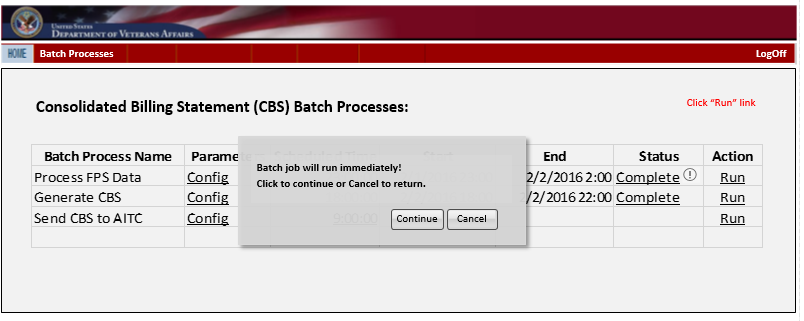


Figure ‑: Run Confirmation

### Manage ICN

CBSS will interact with Master Veteran Index (MVI) and Identity and Access Management Services (IAM) in order to stay in synch with the Enterprise unique patient identification. MVI is the authoritative source for patient identity data. It maintains identity data for patients across VA systems, provides a unique universal identifier for each patient, stores identity data as correlations for each system where a patient is known, provides a probabilistic matching algorithm, and includes the Master Patient Index (MPI), Person Service Identity Management (PSIM), and Toolkit (TK).

CBSS will subscribe to an MVI service which will notify CBSS whenever a change is made to a patient’s identity trait(s) (merged with another ICN, etc.). This will enable CBSS to perform appropriate patient identity actions, and ensure that CBSS patient identification is in sync with VistA sites and other Enterprise processing. CBSS shall utilize the MVI decentralized hybrid integration pattern and shall store/maintain the ICN as a trait of the MVI Correlated identifier, subscribe to MVI maintenance messages, and subscribe to/process the same MVI ICN notifications as VistA. CBSS will follow IAM guidelines for interacting with MVI.

### Generate FPS (VistA AR)

The VistA AR statement generation process will be enhanced to add additional attributes to the FPS file. The additional attributes are required to support the production of consolidates monthly billing statements and are defined in [Table 2‑6](#Table_2_6). The statement generation process will be modified to run 16 times a month and will produce statement data based on the patient’s last name as defined in Table 2-7. Tables outlining the new FPS attributes and the breakdown of the processing schedule are shown below.

Table ‑: New Attributes Added to The FPS File

|  |  |
| --- | --- |
| **New Field** | **Description** |
| ICN | Patient Identifier (Integrated Control Number) |
| ICN Checksum | Validation Identifier for the ICN |
| AR Flag | Indicates if the Patient’s address was pulled from the VistA billing file (If the AR Flag is Yes, then the address is from the VistA file, otherwise, the address is from the Patient File.) |
| Last Bill Prepared Date | The date of the last (most recent) charge made to the Patient |

Table ‑: Modified Schedule for FPS File Generation by Patient Last Name

| **Day of the Month** | **Last Name Beginnings With** |
| --- | --- |
| 1 | A,BA,BU |
| 2 | B (EXCLUDE BA,BU) |
| 4 | CI,CR,CU,D |
| 6 | C (EXCLUDE CI,CR,CU) |
| 7 | E,F,I,Q |
| 8 | G,HE |
| 10 | H (EXCLUDE HE) |
| 12 | J,K |
| 14 | L,O |
| 15 | M (EXCLUDE MC,MI) |
| 17 | MC,MI,N,TI-TZ |
| 19 | R,TA-TE |
| 21 | S (EXCLUDE SC,SH,SI,SM) |
| 22 | SC,SH,SI,SM,V,TF-TH |
| 24 | P,U,X,Y,Z |
| 26 | W |

### Send Nightly Bill Information

Each VAMC will generate and send a nightly file of bill information to CBSS. The file will contain the ICN, oldest bill date, and oldest bill amount for each Veteran. The data layout of the file is documented in the Payment Update Data Layout Design document (Data\_Layout\_Payment\_Update\_VAMC\_To\_CBSS.docx).

### Enhance VistA AR Reports

Three existing VistA AR reports have been identified that require modification to accommodate the new processing schedule for the generation of the patient statement data files. The three reports include the following:

* CCPC Statement Errors Report
* CCPC Totals Report
* Reprint Patient Statements

All three reports are found by navigating to the Clerk’s AR Menu and then the Follow-up Letter Menu .

#### CCPC Statement Errors Report

The CCPC Statement Errors report will be updated to report on statement errors based on the new 16-day cycle, which starts the first of the month rather than the current full-month monthly cycle. The VistA AR user will be presented with a new option to run the report for any date on which there are error codes, or run the report for all dates on which error codes exist.

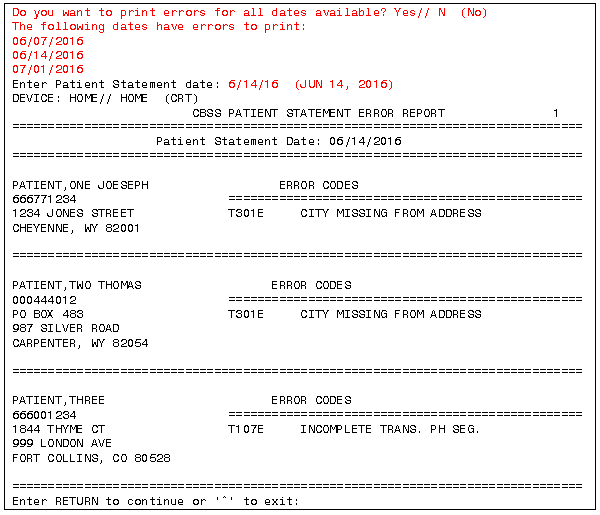


Figure ‑: CCPC Patient Statement Errors report – ran for one statement date

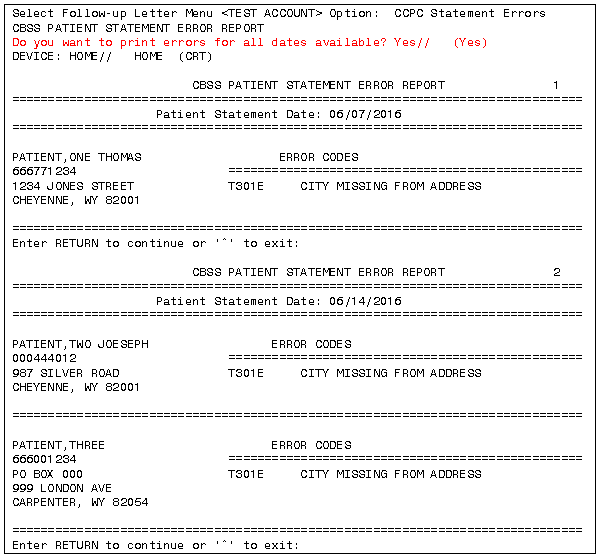


Figure ‑: CCPC Patient Statement Errors report – ran for all statement error dates

#### CCPC Totals Report

The CCPC Totals report will be updated to report on statement totals based on the newly modified 16-day cycle which starts the first day of the month rather than the current full-month monthly cycle. The report can be ran for a single summary total, subtotals by date, or a single user selected date.

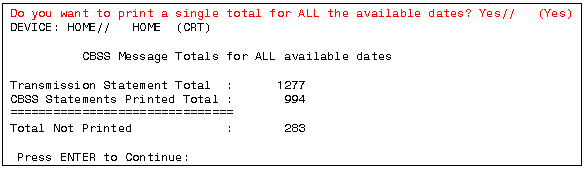


Figure ‑: CBSS Totals report – ran for a single summary total

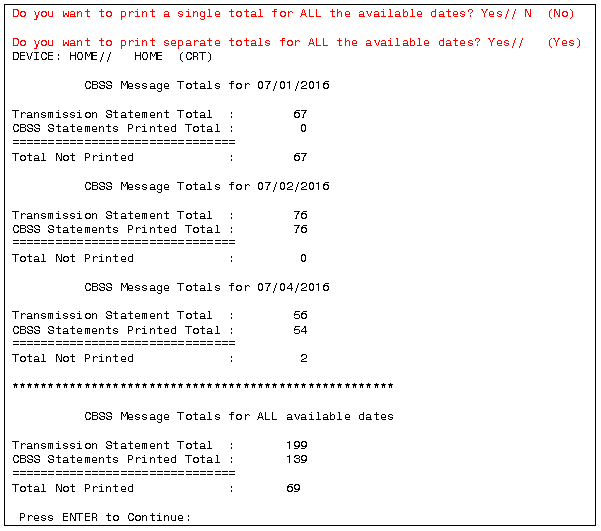


Figure ‑: CBSS - Totals report – ran for subtotals by date, and grand summary total

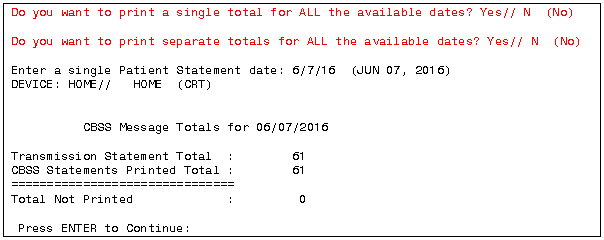


Figure ‑: CBSS Message Totals report – ran for a user selected date

#### Reprint Patient Statements

The Reprint Patient Statement menu option will allow all statements to be reprinted based on the newly modified 16-day cycle which starts the first day of the month rather than the current full-month monthly cycle.

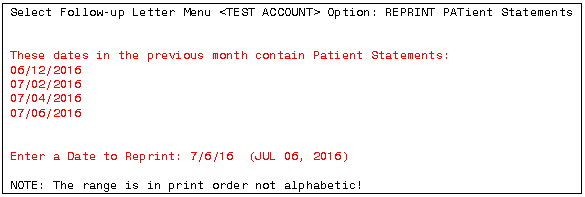


Figure ‑: Reprint Patient Statements menu option

### Enhance Auto-Correction Processing Logic

When processing conditions result in either a missing transaction amount or incomplete transaction discrepancy for an account that is reported as out-of-balance, the Auto-Correction process logic shown in Figure 2-17 will amend processing results to make the overall account balance equal the Patient Statement balance. All transaction types, except for the “Comment Transaction” will be considered when correcting processing results for the discrepancies.

The enhancement to the Auto-Correction processing logic will consider non-active bills that affect overall account balance for both incomplete transaction and missing amount transaction discrepancies. The enhancement will also include the appropriate calculation to be performed to determine the appropriate transaction amount when fixing missing amount transaction discrepancies.

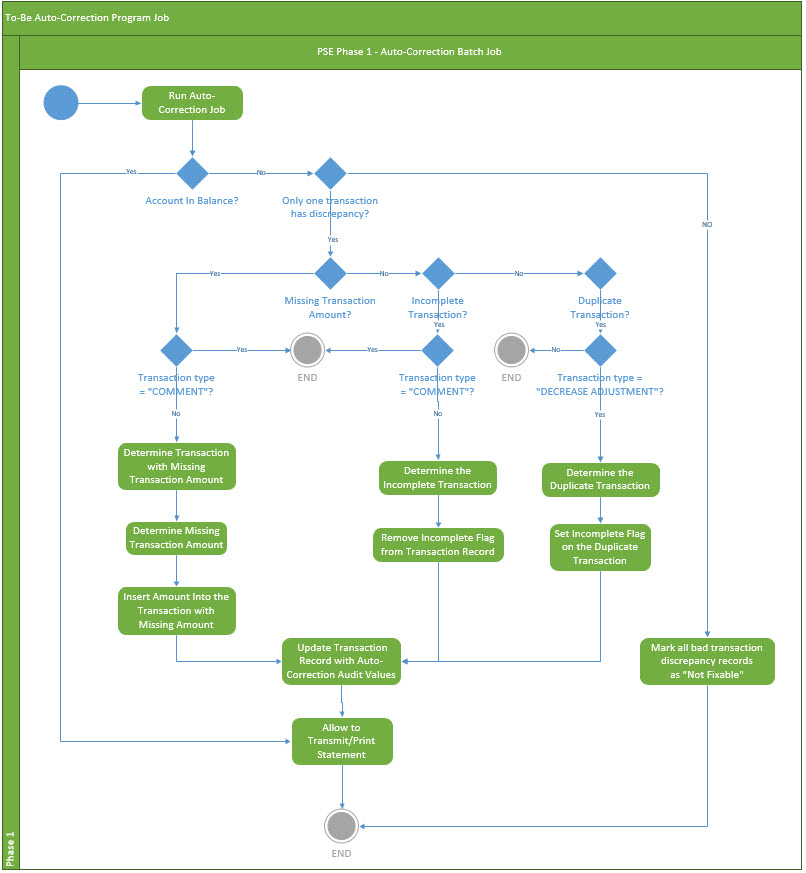


Figure 2-‑: Auto-Correction Batch Process

### Enhance the Increase/Decrease Adjustment Menu Option

The Decrease/Increase Adjustment menu option in VistA AR calculates the Bill Balance incorrectly in that it includes any and all transactions flagged as incomplete including those marked as incomplete by the Auto-Correction Process.

The enhancement to the Decrease/Increase Adjustment menu option logic that calculates bill balance will consider only incomplete transaction that should be included in the bill’s overall balance.

### Functional Requirements

Phase 2 development culminates with the development of processes, features and data necessary to generate a single monthly consolidated patient statement. Table 2-9 includes the functional requirements necessary to implement the capabilities identified in Section 2.6 to generate consolidated patient statements and distribute payments. In order to provide traceability across project artifacts, the following section is organized by the Business Need identified in the PSE PWS and the capabilities identified in Section 2.

Table ‑ CBS Functional Requirements

| **PWS Ref** | **BN** | **Item** | **Type** | **Business Need** |
| --- | --- | --- | --- | --- |
| PWS 5.5.1 | BN 2 |  |  | Create the foundation of a consolidated patient statement. |
|  | BN 2.1 |  |  | Analyze and design the foundation software and processes for the creation of a consolidated patient statement. |
|  | BN 2.2 |  |  | Create the preliminary features of an initial system containing a monthly consolidated patient statement that reflects activity throughout the VA system. |
|  | BN 3 |  |  | Consolidate patient statement(s) within a single billing cycle. |
|  | BN 3.3 |  |  | The system shall generate a consolidated statement combining all active outstanding account charges (regardless of the VA facility) based on the Veteran's billing cycle. |
|  | BN 7 |  |  | The system shall employ PIV 2 Factor Authentication for application access and security. |
|  |  | 1.0.0 | Epic | Load FPS Data |
|  | BN 2.2, 4 | 1.1.0 | User Story | As a VistA user, I want FPS data sent to CBSS so that facility patient statement transactions can be consolidated into a single patient statement. |
|  | BN 2.1, 4 | 1.1.1 | Req | Each VAMC shall send FPS data to CBSS 16 times a month. Each transmission will contain a set of Veterans based on last name. (See the Table 2‑8.)  Note: It is assumed that duplicate patient statement data is not sent per site. |
|  | BN 2.2, 4 | 1.1.2 | Req | The FPS data file shall be enhanced to include new data elements. (CBS file layout can be found in the Phase 2 SDD.) (The new data elements are identified in the Table 2‑7 in this RSD.) |
|  | BN 2.2, 4 | 1.1.3 | Req | If the ICN is null in the FPS file, a Mailman message will be sent in order to identify the records contains the null ICN. |
|  | BN 2.2, 4 | 1.1.4 | Req | Each VAMC shall send bill data to CBSS. (See the section in the RSD “Send Nightly Bill Information”.) |
|  | BN 2.2, 4 | 1.1.5 | Req | CBSS will perform validations on the bill data file. (See the table “Validations for Update Bill Data Routine” in this RSD.) |
|  | BN 2.2, 4 | 1.1.6 | Req | If a validation check of the bill data file fails, the specific record that fails will be rejected. |
|  | BN 2.2, 4 | 1.1.7 | Req | If the bill data file itself is corrupt, the entire file will be rejected and no data records contained in the file will be processed. |
|  | BN 2.4, 4 | 1.2.0 | User Story | As a CBSS user, I want FPS data files processed by CBSS so that facility patient statement transactions can be consolidated into a single patient statement. |
|  | BN 2.2, 4 | 1.2.1 | Req | CBSS shall have an automated batch job to load and store FPS data files from each VAMC sites. |
|  | BN 2.2, 4 | 1.2.2 | Req | CBSS shall create a unique patient account number for each Veteran. |
|  | BN 2.1, 4 | 1.2.3 | Req | CBSS shall capture and store the status of the batch job. |
|  | BN 2.2, 4 | 1.2.4 | Req | CBSS shall capture the date and time each file is loaded. |
|  | BN 2.2, 4 | 1.2.5 | Req | CBSS shall capture the processing status and/or error reason of failure for each FPS file. |
|  | BN 2.2, 4 | 1.2.6 | Req | CBSS shall send an email notification upon completion of the batch job to the CBSSMonitoring email distribution group. |
|  |  | 2.0.0 | Epic | Generate CBS |
|  | BN 2.1, 3.3 | 2.1.0 | User Story | As a CBSS user, I want the ability to aggregate and calculate FPS so that a CBS can be generated. |
|  | BN 2.1, 3.3 | 2.1.1 | Req | CBSS shall aggregate and calculate patient account balances for transactions that occurred across VAMCs during the patient’s billing cycle. Patient account balance includes: Previous Balance (unpaid transactions from previous statements), Current Balance (charges minus payments received during the current statement cycle), and Total Balance (combines Previous Balance and Current Charge amounts). |
|  | BN 2.1, 3.3 | 2.1.2 | Req | CBSS shall prefix the Veterans’s primary site DFN followed by the first 5 characters of the Veteran last name as the account number on the CBS. |
|  | BN 2.1, 3.3 | 2.1.3 | Req | CBSS shall use the Person Traits from the FPS data with the most recent visit date. |
|  | BN 2.1, 3.3 | 2.1.4 | Req | CBSS shall use the Veteran address from the FPS data with the most recent visit date. |
|  | BN 2.1, 3.3 | 2.1.5 | Req | CBSS shall use the Site Id and Address from the FPS data with the most recent visit date. |
|  | BN 2.1, 3.3 | 2.1.6 | Req | CBSS shall use the Statement Cycle Date from the FPS data with the most recent visit date. |
|  | BN 2.2, 3.3 | 2.1.7 | Req | CBSS shall capture and store the status of the Generate CBS batch job. |
|  | BN 2.2, 3.3 | 2.1.8 | Req | CBSS shall capture the processing status and/or error reason of failure for each CBS. |
|  | BN 2.2, 3.3 | 2.1.9 | Req | CBSS shall send an email notification upon completion of the batch job to the CBSS User group email distribution list. |
|  |  | 3.0.0 | Epic | Send CBS |
|  | BN 2.2, 3.3 | 3.1.0 | User Story | As a CBSS user, I want the ability to create and send CBS files to AITC/CCPC so that the CBS can be formatted and mailed to Veterans. |
|  | BN 2.2, 3.3 | 3.1.1 | Req | CBSS shall have configurable batch jobs to generate and send CBS file(s) to AITC/CCPC. |
|  | BN 2.2, 3.3 | 3.1.2 | Req | CBSS shall have the ability to send daily CBS files to AITC/CCPC.  For each CBS transmission to AITC, two files are sent:   1. The “P1” file includes Veterans who have statement data from only one site within the statement date range. 2. The “Multi-Site” file includes Veterans who have statement data from two or more sites within the statement date range.   For the Multi-Site file, the data is sorted so that the primary site data is first to allow printing of the primary site transaction data at the top of Billing Statement’s transaction detail section. The file is sorted further alphabetically by site name for all other site data. |
|  | BN 2.2, 3.3 | 3.1.3 | Req | AITC/CCPC shall send CBSS acknowledgement of CBS. |
|  | BN 2.2, 3.3 | 3.1.4 | Req | CBSS shall have the ability to receive consolidated acknowledgements from AITC. |
|  | BN 2.2, 3.3 | 3.1.5 | Req | CBSS shall have the ability to translate consolidated acknowledgements into individual VAMC acknowledgements and then send to AITC/CCPC for distribution to VAMCs. |
|  | BN 2.2, 3.3 | 3.1.6 | Req | AITC/CCPC shall have the ability to receive and distribute site acknowledgements to each VAMC. |
|  | BN 2.2, 3.3 | 3.1.7 | Req | VistA AR shall have the ability to receive site acknowledgements from AITC/CCPC. |
|  | BN 2.2, 4 | 3.1.8 | Req | CBSS shall capture and store the status of the batch job. |
|  | BN 2.2 | 3.1.9 | Req | CBSS shall capture the processing status and/or error reason of failure. |
|  | BN 2.2 | 3.1.10 | Req | CBSS shall send an email notification upon completion of the batch job to the CBSS User group email distribution list. |
|  | BN 2.2 | 3.1.11 | Req | CBSS shall identify when a second CBS has been created (for a Veteran for the month) so that AITC/CCPC can add an explanation message to the statement. |
|  | BN 2.2 | 3.1.12 | Req | CBSS shall send an email notification when an error occurs in the print acknowledgement files. |
|  | BN 2.2 | 3.1.13 | Req | VistA AR shall have the ability to update the statement run date for sites that run at the end of the month so that Veterans will not receive multiple statements. |
|  | BN2.2 | 3.1.14 | Req | Whenever the Send CBS job is started, CBSS shall perform a check to see if the Generate CBS job is already actively running. If the Generate CBS process is running, the Send CBS batch job will not be started. |
|  | BN2.2 | 3.1.15 | Req | When the Send CBS job does not initially start because the Generate CBS job is actively running, CBSS shall retry a start every 15 minutes and will stop retrying after 2 hours. If the Send CBS stops due to the 2 hour retry timeout, CBSS will send an email notification to the CBSS distribution group that the job did not run and needs to be manually started. |
|  |  | 4.0.0 | Epic | Manage Bill |
|  | BN 3.3, 4 | 4.1.0 | User Story | As a CBSS user, I want ICN, oldest bill balance and date sent from each VAMC to CBSS so that CBSS can determine payment allocation. |
|  | BN 3.3, 4 | 4.1.1 | Req | CBSS shall have an automated nightly batch job to load and store bill data from each VAMC. |
|  | BN 3.3, 4 | 4.1.2 | Req | CBSS shall capture and store the status of the file processed by the Process Bill Data batch job. |
|  | BN 3.3, 4 | 4.1.3 | User Story | CBSS shall capture and store the status of the batch job. |
|  | BN 3.3, 4 | 4.1.4 | User Story | CBSS shall capture the processing status and/or error reason of failure. |
|  | BN 3.3, 4 | 4.1.5 | User Story | CBSS shall send an email notification upon completion of the batch job to the CBSS User group email distribution list. |
|  | BN 3.3, 4 | 4.2.0 | User Story | As a Vista user, I want to send a nightly file of ICN, oldest bill balance and date so that CBSS can correctly determine payment allocation. |
|  | BN 3.3, 4 | 4.2.1 | Req | CBSS shall send AITC/Lockbox a nightly file of payment allocation for all Veterans who have a bill balance greater than zero. |
|  |  | 5.0.0 | Epic | Manage Batch Jobs |
|  | BN 2.2 | 5.1.0 | User Story | As a CBSS user, I need the ability to view batch job information so that CBS files can be effectively managed. |
|  | BN 2.2 | 5.1.1 | Req | CBSS shall provide the ability to view the status of each batch job. |
|  | BN 2.2 | 5.1.2 | Req | CBSS shall provide the ability to view the batch job start and end date/time. |
|  | BN 2.2 | 5.1.4 | Req | CBSS shall provide the ability to view the status of a completed job. |
|  | BN 2.2 | 5.2.0 | User Story | As a CBSS user, I need the ability to configure a batch job so that CBS files are processed correctly. |
|  | BN 2.2 | 5.2.1 | Req | CBSS shall provide the ability to configure a job to be run manually or automatically daily on a specific time. |
|  | BN 2.2 | 5.2.2 | Req | CBSS shall store the date/time and user modifying the batch job. |
|  | BN 2.2 | 5.3.0 | User Story | As a CBSS user, I need the ability manually run a batch job so that CBS files are processed correctly. |
|  | BN 2.2 | 5.3.1 | Req | CBSS shall provide the ability to manually run a batch job. |
|  | BN 7 | 5.4.0 | User Story | As a CBSS User, I want the system to require two factor authentication (i.e., PIV card and PIN) and authorization through the IAM Provisioning services so that only authorized users are successfully logged in and granted access to CBSS. |
|  |  | 6.0.0 | Epic | Manage ICN |
|  | BN 2.1, 4 | 6.1.0 | User Story | As a CBSS user, I want to update an ICN for a Veteran when it is changed by MVI so that Veterans are uniquely identified by the correct ICN in CBSS. |
|  | BN 2.1, 4 | 6.1.1 | Req | CBSS shall register all new site and DFN combinations with MVI. |
|  | BN 2.1, 4 | 6.1.2 | Req | CBSS shall receive and update ICN changes based on broadcast ICN updates from MVI. |
|  | BN 2.2 | 6.1.3 | Req | CBSS shall capture and store the status of the batch job. |
|  | BN 2.2 | 6.1.4 | Req | CBSS shall capture the processing status and/or error reason of failure. |
|  | BN 2.2 | 6.1.5 | Req | CBSS shall send an email notification upon completion of the batch job to the CBSS User group email distribution list. |
|  | BN 2.2 | 6.1.6 | Req | CBSS shall retransmit a register request every 24 hours until a response is received. |
|  | BN 2.2 | 6.1.7 | Req | CBSS shall inform the CBSS User when no response is received back from MVI to the registration request. |
|  |  | 7.0.0 | Epic | View CBS |
|  | BN 2.2 | 7.1.0 | User Story | As a CRM user, I want to view the consolidated patient statement so that I can respond to patient inquiries regarding their bill. |
|  | BN 2.1 | 7.1.1 | Req | CRM shall call CCPC to get the Veteran CBS PDF using the DFN. |
|  | BN 2.2 | 7.1.2 | Req | CCPC shall translate the CBS data to a PDF and send to CRM. |
|  |  | 8.0.0 | Epic | Enhance VistA AR Report Processes |
|  | BN 2.2, 4 | 8.1.0 | User Story | As a VistA AR user, I want the reports to reflect the new 16-day transmission cycle so that I can accurately view statement data errors and reprint statements based on the modified billing statement schedule. |
|  | BN 2.1 | 8.1.1 | Req | The CCPC Statement Errors report in VistA shall be updated to reflect the new 16-day processing cycle. |
|  | BN 2.1 | 8.1.1.1 | Req | VistA AR shall allow the CCPC Patient Statement Errors report to run for all dates or for only one calendar date on which statement errors exist. |
|  | BN 2.1 | 8.1.1.2 | Req | When the VistA AR user runs the CCPC Patient Statement Errors report for multiple days, the VistA AR system shall allow the user to continue or exit the report display after each reported date is displayed on the screen. |
|  | BN 2.1 | 8.1.1.3 | Req | When the VistA AR user selects to run the CCPC Statement Errors report for a day on which no statement errors exist, the system will display the message “There are no error files for that date.” |
|  | BN 2.1 | 8.1.2 | Req | The CCPC Totals report in VistA shall be updated to reflect the new 16-day processing cycle. |
|  | BN 2.1 | 8.1.2.1 | Req | VistA AR shall allow the CBSS Message Totals report to be run by three criteria:   1. A single summary total of all available statement message dates 2. Subtotals for each available statement message date, with a grand total of all dates at the end of the report. 3. A single total for a user selected statement message date. |
|  | BN 2.1 | 8.1.2.2 | Req | When the VistA AR user selects to run the CBSS Message Totals report for a day on which no statement messages exist, the system will display the message “There are no records for that date.” |
|  | BN 2.1 | 8.1.3 | Req | The Reprint Patient Statement report in VistA shall be updated to reflect the selection of the reprint dates based on the modified 16-day processing cycle. |
|  | BN 2.1 | 8.1.3.1 | Req | VistA AR shall allow the Reprint Patient Statements menu option to run for any date in which re-printable patient statements exist for the VistA site.  NOTE: Patient Statements will be available for reprint after a print acknowledgement has been processed at the VistA site. |
|  | BN 2.1 | 8.1.3.2 | Req | When the VistA AR user selects to run the Reprint Patient Statements menu option for a day on which no re-printable statements exist, the system will display the message “No notifications sent on that date”, then the system redisplays the list of dates available for reprint. |
|  | BN 2.1 | 8.1.4 | Req | The CCPC Statement Errors report, CCPC Total report and the Reprint Patient Statement report shall not exceed 78 characters in width so that if queued to MailMan or printed in hard copy the report will render without wrapping lines. |
|  |  | 9.0.0 | Epic | Manage Print Acknowledgement |
|  | BN 2.4, 4 | 9.1.0 | User Story | As a CBSS user, I want print vendor data files processed by CBSS so that CBSS has confirmation that a Veteran’s CBS is printed and mailed. |
|  | BN 2.2, 4 | 9.1.1 | Req | CBSS shall have an automated batch job to validate, load, and process print acknowledgement data files received from AITC/CCPC. |
|  | BN 2.2, 4 | 9.1.2 | Req | CBSS shall capture the processing status and/or error reason of failure for each print acknowledgement file. |
|  | BN 2.2, 4 | 9.1.3 | Req | CBSS shall send an email notification upon completion of the batch job to the CBSSMonitoring email distribution group. |
|  | BN 2.2, 4 | 9.1.4 | Req | CBSS shall reject the entire Print Acknowledgement file if any validation error occurs. |

Table ‑ Auto-Correction and Transaction Discrepancy Fix Functional Requirements

| **PWS Ref** | **BN** | **Item** | **Type** | **Business Need** |
| --- | --- | --- | --- | --- |
|  |  | US001 | User Story | As a user, I want the Accounts Receivable application to detect and correct account balance discrepancies as part of normal operations, so that I do not have to perform the task manually. |
|  |  | ACJ007 | Req | If missing dollar amounts in the TRANS AMOUNT field (#15) of the AR TRANSACTION file (#433), for any transaction type other than a “COMMENT TRANSACTION”, causes a patient’s account to be out-of-balance, then the Auto-Correction Job shall correct the out-of-balance by entering the amount in the TRANS AMOUNT field (#15).  [See Appendix A - Missing Transaction Amount example](#Appendix_A) |
|  |  | ACJ015 | Req | If a transaction in the AR TRANSACTION file (#433) has the INCOMPLETE TRANSACTION FLAG field (#10) set to 1 for any transaction type other than a “COMMENT TRANSACTION” for a bill that is currently in a status other than ‘Active’ or ‘Open’, and causes a patient’s account to be out-of-balance, then the Auto-Correction Job shall correct the out-of-balance condition by replacing the value of 1 with a value of 0 in the INCOMPLETE TRANSACTION FLAG field on the incomplete transaction record. |
|  |  | ACR015 | Req | The Auto-Correction Report shall be enhanced to track and report on Missing Transaction Amount balance discrepancies.  **Note:** The following AR VistA menu option runs the Auto-Correction Report:  Auto-Correct Patient Discrepancy Report |
|  |  | US008 | User Story | As a VistA AR user I want the ability to run the Auto-Correction Report sorted by Auto-Correct reason so that I can quickly identify the list of ‘Not Fixable’ bills that need manual intervention to resolve. |
|  |  | US009 | User Story | As a VistA user, when I am manually adjusting a AR bill (using the ‘Adjustment to an AR record’ menu option) I want the VistA AR system to calculate and update the bill’s balances correctly so that the Veteran’s monthly billing statements are not delayed in the normal monthly printing process. |
|  |  | AR001 | Req | When an AR bill’s transaction total is calculated to determine if the bill is in balance the following transactions, if flagged as incomplete, shall be excluded from the calculated transaction total (all other incomplete transaction’s shall be included):   * Decrease Adjustment, when created by the system from the Prepayment process. * Increase Adjustment, when created by the system from the Prepayment process. * Any transaction marked as incomplete by the Auto-Correction Batch Job process. * Any transaction that was manually flagged as incomplete because it was identified as a duplicate. |

### Non-Functional Requirements

| **PWS Ref** | **BN** | **Item** | **Type** | **Business Need** |
| --- | --- | --- | --- | --- |
|  |  | US010 | User Story | As a CBSS System Administrator, I want the CBSS system to archive off billing data on a 16 rolling cycle so that the volume of CBS data in the database and on the server does not become a performance issue. |
|  |  | US011 | User Story | As a VistA FileMan user I want to see accurate field descriptions in File #349 so that I have access to usable descriptions about the file’s data. |
|  |  | AR003 | Req | The correct spelling of the words “recipients” and “acknowledgement” shall be updated in the FileMan descriptions of the fields in node 349.11,.01 and 349.151,.01 respectively. |

### Additional PWS Requirements

The following table provides PWS requirements that were identified for Phase 3. These requirements were reviewed with PSE Stakeholders during the Requirement Elaboration Meeting held 10/26/2015, during which it was determined to move these requirements to Phase 2, as interface requirements are part of Phase 2 development.

Existing interfaces and processes between AITC/CCPC, AITC/Lockbox, VAMC, FMS, TOP, DMC, and CCPC will not be impacted during Phase 2 development so they are out of scope for development. However, these requirements are still part of the overall end-to-end statement process and therefore left in scope from a testing perspective to ensure no impact from the changes to existing functionality.

Table ‑ Additional Requirements

| **Req. ID** | **Primary Text** | **Requirement Status** |
| --- | --- | --- |
| 5.5 | Provide functionality to allow and ensure that payments can be made by Veterans by using an online feature (Pay.gov). | Existing functionality and out of scope for development activities however will need to be tested to ensure there are no impacts from the new system. |
| 5.13 | The system shall maintain existing interfaces with Pay.gov. | Existing functionality and out of scope for development activities however will need to be tested to ensure there are no impacts from the new system. |
| 5.14 | The system shall maintain existing interfaces with Treasury Offset Program (TOP). | Existing functionality and out of scope for development activities however will need to be tested to ensure there are no impacts from the new system. |
| 5.15 | The system shall maintain existing interfaces with 90-day Debt Management Center (DMC). | Existing functionality and out of scope for development activities however will need to be tested to ensure there are no impacts from the new system. |
| 5.16 | The system shall maintain existing interfaces with CCPC Print Contractor. | Existing functionality and out of scope for development activities however will need to be tested to ensure there are no impacts from the new system. |
| 5.17 | The system shall maintain existing interfaces with Lockbox Bank of America. | Existing functionality and out of scope for development activities however will need to be tested to ensure there are no impacts from the new system. |

## Graphical User Interface (GUI) Specifications

Features and functionality within the new CBSS shall adhere to accessibility, security and 508 compliance standards.

Enhancements made to VistA and CBSS user interfaces shall adhere to current accessibility, security and 508 compliance standards.

## Multi-divisional Specifications

There are no new multi-divisional capability requirements of VistA AR. Changes in support of CBSS must be seamless to all VistA users and non-disruptive to existing VistA AR functionality.

## Performance Specifications

This section identifies the dynamic numeric specifications required for CBSS, AR package and the number of users who interact with the AR package.

* CBSS will support the current volume of two million statements printed and sent to Veterans. CBSS architecture is designed to support an increase in number of Veteran statements to the monthly cycle (with addition to CBSS infrastructure, this capability will be benchmarked during the Performance Testing phase of CBSS).
* The CBSS will support processing of at least 150 FPS sites in a 12-hour period.
* CBSS architecture is flexible to accommodate a 10% future growth in CBSS Application usage.

## Quality Attributes Specification

Quality attribute specifications will enhance the supportability, maintainability, portability, testability, and reusability of the VistA AR and CBSS. The enhancements to VistA AR and development of the CBSS will include applicable coding standards, naming conventions, class libraries, maintenance access, and maintenance utilities. The quality attributes specifications are achieved by the accepted design for VistA AR enhancements and CBSS.

## Reliability Specifications

CBSS shall be available 24 hours per day, 365 days per year, except during periods of scheduled maintenance. This project will not change or impact the existing VistA AR package availability.

## Scope Integration

Vista AR is an existing package of VistA. The PSE project will be making enhancements to the VistA AR package. The enhancements will include changes to the statement run process and a new interface to the CBSS system. VistA AR will send oldest bill information to CBSS. Existing architecture will be utilized for sending FPS data to CBSS, as well as receiving acknowledgements from CBSS.

CBSS is a new system with interfaces to AITC/CCPC, AITC/Lockbox, and MVI. The AITC interfaces will use existing infrastructure used by VistA today sending and receiving statement and payment information. There will be one new type of interface between CBSS and MVI which will be implemented using MLLP protocol or SOAP (as appropriate for CBSS architecture in concurrence with MVI SME’s). Please reference the below CBSS Interface Diagram for more details on the flow.

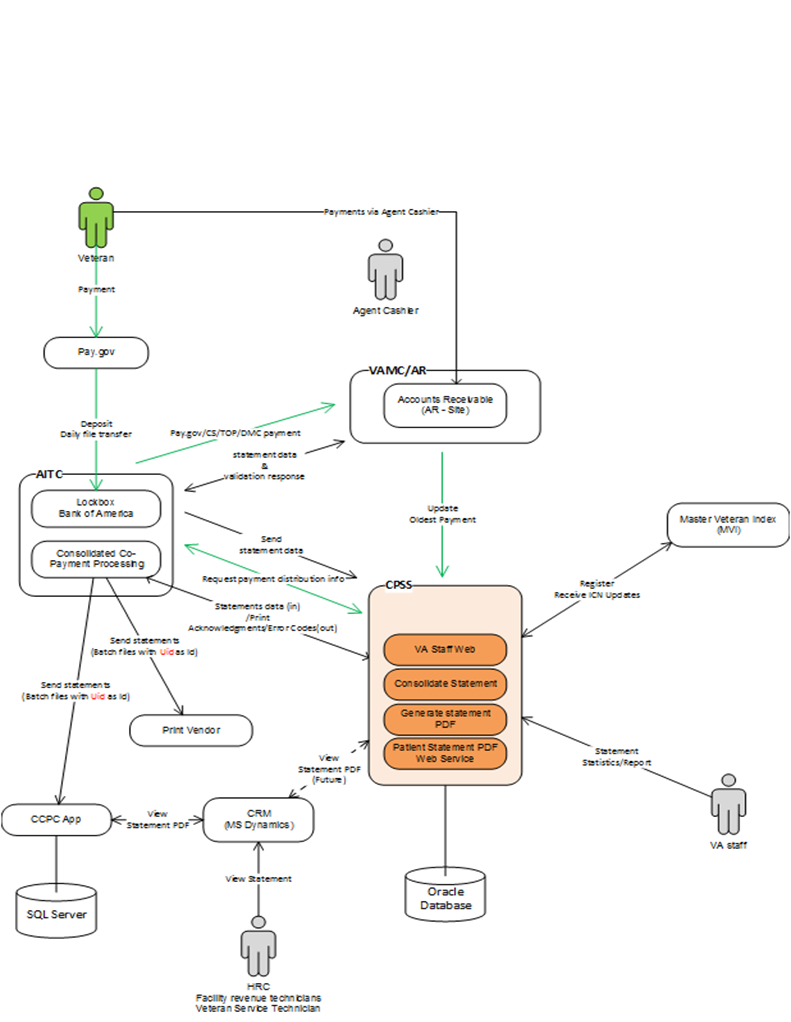


Figure ‑: CBSS Interface

Legend



## Security Specifications

The enhancement to VistA AR and development of the CBSS will include necessary standards, procedures, and technical aspects of the solution required for achieving system certification and accreditation. The design will address controls listed in Federal Information Processing Standards (FIPS) PUB 200, Minimum Security Requirements for Federal Information and Information Systems. Additional security specifications included in the design will address:

* Compliance with standards and regulatory requirements published in VA Handbook and Directive 6500: Veterans Affairs Directives > VA Handbook and Directive 6500.
* Compliance with FIPS PUB 140-2, Security Requirements for Cryptographic Modules, and for all voice and data traffic encryption: Computer Security Division > Publications > Federal Information Processing Standards > FIPS PUB 140-2.
* Additionally, due to patient safety considerations, data protection measures such as backup intervals and redundancy shall be consistent with systems categorized as critical.

## System Features

CBSS features are defined in Section 2.6 of this document.

## Usability Specifications

There are no changes to usability specifications for VistA AR enhancements. PSE shall conform to the current usability standards within the AR package.

CBSS user interface designs will be reviewed by the actual business users early in design and development to ensure a high level of usability.

# Purchased Components

The CBSS system will run on the VA cloud-based environment.

CBSS hardware architecture design will be composed of Virtual Machines (VM) based and deployed on hardware at AITC data centers in a Virtual farm following VA’s Cloud First directive. The deployment will have VM servers for sFTP, Proxy server for Load Balancing, VM WebLogic Application servers for the Application Cluster, and Oracle Database servers.

The CBSS application server and Oracle Database servers will run on an RHEL Enterprise Edition platform. The RHEL version will conform to VA TRM.

**CBSS-Web Application**: will be hosted by WebLogic Application Server and Oracle Database Server (with RHEL as operating system).

**Internal System Interfaces:**

**CBSS-Web Application:** Local VAMC (AR package), AITC (Lockbox etc.).

CBSS application is in the early design phase of its lifecycle. The RSD will be signed off prior to MS1 and the SDD is ready for MS1 but will be updated throughout the development phase.

Table 3‑1 outlines the Detail VM Requirements for deploying CBSS application.

Table ‑ CBSS VM Requirements

| **S.N0** | **VM** | **Ram(GB)** | **OS Storage (GB)** | **Disk Storage (GB)** | **OS** | **CPUs** | **VM Description** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 4 | 32 for each VM  Total=32x4 | 60x4 | 80x4 | RHEL- Linux | 4x4 | WebLogic Application Server Cluster (2 clusters) to Host CBSS application |
| 2 | 2 | 64x2 | 60x2 | 700x2 | RHEL- Linux | 4x2 | Oracle Database Server Cluster to Host CBSS application Database |
| 3 | 2 | 32x2 | 60 | 500x2 | RHEL-Linux | 4x2 | Red Hat Linux (sFTP) Server. |
| 4 | 1 | 16 | 60 | 80 | RHEL- Linux | 4 | Load Balancer and Reverse Proxy |

Note: The above requirements will be further refined during SEDR process and working with AITC architects. CPU, RAM and disk space requirements will be based on performance testing results required to attain the SLA-directed throughput for number of concurrent users and transaction response time. Changes may be made to these estimates as functionality is added to the application and performance testing continues.

# Approval Signatures

REVIEW DATE:

SCRIBE:

Signed:

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Integrated Project Team (IPT) Chair Date

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Business Sponsor Date

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IT Program Manager Date

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Project Manager Date

1. **Appendix** 
   1. CBSS User

The CBSS User Role must be fully defined through collaboration between OIT and the Business. The following definition was provided to OIT and the Business 12/3/2015 Requirement Elaboration Meeting.

CBSS User Role: this role shall have a global view of the generation of statements. This person is logging in and managing the process of statements. This person does not need to be technical, but will log in to make sure scheduled processes are executing correctly, reviewing batch schedule failures, and re-generating scheduled events that fail.

* Will communicate with HPC when files fail from VAMCs (not received or cannot be processed)
* Will communicate with AITC when file transmission errors occur
* Identify issues or enhancements that need to be made to the CBSS system to correct or improve processes
* Open change requests for issues and/or enhancements
* Work directly with CBSS application owner to resolve issues, or development process improvements

1. <http://DNS/508/resources_508.html> [↑](#footnote-ref-1)