VistA Blood Establishment Computer Software (VBECS) 1.6.0

Release Notes Version 6.0

Department of Veterans Affairs
Product Development

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Revision History

Date	Revision	Description	Author
06/27/11	1.0	Initial release.	BBM team
09/27/11	2.0	Revised to include all changes included in the 1.6.0 Release.	BBM team
		Footer: Changed date to February 2012. Global: format change. Put the HD or KDA CR number above the text in any row. CR/DR that are not published but related are in hidden text. Removed the word 'type' as related to facility type. Changed references from 'form' to 'window' as appropriate. Introduction: Revised. Validation Planning: Minor revisions. Added SharePoint reference. New Features and Functions: Changed to read None. Transfusion Verification Interface information was edited and moved to Untestable System-Level Corrected Code Requests, VBECS Administrator with link to Test Scenario Group 7 for negative testing. Removed Transfusion Verification Testing Scenario (Appendix B) as for sites without the vendor server to available to configure and test, Test Scenario Group 7. Renumbered the Appendices. Global Change to all Verification and Validation Scenarios: "None" changed to read "None Provided" (DR 4367) Enhancements and Modifications: Changed enhancements to corrections in header and text. Added HD 378098, HD 481469, HD 510119, HD 510389, HD 511255, HD 518119, HD 521368, HD 522558, HD 581620. VBECS Administrator: 1st row: Revised Problem Summary. Removed: old 2nd row, Problem Summary "Copy of CR 2561" and revised sentence. 3rd row, Problem Summary and Resolution Summary changed "Test Button" to "Test Correction Button". Services: Problem and Resolution revised. Added a note that installation of 1.6.0 in Test immediately changes the Production reporting as well. Added Test Scenario Group 8 (DR 4359) Throughout VBECS: 2nd row revised Problem and Resolution Summary (DR 4351). Status Tray Changes: 2nd row: Moved "The interval was five seconds" to the Problem Summary. Division Logon: Edited the option names to match GUI. Daily Reagent QC:1st row: Revised Problem Summary and fixed typos. Resolution summary changed "computer" to "VBECS" in the last sentence. Patient Search Utility: 2nd row Revised Resolution Summary (CR 2998). Problem Summary: Added HD 489699 and CR 3054 to compatibility percentage entry. Patient Merge: Problem Summary revised. Accept Orders Revised Problem and Resolution Summaries 1st row and added Verification Scenario (DR 4367). Added 2nd row. See Patient Testing 1st row edit. Patient Testing: Revised the Problems and Resolution Summary of the 1st row. Moved this row to Accept Orders as it refers to the Pending ORDER list. Revised the Resolution Summary of the new 1st row. 5th row: Edited the Problem Summary.	

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		6th row: Revised the Problem and Resolution Summary. Added KDA CR 2805 (DR 4357). 7th row: Revised the Resolution Summary. 8th row: Added HD 378098, KDA CR 2576 and CR 2787 and edited the Resolution summary. 9th row: Added HD 522558. Invalidate Test Results: 1st row Problem Summary, removed "type'. 3rd row: Added. Transfusion Reaction Workup: Revised the Problem Summary and Resolution Summary. Revised the Verification Scenario per CR 3179 findings. Blood Transfusion Record Form and Caution Tag: 1st row Resolution Summary: added Note. 2nd row: Edited the Resolution Summary. 5th row: edited Verification Scenario Added 6th row for HD 518119, CR 3137. Select Unit and Issue Unit: Added 2 rows for HD 510389, CR 3114 and HD 511255, CR 3119. Blood Product Table Update: 2nd row: removed "FDA/AABB (Codabar). Appendix ID updated. Incoming Shipment: 1st row: Edited the Resolution Summary. 3rd row: CR 1594 Edited the Resolution Summary and the Verification Scenario (DR 4314). 6th row for HD 366911: Edited the Problem and Resolution Summary. Rearrange this area for improved printability. Discard/Quarantine: 2nd row: Revised Problem Summary. Outgoing Shipment: 1st row: Edited Resolution Summary. Added 3rd row, CR 3193. Unit Antigen Typing: Added a row for HD 353065, KDA CR 2724. Remove Final Status: 1st row clarified all sections, DR 4315. Edited Verification or Validation Scenario. Added a line for HD 481469 CR 3010. Modification Update: 1st row: Added a verification of the Unit History Report (DR 4357). KDA DR 2133, removed the entire line item due to CR 3135 is postponed. Added row for KDA CR 2678. Audit Trail Report: 1st row: Special Testing Cost Resolution Summary Added clarification text (DR 4349). Administrative Data Report: 2nd row: Edited Problem and Resolution Summary (DR 4350). Transfusion Complications: 1st row: Edited: Problem and Resolution Summary. Added CR 3194. Added verification instructions (DR 4353).. CPRS Interface Order Dialog: 1st row: Edited Resolution Summary to include postponed CR 3184. Added explanatory notes. 3rd row: Edited Note in Resolution Summary. CPRS Interface Reports: 1st row: Edited Problem Summary. Added 4th row for CR 3161. Untestable System Level Corrected Code Requests: Added VistaLink Connections section and a VBECS Administrator section. Section heading changed: "Related Manuals and Materials" to "VBECS User Documents" separated the Product Support	

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02/08/12	3.0	Section. Test Scenario Group One, Scenario 3:Edited user information. Test Scenario Group Two, Scenario 1: Edited Expected Outcome Transfusion Only. Test Scenario Group Two, Scenario 3: Removed redundant step numbers and revised the Expected Outcome (DR 4352). Test Scenario Group Three, Scenario 2: Added. Test Scenario Group Three, Scenario 3: Added. Test Scenario Group Four, Scenario 1: Removed "Note: Do NOT print the tags/forms during this testing scenario [(HD 0000000510389 (CR 3114) or HD 0000000511255 (CR 3119)]." Test Scenario Group Five, Scenario 1: Steps corrected menu option. Test Scenario Group Five, Scenario 3: Removed references to multiple users. Steps changed menu information. Test Scenario Group Six, Scenario 1: Revised. Test Scenario Group Six, Scenario 2: Added. Test Scenario Group Seven and Eight: Added. Appendix B: Edited 1st paragraph.	BBM team
04/03/12	4.0	DR 4,406 and DR 4,407: VBECS Administrator, Resolution Summary, "Correction" changed to "Connection". Modify Unit: Rearranged line items to improve format and pagination. Testing Worklist Report: HD 399388, Revised Resolution Summary to reflect all tests now display the specimen collection time not the accepted time. Audit Trail: Rearranged line items to improve format and pagination. HD 378098 KDA CR 2576: Problem Description: Added a Note to clarify this is a repeated change. CR 2881: Added to Resolution Summary: The D Control portion of the grid is no longer ignored when validating Weak D results after the grid was previously invalidated via the "X" button. CR 2724: Revised the Resolution Summary to reflect that invalid results cannot be saved in this scenario. DR 4409: CPRS Interface Reports, HD366911: Problem description added, "*(released 11/29/2011)".* Resolution summary, removed "This change is dependent on the installation of OR*3*332 and is not visible until that patch is also installed to display multiple portions of same collection in the order dialog." DR 4412: Clarified Resolution Summary and added a note to the Verification or Validation Scenario HD 337715, HD 396365, HD 402842, KDA CR 2252. DR 4417: Edited Test Scenario Group Seven Scenarios 1 & 2. Revised Services Resolution Summary to read, "System Center Operations Manager (SCOM) monitors the status of VBECS Services." Footer: Changed date to April 2012 Transfusion Complications report: Edited: "Note: Configuring to "Note: When configuring…".	BBM team

Date	Revision	Description	Author
		DR 4440: Throughout VBECS: An audible alert may not occur when VBECS prevents the user from accessing a selected option or proceeding with a process. The following KDA are associated with entry of an invalid character in a testing grid. Serologic Crossmatch: KDA CR 2,033 Unit Antigen Typing: KDA CR 1,893 Antibody Screen Test: KDA CR 2,045 Patient Antigen Typing: KDA CR 2,038 The following KDA are associated with security role restricts the user from selecting or issuing the unit or requires override to select or issue the blood unit. Select Unit: KDA CR 2,193 Issue Unit: KDA CR 2,115 , KDA CR 2,195 ,KDA CR 2,199 KDA CR 2,708 occurs in Discard/Quarantine when a user attempts to update a unit to a date/time that is before the last transaction in a different option. CR 2,995: Edited Problem Summary.	BBM team
07/13/12	6.0	Document footer: Changed “May 2012” to “July 2012”. DR 4450: Revision requests by Product Support 061512	BBM team

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Introduction

VistA Blood Establishment Computer Software (VBECS) 1.6.0 Release Notes contains information and examples of test scenarios corresponding to corrections or relating to modifications in VBECS.

Validation Planning

Document your local Validation Plan for any patch related to VBECS, including VistA namespace patches that are identified as an external dependency in the release notes such as LR, OR, VBEC. **The breadth of the validation is focused on the changes as related to YOUR facility's processes, procedures and practices.**

- *Each site is responsible for evaluating changes for their intended use and for establishing additional validation test scenarios (as appropriate).*
- *Each of the verification or validation scenarios are examples of a possible validation activity not mandated testing of the change by each facility.*
- *Execution of an example test scenario may not be appropriate at your facility based on your local procedures and policies.*

Read the Release Notes or associated Patch Descriptions that describe the changes made and take time to evaluate each change:

Ask yourself, does the change apply to my site? "Yes" or "No"…OR "I don't know"!
If "I don't know" applies, find a resource who does know and can make that assessment.

IF the change does apply to your site, the next question is "HOW does it apply to my site?"

- If it does apply, do you want to test as described in the example scenario or perform a different scenario?
- Is the example scenario reflective of your LOCAL PROCESS? If not, remove or edit as needed.
- Do you need to test a different set of data or process?
- Do you have a list of your supplier's product codes for evaluation of blood product updates?
- Does a blood product update require review of any workarounds or missing targets?
- Is a blood product name included in an SOP?
- Do you need to update any circulated documents or information? Workarounds? Procedures? Policies? Web or SharePoint sites?
- Do you need to perform any training for Blood Bank Staff, IT Staff, or Clinical Staff?

The VBECS SharePoint (http://vaww.oed.portal.va.gov/projects/vbecs/default.aspx) has multiple resources regarding validation planning.

New Features and Functions

VBECS 1.6.0 implements the VBECS portion of the pre-transfusion interface to an independent/vendor transfusion verification application. This portion of the interface is not functional until the vendor

application and interfaces are released and installed nationally. See the *Untestable System-Level Corrected Code Requests, VBECS Administrator* section as this cannot be fully tested at this time.

Corrections and Modifications

This section lists corrections and modifications to VBECS 1.5.2 software. Items in the currently released *Known Defects and Anomalies* addressed in the VBECS 1.6.0 release are noted as 'KDA CR or DR number'. Some corrections have an example validation scenario in Appendix A: Validation Planning and Example Test Scenarios.

Local validation is required as defined in your validation plan.

Resolution of:

- New Service Request (NSR) – ID #20100407
- PSPO #1881 is associated with HD 387437, HD 387849, HD 444539, and HD 456724.
- HD 335307
- HD 337715
- HD 339277
- HD 339722
- HD 341940
- HD 346879
- HD 352578
- HD 353065
- HD 354983
- HD 356628
- HD 357434
- HD 366911
- HD 372115
- HD 373392
- HD 377513
- HD 378098
- HD 378779
- HD 381558
- HD 381907
- HD 387437
- HD 387849
- HD 388913
- HD 394622
- HD 396221
- HD 396365
- HD 396922
- HD 399388
- HD 399413
- HD 399931
- HD 400511
- HD 402842
- HD 409713
- HD 410129
- HD 415180
- HD 421894
- HD 432678
- HD 432763
- HD 438441
- HD 439888
- HD 444539
- HD 446944
- HD 453467
- HD 454433
- HD 454476
- HD 454589
- HD 456084
- HD 456724
- HD 457618
- HD 459134
- HD 464593
- HD 474279
- HD 475339
- HD 475372
- HD 476470
- HD 481469
- HD 488361
- HD 489699
- HD 490907
- HD 494963
- HD 495822
- HD 504237
- HD 510389
- HD 511255
- HD 512936
- HD 513792
- HD 515768
- HD 516846
- HD 517387
- HD 518119
- HD 521368
- HD 522558
- HD 534251
- HD 535356
- HD 535467
- HD 535633
- HD 536226
- HD 538641
- HD 540502
- HD 555413
- HD 573529
- HD 588636
- HD 595084
- HD 599670
- HD 608425
- HD 608685
- HD 616280
- HD 620566
- HD 621115

VBECS Administrator

Problem Summary	Resolution Summary	Verification or Validation Scenario
When configuring an interface, entering a space before the IP address in that field causes a system error. CR 2936	The application no longer causes a system error when an extra space(s) precedes an IP address.	None Provided

VBECS Administrator

Problem Summary	Resolution Summary	Verification or Validation Scenario
Multiple Tool Tip messages associated with an enabled clear button are incorrect or missing causing potential user confusion. CR 2954	Tool tip messages display correctly. The clear button enables correctly.	None Provided
Enter a valid Interfaced Application IP Address and Port Number, the Test Connection Button does not enable. CR 2949	Entering a valid Interfaced Application IP Address and Port Number enables the Test Connection Button.	None Provided

Services

Problem Summary	Resolution Summary	Verification or Validation Scenario
The service monitor sends emails too frequently consuming server CPU usage. The send rate was every 5 seconds. CR 2732	System Center Operations Manager (SCOM) monitors the status of VBECS Services. If a service goes offline or fails to start after a reboot, SCOM will send an email alert to the administrators group. Note: Installation of 1.6.0 in Test affects the Production reporting.	Test Scenario Group 8

Throughout VBECS

Problem Summary	Resolution Summary	Verification or Validation Scenario
Online Help links are lost. CR 2693	The links to Online Help are intact and functioning.	None Provided
The VBECS databases are checked for integrity errors once every Sunday. This led to an issue at one site where the problem resulted in data loss due to the length of time that passed between the problem origin and detection. CR 2808 CR 3178	The VBECS databases are checked for integrity errors every night. Email alerts are sent only when integrity errors are found.	None Provided

Throughout VBECS

Problem Summary	Resolution Summary	Verification or Validation Scenario
An audible alert may not occur when VBECS prevents the user from accessing a selected option or proceeding with a process. The following KDA are associated with entry of an invalid character in a testing grid. Serologic Crossmatch: KDA CR 2,033 Unit Antigen Typing: KDA CR 1,893 Antibody Screen Test: KDA CR 2,045 Patient Antigen Typing: KDA CR 2,038 The following KDA are associated with security role restricts the user from selecting or issuing the unit or requires override to select or issue the blood unit. Select Unit: KDA CR 2,193 Issue Unit: KDA CR 2,115 , KDA CR 2,195 ,KDA CR 2,199 KDA CR 2,708 occurs in Discard/Quarantine when a user attempts to update a unit to a date/time that is before the last transaction in a different option.	The audible alerts throughout VBECS occur.	None Provided.

Status Tray Changes

Problem Summary	Resolution Summary	Verification or Validation Scenario
The Pending Order alert and Order Count queries may cause overall performance issues. DR 3679, DR 3680	The total number of pending orders no longer displays in the status tray.	None Provided
The Patient Update/Merge alert queries cause overall performance issues The interval was five seconds. CR 2755	The patient update/merge alert interval is now five (5) minutes to further improve system responsiveness.	None Provided

Division Logon

Problem Summary	Resolution Summary	Verification or Validation Scenario
An option to restore VistALink connection is not offered consistently in the VBECS options: • Accept Orders • Return Issued Units to the Blood Bank • Post-Transfusion Information HD 335307, HD 341940, HD 421894, HD 504237, KDA CR 2761, CR 2695, CR 1571, CR 2455, CR 2372	The application provides an opportunity to restore the connection or informs the user that VistA is not available. The application will be able to differentiate between the options to restore a VistALink connection versus an unavailable VistA application.	Log on to VBECS without logging into VistALink. Attempt to open any menu option that requires a VistALink connection. The application displays an option to restore the connection or a message that VistA is unavailable.

Daily Reagent QC

Problem Summary	Resolution Summary	Verification or Validation Scenario
Daily entry of quality control testing details are required to indicate that a rack is tested whether or not that QC configuration conforms to the facility's testing protocol. CR 2718, DR 3448	A user may indicate that daily QC for a rack is documented off-line allowing use of the rack as QC tested. Current functionality related to the successful completion of the daily reagent rack QC remains unchanged. Patient and unit testing overrides regarding rack QC testing apply when this check box is unchecked or testing is not documented in VBECS.	Test Scenario Group One If you elect to mark a rack QC'ed offline, you must also test that the rack appears tested "yes" in the appropriate options; see Test Scenario Group One, Scenario Two.
The QC testing grid is not enabled when a secondary reagent lot number *(a tested with reagent)* is updated. Examples are the enhancement media or AHG sera when tested as part of the ABS QC. KDA CR 2696	The testing grid enables when a new lot number is selected during Enter Daily Reagent QC for all primary and secondary reagents.	If you perform daily QC online, change any reagent lot number on a tested rack to enable the corresponding reaction result cells in the testing grid.
An exception was not collected when a user enters a negative reaction when the expectation is positive and vice versa. DR 2154	The exception is generated for a test entry both when the entry is positive when negative is expected and vice versa for each reagent type by lot number in addition to a change in reactivity of 2 or more in reaction grades.	If you perform daily QC online, change an expected reaction to its opposite, process the override and review the exception report.

Patient Search Utility

Problem Summary	Resolution Summary	Verification or Validation Scenario
The patient's hospital location does not display in the patient search window. DR 3735	The patient search window now displays the most recent hospital location in VBECS for the selected patient.	None Provided
Compatibility percentage is not correct when one of the identified antibodies may exist individually or as a combination of antigen negative requirements, i.e. Anti-f, G, Ce etc. and the compatibility percentage was changed in Tools, Antibodies from no value to zero for one of the antibody specificities. HD 489699, CR 3054	The compatibility calculation is correct, regardless of the specificity origin(VistA Converted or VBECS entered), based on the values entered in Tools, Antibodies, whether the antigen may exist singularly or as a combination of antigen negative requirements, i.e. Anti-f, G, Ce, etc.	None Provided

Patient Update

Problem Summary	Resolution Summary	Verification or Validation Scenario
A patient update message was rejected incorrectly when the only update is to the patient's SSN. CR 2971	The update message processes when a change to the SSN is the only change.	None Provided

Patient Merge

Problem Summary	Resolution Summary	Verification or Validation Scenario
The merge process changes the "merge from" patient's name to include the string "MERGING INTO" when the patient record is verified as a valid duplicate. The patient name is too long after Patient Merge because of the prepended string merging. This results in the patient name being too long. HD 453467 CR 2931	When the merge-from patient name includes the words "MERGING INTO" and exceeds the standard length, VBECS will no longer reject the message.	None Provided

Accept Orders

Problem Summary	Resolution Summary	Verification or Validation Scenario
When data has been changed and not saved and the X button on the Accept Orders window is used to close the window, the window behaves differently than when the close button is used to exit the window and data may be lost. CR 2909	When data has been changed and not saved and the X button on the Accept Orders window is used to close the window, the confirmation popup displays to prevent data loss.	Select an order, enter the UID and click the X button to close the Accept Orders window. A message appears allowing user to return to the window and save the information or exit without saving the changes.
The specimen collection date/time is the system date/time from when the TAS order was accepted in VBECS, not the real collection date/time for any diagnostic test. Note: Maintain Specimen continues to displays the TAS collection date/time. HD 399388, DR 3793, CR 2817	The TAS test displays the specimen collection date/time rather than the date/time the order was accepted on the Pending Order List (POL) on the Testing Worklist Report and Single Order History Report. This information does not display on the Pending Task List (PTL).	None Provided

Patient Testing

Problem Summary	Resolution Summary	Verification or Validation Scenario
The PTL is slow to clear and move to the testing when 50 units or more are associated with the component order. CR 2920	The PTL closes and moves to the next window without any performance issues.	None Provided
The testing details ALL PHASES is the default. CR 2717, DR 3099	The default selection in the Patient Testing, Testing Details window displays a default as selected in the Configure Division, Configure Testing option.	None Provided
The ABO/Rh test comments from a patient are incorrectly carried over to the next patient test record when processing multiple patient orders in the same batch. HD 381558, KDA CR 2777	The free text comment entered for one patient's ABO/Rh test comment does not appear related to the next patient selected in the same testing batch.	Select at least two (2) patients for batch testing of the ABO/Rh test. Enter a free text comment in the ABO/Rh test comment of the first patient selected. Move to the next patient and the ABO/Rh test comment field is blank.

Patient Testing

Problem Summary	Resolution Summary	Verification or Validation Scenario
Reflex test orders on an expired specimen cannot be selected and completed. HD 432678, KDA CR 1843	Patient reflex test results are allowed with appropriate overrides when the specimen is expired.	Order and result a reflex test on a test associated with an expired specimen.
When Special Instructions (SI) and Transfusion Requirements (TR) option is displayed by pressing the SI/TR button in Patient Testing, the testing grid freezes in the background and is hidden behind the SI & TR window. CR 2845	The SI or TR information window does not cause display problems with the Testing Grid window.	None Provided
Selecting a TAS that is partially tested and another that is "not started" (TAS, ABS or RBC order), does not allow the user to select a testing format for the "not started" order and does not allow the user to result the partially completed test. HD 394622, HD 464593, HD 396221, HD 457618, HD 454433, HD 476470, HD 515768, CR 2805	The testing details are forced to the testing pattern selected for the partially completed test. The user may complete both tests in this grid format.	Test Scenario Group Three, Scenario 1
Invalidation of partial XM results in the All Phases grid (via "red X" button in the corner of the grid) does not fully invalidate all results. The Testing Worklist Report does not mark the invalidated entries with the "entered in error" comment. When re-opened the grid is forced to AHG Only format. CR 2995	The previously entered crossmatch results are cleared.	None Provided
When the user saves patient ABO and Rh interpretations separately, an ABO/Rh discrepancy was incorrectly defined. Note: This problem has not reoccurred. This change automatically corrects any previously unknown instances of the problem. HD 378098, KDA CR 2576, CR 2787	A user is no longer able to save a patient ABO interpretation separately from its corresponding Rh typing.	None Provided
The warning message to notify the physician immediately regarding units that were emergency issued appears related to a released unit that was issued to another patient. HD 522558, CR 3152	The warning message regarding physician notification due to issuance of blood products related to incomplete testing appears appropriately for the correct patient order.	Test Scenario Group Three, Scenarios 2 and 3.

Invalidate Test Results

Problem Summary	Resolution Summary	Verification or Validation Scenario
In a Transfusion Only facility, invalidating a crossmatch interpretation caused a system error. KDA CR 2674	Invalidation of a crossmatch interpretation entry will no longer result in a system error.	None Provided
In a Full Service facility, invalidating crossmatch results from an AHG only data grid caused a system error. CR 2996	Invalidation of crossmatch results from an AHG only data grid will no longer result in a system error.	None Provided
When processing a test as 'entered in error', users do not check the checkbox triggering the corrected results entry. Tier 3 support is required to change the order status allowing corrected result entry by the user. CR 3198, DR 4358	The window is changed, the checkbox is always "checked ". This will default to require a result correction of the erroneous results unless the user UNCHECKS the box, indicating that they do not choose to enter "corrected results" for the test. Note: A test that appears on the PTL for correction that is not needed may be cancelled.	None Provided

Post-Transfusion Data

Problem Summary	Resolution Summary	Verification or Validation Scenario
The user could save a Post-Transfusion Information screen without confirming (overriding) errors at Transfusion Start Date, Transfusion End Date, and Volume fields. CR 3002	The option displays a message box and does not allow incorrectly formatted entries to be saved.	Create a transfusion record with erroneous data on the page in the specified fields.

Document ABO Incompatible Transfusion

Problem Summary	Resolution Summary	Verification or Validation Scenario
The OK button does not enable when all required fields have been completed. CR 2976	The option enables the OK button when all required information has been entered.	None Provided

Transfusion Reaction Workup

Problem Summary	Resolution Summary	Verification or Validation Scenario
The current Transfusion Reaction types contain outdated terms. DR 3747, DR 3833, DR 3845, CR 3049	The list of selectable transfusion reaction types is modified by **removing:** • Acute Hemolytic and Circulatory and **adding:** • Acute Hemolysis non ABO • Acute Hemolysis ABO Incompatibility • TACO (Transfusion Associated Circulatory Overload) • Transfusion Related Microbial Infection • Citrate Toxicity • Unrelated to Transfusion	View and select the reaction types when Finalizing a Transfusion Reaction Work-Up.

Blood Transfusion Record Form (BTRF) and Caution Tag (Tag)

Problem Summary	Resolution Summary	Verification or Validation Scenario
A longer patient name may print into the recipient blood type area of the tag. KDA CR 2454	The patient name and SSN have been switched to allow adequate space for a long patient name to print clearly. Note: Also applies to the blank Caution Tag.	Print a Caution Tag for a blood unit assigned to a patient with name longer than 26 characters total.

Blood Transfusion Record Form (BTRF) and Caution Tag (Tag)

Problem Summary	Resolution Summary	Verification or Validation Scenario
The unspaced ISBT 128 donor identification number (DIN) is difficult to read. NSR – ID #20100407, DR 3752	A space is inserted between the Facility Identification Number (FIN) and the year as well as a space between the year and the sequential number assigned as part of the DIN. The full 13 character DIN number remains the full unit identifier. Example: **W1234 11 654345**	Print a Caution Tag for a blood unit assigned to a patient.
The BTRF or Caution Tag does not include an eye readable product code. KDA DR 1704, DR 4093, DR 3130, CR 3064	The eye readable product code is printed on the Caution Tag next to the 2D barcode. Note: The product code was not added to the BTRF, as that hard copy document becomes only a downtime form with the implementation of Transfusion Verification.	Print a Caution Tag for a blood unit assigned to a patient.
When the Caution Tag and BTRF are printed at the completion of patient testing (TAS and XM), they print without the current ABO/Rh test information. Note: When the patient has previous testing on file that matches the entered ABO/Rh type, this is not evident. KDA CR 2493	The current blood type testing results is saved prior to allowing the generation of the Caution Tag and BTRF associated with selected units when the request to print them is made in Patient Testing.	Select a patient with No Record (NR) of an ABO/Rh test. Order a TAS and RBC for the patient. Perform and save the TAS and crossmatch testing of a unit in the SAME testing session. The Caution Tag and BTRF print the blood type saved with the TAS testing, not that the blood type is unknown.
A transferred blood unit's Caution Tag is printable. CR 2908	A unit in a status of Transferred cannot have a Caution Tag or BTRF printed.	Confirm a shipment of at least one blood unit (Shipment, Outgoing Shipment). Attempt to print the Caution Tag or BTRF from either menu option.
The tag failed to print when the unit is Rh Positive and the patient is Rh Negative. HD 518119, HD 540502, CR 3137	The Tag prints successfully when an Rh Positive unit is selected for an Rh Negative patient.	None Provided.

Select Unit and Issue Unit

Problem Summary	Resolution Summary	Verification or Validation Scenario
The locks created for previously assigned units when the Select Units window loads prevents those units from being issued to the patient. KDA CR 2758, DR 3675	The record lock created for a previously assigned unit that has already been crossmatched is released when selecting this unit in Issue Units.	Test Scenario Group 4

Select Unit and Issue Unit

Problem Summary	Resolution Summary	Verification or Validation Scenario
Frozen products, within the product types PLASMA, Frozen Apheresis RED BLOOD CELLS and Frozen POOLED SERUM, may be issued. KDA DR 1661, DR 3321, CR 3065	The informational message that the selected unit requires additional processing displays for the product types PLASMA, Frozen Apheresis RED BLOOD CELLS and Frozen POOLED SERUM.	Select products of these product types to view the message.
In the warning message, the antibody and antigen test text is misplaced in the message when the unit is antigen positive. CR 2997	The warning message displays the antibody and antigen text correctly when the selected unit is antigen positive.	Select a unit that does not satisfy the patient's antigen negative requirement as created by an antibody. (Do not use an antigen negative requirement only.)
A cryoprecipitate unit with a blood type of POOLED ABO or Rh cannot be selected for a patient. HD 454476, HD 388913, DR 3972, DR 4130, CR 3097	A unit of pooled cryoprecipitate with the mixed blood types is selectable.	Create or enter a cryoprecipitate pool with a POOLED ABO and/or Rh. Select the unit for a patient.
When prompted to print the caution tag and BTRF, click YES for a unit selected from the Emergency issue tab that requires a specimen association but does not have one at this time causes a system error forcing the tech off VBECS. HD 510389, HD 513792, HD 516846, HD 534251, HD 535467, HD 536226,CR 3114	The tag and BTRF prints as requested during an emergent blood issue.	None Provided.
Tech #2 crossmatches units for a selected patient and upon completing are asked if they want to print tags to which they respond **yes**. Tech #1 is reprinting tags for that patient. The system error forces tech #2 off VBECS. HD 511255, CR 3119	The tag and BTRF prints as requested when multiple users are processing the same patient's orders.	None Provided.

Blood Product: Table Update

Problem Summary	Resolution Summary	Verification or Validation Scenario
Product codes were not added to the Blood Product table. DR 3665 CR 2765	The following 12 product codes are added to the Blood Product Table: E6366, E6376, E6377, E6421, E6422, E6528, E6529, E6530, E6531, E6532, E6533, and E6534.	Tools, Blood Products, these product codes are available for configuration. Test Scenario Group 5

Blood Product: Table Update

Problem Summary	Resolution Summary	Verification or Validation Scenario
Additional available blood product codes from ICCBBA (ISBT128) are required additions to the Blood Product Table. CR 3049, CR 3058, CR 3091, CR 3107, DR 3631, DR 3946, DR 3963, DR 3965, DR 3973, DR 4015, DR 4016, DR 4029, DR 4037, DR 4089, DR 4095, DR 4140, DR 4174, DR 4179, DR 4180, DR 4185.	An update to the VBECS blood product table includes addition of new product codes and attributes as well as edits to current product code entries. Blood product codes have been added from ICCBBA Blood Product Database updates, Version 3.45.0 (December 2010) through and including ICCBBA Version V 4.1.0, (July 2011) (E7168-E7417).	Tools, Blood Products, these product codes are available for configuration. Test Scenario Group 5 (See Appendix B: Blood Product Table Updates)

Incoming Shipment

Problem Summary	Resolution Summary	Verification or Validation Scenario
Revise confirmation message to remind the user to perform a visual inspection upon receipt of the blood product as required by policy and procedure. CR 2740, DR 3109, 1.4.0.0 FTI 324	The text of the confirmation message popup no longer presents a generic message. The confirmation message states that by clicking OK and saving the unit record, the unit was visually inspected and is acceptable for use. There is no documentation added to any report related to this change in message text. The user may only enter visually acceptable blood products into VBECS at this time.	Test Scenario Group 2, Scenario 1, Step 5
When entering a Codabar labeled blood product, scanning a 10 digit FDA registration number displays a ~ at the front of that number causing it to display an error message. KDA CR 2759	All lengths of a FDA Registration number barcode label on a Codabar blood product label scans into the FDA registration number field.	None Provided
The system does not allow the scan of a pooled/mixed ABO/Rh blood group label. KDA CR 1594	A pooled or mixed ABO/Rh blood product label can be scanned and moves the cursor to the expiration date field. Note: Pooled FFP and Plasma cannot be entered with mixed/pooled ABO or Rh.	Enter a component that has a pooled ABO or Rh barcode label as allowed by component type (PLT or CRYO).
When a **Transfusion Only** receives a blood unit repeatedly, the site cannot update the restricted-to patient information at Incoming Shipment. KDA DR 3605,CR 2741	A unit has its Restricted-for patient information removed when it is "Transferred". When the unit is subsequently received by the facility, the restricted for patient is blank and allows for the selection of a different restricted for patient at unit receipt.	Test Scenario Group 2, Scenario1, Transfusion Only outcome #1.

Incoming Shipment

Problem Summary	Resolution Summary	Verification or Validation Scenario
Codabar product code, 18451, cannot be saved to inventory during Incoming Shipment. HD 494963, HD 474279, CR 2993, DR 4174	The Codabar product code, 18451, can be used to enter a blood unit. This is a blood product created by the American Red Cross blood suppliers that is not present on the AABB/FDA list of blood product codes.	None Provided

An ISBT labeled unit product code is saved without the unit's product code division codes.
HD 366911, HD 475339 KDA DR 2735, CR 2824, CR 3068, CR 3104, DR 3632, DR 4170,
	The user must enter a full eight-digit product code (five digit product code, donation type, and specific unit division information).
	A unique blood unit record is defined by the following data elements:
	• VBECS Division
	• Unit ID
	• Product type code (Codabar Only) For example: Product Code: 12000 will present a choice of Product type code: Platelets or Washed Platelets
	• Product code
	  • Codabar (5 digits)
	  • ISBT 128 (8 alphanumeric characters).
	• Expiration date.
	When sufficient blood unit information is entered, additional checks are made to ensure its uniqueness. The unit status is checked and a message regarding the ability to re-enter the unit is displayed.
		Test Scenario Group 2
		Attempt to enter and save only the first 5 digits of an ISBT 128 product code as entering a unit.

ABO/Rh Confirmation

Problem Summary	Resolution Summary	Verification or Validation Scenario
The confirmation message window does not resize and hides the OK button when there is a large group of units in the testing batch. KDA CR 2707	A simple confirmation window displays prior to saving data changes. It does not include a listing of the blood units in the batch.	None Provided

Discard/Quarantine

Problem Summary	Resolution Summary	Verification or Validation Scenario
The confirmation message window does not resize and hides the OK button when there is a large group of units in the testing batch. KDA CR 2706	A simple confirmation window displays prior to saving data changes. It does not include a listing of the blood units in the batch.	None Provided

Discard/Quarantine

Problem Summary	Resolution Summary	Verification or Validation Scenario
The incorrect date/time displays in the message when attempting to discard the unit prior to the last record change from testing or processing. KDA CR 2708, CR 3195	When a user attempts to change information on a unit before the last recorded update, the application provides an audible alert and a warning or override message per the logged on user's security role.	None Provided

Outgoing Shipment

Problem Summary	Resolution Summary	Verification or Validation Scenario
In a Transfusion Only facility type, the Restricted-to patient information remains associated with a transferred blood unit and is displayed when that unit is subsequently received for a different patient. HD 339722, CR 2739, KDA DR 3542	The restricted-to patient information is cleared when the user removes the patient assignment when an invoice is confirmed. **Does not apply to the Full Service type configured facility**.	None Provided
The division address is incorrect on the outgoing shipment invoice. HD 352578, KDA CR 2722	The division address displayed on the VBECS Outgoing is the address information as recorded in Tools, Local Facilities.	None Provided
The option does not allow the return of a unit to the original shipper after transfer to a different facility. CR 3193	A unit may be returned to the original supplier after recording interim shipments to other facilities and the unit is in the original facility's inventory.	None Provided
A unit cannot be removed from an un-confirmed outgoing shipment invoice. HD 399413, CR 2818, CR 2941	A unit can be removed from an unconfirmed outgoing shipment invoice.	None Provided

Unit Antigen Typing

Problem Summary	Resolution Summary	Verification or Validation Scenario
A rack marked "not in use today" displays in the pick list. DR 4169, CR 3069	Racks marked as "Not In Use Today" are not included in the rack list presented to the user.	In Enter Daily QC, check a rack "not in use" today, create a worklist, view the selectable list of racks, and verify that the rack does not appear.

Unit Antigen Typing

Problem Summary	Resolution Summary	Verification or Validation Scenario
Unit testing for weak D forces the use of the D reagent lot number associated with the selected rack. When the selected rack is “QC’ed offline”, this is not possible. DR 3613	Unit testing for weak D requires the selection of the antisera lot number but does not force the use of the D reagent lot number associated with the selected rack.	Select a Reagent Rack that has been marked “QC’ed Offline”. Create a worklist for Unit antigen typing with weak D. Select a lot number for D antisera that is not associated with that rack.
A system error occurs if more than one unit antigen test is defined for a worklist and an existing specificity is not selected. HD 381907, HD 495822, KDA CR 2754	A user is able to select any worklist that has more than one unit antigen test defined.	Select any worklist in the top list view that has more than one unit antigen test defined and proceed to testing without incident.
The legend text does not refresh accurately as the cursor moves in the testing grid. CR 2835	The legend displays the allowed entries for the grid cell in which the cursor is placed.	Move the cursor into an interpretation cell of the test grid, the valid interpretations are displayed, not the words “Any Text”.
The weak D test does not allow an INCONCLUSIVE interpretation when expected. CR 2881	The weak D test allows the save of an Inconclusive interpretation with the entry of a negative D test and a positive control test. The D Control portion of the grid is no longer ignored when validating Weak D results after the grid was previously invalidated via the “X” button.	Result a weak D test with negative D and positive control, an inconclusive interpretation is saved.
When more than one antigen typing tab is used for the unit, entries are incorrectly cleared. CR 2864	Entered data remains unchanged when switching between the unit’s testing tabs, specifically lot numbers selected but not saved as one navigates to another tab to enter additional data.	None Provided
User may place the cursor in the row validation square (E, V or W area) in the unit testing grid section. CR 2831	The cursor cannot be placed in the row validation cell.	Place the cursor on the row validation square (E, V or W area), attempt to click into that square. The cursor cannot be placed in this square.
The testing entry validation is not working correctly for weak D antigen typing test allowing the system to save invalid results. HD 353065, KDA CR 2724 This was also corrected by CR 2836 in VBECS 1.5.2.0.	The save of invalid weak D typing will not be allowed when multiple antigen typing are selected for unit or patient antigen type testing. This correction validates the results on a tab, whether alone or after switching to another antigen type.	None Provided

Remove Final Status

Problem Summary	Resolution Summary	Verification or Validation Scenario
Invalidating a transfusion in VBECS increased the transfused units count appearing in the CPRS Transfusion Report as part of the CPRS Blood Bank Report or separately for that date. HD 438441, HD 439888, HD 354983, HD 378779, HD 459134, HD 490907, HD 512936, HD 535356, HD 538641, CR 2589, CR 2901	Removing the Final Status of "transfused" from a unit is correctly reflected in the CPRS transfused unit tally for that date.	Transfuse at least 2 blood units to create a tally on the CPRS Transfusion Report. Remove the final status of transfused from one of these units. The CPRS tally is changed.
Unable to remove the final status of a unit entered into VBECS prior to 1.5.1. The message "the unit has no previous unit status on file and cannot be selected." displays to the user when such a unit is selected. HD 481469, CR 3010	Units entered into inventory prior to 1.5.1 may be processed in Remove Final Status.	None Provided.

Modification Update

Problem Summary	Resolution Summary	Verification or Validation Scenario
The thawed PLASMA target expiration is incorrect. Note: This change includes Plasma Frozen Within 24 Hours of Collection (FP24). FP24 can only be modified to a thawed plasma target with a 5-day expiration. Where local policy is to use FP24 as FFP with 24-hour expiration, the 5-day expiration may be changed to 24 hrs without override during the modification to a thawed product. KDA CR 2735, CR 3196	A 5-day maximum storage time is displayed for PLASMA targets when thawed.	Thaw a plasma product. Displayed default expiration is 5 days. Review the Unit History Report.
A previously divided unit can be divided. CR 3071	A unit may be split only once in the application as designed.	Split a blood unit. Take one of the targets and attempt to split it.

Modification Update

Problem Summary	Resolution Summary	Verification or Validation Scenario
Missing target product codes for various modifications. HD 432763, HD 357434, KDA CR 2691, CR 2746, CR 2773, CR 2745, DR 1942, DR 2092, DR 2998, DR 3423, DR 3433, DR 3579, DR 2163, DR 2616, DR 3262, DR 3360, DR 3596, DR 4050, DR 2150, DR 3818, DR 4108, DR 4116	The modification type truth tables, TT_26.02 Preamble rules and tables A-K, are updated. The update will include the addition of all known core conditions to each of the various tables that are approved for use in the USA, including PAS.	Test Scenario Group 6, Objective 2 Review your workarounds for missing targets for modifications performed at your facility. If you continue to have missing targets, file a Remedy ticket with specific product code information.
THAW modification was missing targets. HD 346879, HD 415180, HD 432763, DR 4189, CR 3070, CR 3109, CR 3110	THAW modification is revised to display at least one target for ISBT 128 labeled units. Note: No changes are made to Thaw /Pool modification.	None Provided Review your workarounds for missing targets for modifications performed at your facility. If you continue to have missing targets, file a Remedy ticket with specific product code information.
The following blood product codes do not display a valid THAW target in 1.5.2: 10100, 10120, 10140, 10200, 10300, 11100, 11120, and 11200. HD 488361, CR 3031	The product codes list THAW to a valid target.	Thaw any or all of these as a single unit modification and the corresponding target appears.
Volume Reduce modification method displays incorrect target products for previously manipulated platelet products. KDA CR 2612	Volume reduction of a previous manipulated blood product is disallowed for products other than Whole Blood and Red Blood Cells. When a product volume needs change, use Edit Unit Information.	None Provided
An ISBT 128 labeled unit received via Incoming Shipment with a product code division code other than “00” cannot be split or pooled in VBECS modification. HD 535633, KDA CR 2756, DR 1696, DR 3637, DR 3652, DR 3663	A unit with a product code division code other than “00” can be split or pooled in VBECS modification.	Test Scenario Group 6, Objective 1, Scenario 1
The Codabar product code 10191 did not display product code 10100as a valid target when thaw/pooling Codabar units. KDA CR 2678	The Codabar product code 10191 is presented as a valid target when thaw/pooling Codabar units of product code 10100.	None Provided

Modification Update

Problem Summary	Resolution Summary	Verification or Validation Scenario
Modification option is not using the same logic as Incoming Shipment to determine uniqueness of a blood unit record. HD 454589, KDA CR 2587, DR 3609	Incoming Shipment and Modification will use the same rules to define a unique blood unit record: A unique blood unit record is defined by the following data elements: • VBECS Division • Unit ID • Product type code (Codabar Only) o For example: Product Code: 12000 will present a choice of Product type code: Platelets or Washed Platelets • Product code • Codabar (5 digits) • ISBT 128 (8 alphanumeric characters)	Attempt to reenter a duplicate blood unit of either labeling type, when these items are the same for the second attempted entry, the unit is disallowed into inventory. This can be done in Incoming Shipment and Modification

Audit Trail Report

Problem Summary	Resolution Summary	Verification or Validation Scenario
There is a new section to capture the Testing Details Configuration setting changes. DR 3561	This change is related to the requested Patient Testing configuration change. The report displays the initial selection and changes to the division configuration setting of "ABS and XM Testing Phases" in the Maintenance: Configure Division section of the report.	Configure Testing Details. Review the Audit Trail report section.
Audit trail incorrectly lists a Special Testing Cost change when a unit is entered in Incoming Shipment. HD 399931, KDA CR 2714	The report will no longer display information for a unit entered via the Incoming Shipment option where the Special Testing Cost field was not changed from the default $0.00. Note: Special Testing Cost does not appear on the Audit Trail when entered during Incoming Shipment. A Special Testing Cost entered during initial receipt of a blood product appears on the Unit History Report and the Cost Accounting Report. The application is unchanged in that a change to a previously saved Special Testing Cost entered in Edit Unit Financial Data appears on the Audit Trail Report.	Bring a unit into your inventory with NO special testing cost. The unit does not appear on the Audit Trail report suggesting a change from blank to $0.00. Review the Audit Trail report.

Audit Trail Report

Problem Summary	Resolution Summary	Verification or Validation Scenario
The Audit Trail Report is missing Blood Unit Antigen changes. HD 377513, KDA CR 2614, CR 2905	Unit records display unit antigen typing changes made in the Edit Unit Information option.	Bring a unit into your inventory with antigen typing information. Change those antigen typings and view the Audit Trail section documenting the data changes.

Administrative Data Report

Problem Summary	Resolution Summary	Verification or Validation Scenario
RBC and FFP counts are incorrect. HD 373392, HD 421894, HD 446944, CR 2695, CR 2797	The correct counts for RBC and FFP display for Incoming and Outgoing Shipment display.	None Provided
The sickle cell negative and CMV negative counts were incorrect as follows: The report counted that the units were SC neg and CMV neg when they were not. For the RBC, unit counts were removed from the incoming shipment count when they were shipped out. For the FFP, units that were modified to THAW were removed from the incoming shipment count. HD 373392, HD 399931, KDA CR 2105	The sickle cell negative and CMV negative units received through Incoming Shipment are reported correctly.	None Provided

Testing Worklist Report

Problem Summary	Resolution Summary	Verification or Validation Scenario
Users prefer to see the date/time specimen was collected rather than the date/time it accepted in VBECS on the Testing Worklist Report. HD 399388, CR 2817, DR 3793	The specimen collection date/time displays rather than the accepted date/time for ALL tests.	None Provided

Transfusion Requirements Report

Problem Summary	Resolution Summary	Verification or Validation Scenario
Report scheduler is not working. CR 2828	The Transfusion Requirements cumulative report format allows the report to print at a future date and time as requested.	None Provided

Transfusion Complications Report

Problem Summary	Resolution Summary	Verification or Validation Scenario
Multiple threshold values cannot be used to prepare the report for a single test. Some results did not display on the report if thresholds were defined with text casing (upper case, lower case, etc.) that differed from VistA. KDA CR 2247, CR 3194	The requested change will allow multiple positive threshold values as selection criteria for a single test to prepare the report. VBECS will display all entries in upper case but will retrieve and display the returned results regardless of case in VistA (all upper, lower or mixed case). Check the various forms of result in your local Lab Account, i.e., POS, Positive, P including all in the threshold settings test format.	Configure the report to return only Positive results. Select to create a report for a date range and review it.
A system error occurred when the retrieved data is unexpectedly non-numeric. HD 337715, HD 396365, HD 402842, KDA CR 2252	The requested change provides a report that includes a non-numeric result when a numeric result is expected to allow for canceled and other terms used in the field.	None Provided Note: When configuring the report to find tests with the lower case alpha characters, the VistA name must match exactly.

CPRS Interface Order Dialog

Problem Summary	Resolution Summary	Verification or Validation Scenario
Unfilled component orders that are not associated with a specimen UID are not completed in CPRS when expired. KDA DR 2883, KDA CR 2368, DR 2420, DR 3626	When a component order is not associated with a specimen, and the component order was never “Filled” (the number of units ordered was not prepared in full), the VBECS component order expires 10 days after acceptance and sends an update to CPRS to complete the VBECS child order. Note: The order appears continues to appear active, as the parent order is not completed. There is no ‘expired’ order status available in the VistA Lab application. See KDA CR 3184. See *FAQ CPRS VBECS Order Details*	None Provided Note: CPRS order details: the VBECS child order will have an ‘e’ indicating that the order is ‘expired’.
A system error occurred when saving tests associated with an order where the Date/Time Wanted was not included in the CPRS Order message to VBECS. PSPO#1881, HD 387849, HD 387437, HD 444539, HD 456724, HD 517387, KDA CR 2784	A system error no longer occurs.	None Provided

CPRS Interface Order Dialog

Problem Summary	Resolution Summary	Verification or Validation Scenario
Inactive MSBOS entries are displayed in the CPRS order dialog when an urgency of 'Pre-Op' is selected DR 2821, CR 3078	The CPRS order dialog displays only surgery names that are marked "active" by division in the VBECS MSBOS option. Note: Alerts display only for active recommendations for a component type. When no recommendation is configured for a component class, other recommendations may be active, no warning appears when an order for the component with no active recommendation.	None Provided
CPRS order dialog MSBOS alert for No Blood Required does not work. DR 3651, KDA CR 2742	CPRS Order dialog displays a message for a blood component order when the selected order urgency is "PRE-OP" and the VBECS active MSBOS surgery name and its active component order recommendation is set to "No Blood Recommendation" or "Type and Screen Only" in VBECS.	None Provided

CPRS Interface Reports

Problem Summary	Resolution Summary	Verification or Validation Scenario
CPRS does not display multiple unit divisions of the same unit ID number. *This aligns with the correction described in OR*3*332 (released 11/29/2011).* HD 366911, *CR 2806*	VBECS transmits the ISBT 128 eight digit product code allowing CPRS to differentiate apheresis collections that have the same donor identification number.	View an ISBT unit on the CPRS reports or order dialog.
The converted transfusion reaction records do not display the date properly. HD 396922, CR 2807	An eye-readableTransfusion Reaction date for VistA converted records displays in the CPRS Blood Bank Report.	None Provided
The incorrect message text was displayed in the CPRS Blood Bank report in association with a positive antibody screen test result. HD 372115, HD 410129, KDA CR 2435, DR 4025	The informational message text displayed related to positive Direct Antiglobulin Tests and positive Antibody Screen Tests displays: *Preparation of red cell components for transfusion may be delayed due to serologic problems. Contact transfusion service for information on potential clinical significance and availability of blood components.*	None Provided
CPRS Blood Bank Report displays unit blood type of MX as "Y" CPRS Blood Bank Report displays a unit with No RH as "Z". CR 3161	CPRS Blood Bank Report displays mixed/pooled or blank Rh unit types as MX and blank respectively.	None Provided

Untestable System-Level Corrected Code Requests

Services

Problem Summary	Resolution Summary	Verification or Validation Scenario
The patient update interface inhibited system responsiveness. CR 2956	Patient Update queries are revised to minimize effects on system response time.	None Provided

VistaLink Connections

Problem Summary	Resolution Summary	Verification or Validation Scenario
VBECS does not release the VistALink session and may leave inactive sessions connected. This is unseen by the VBECS user unless there are too many VistA sessions running in the background. HD 521368 CR 3121	VBECS logs off the VistALink session when the user logs out of VBECS.	None Provided

VBECS Administrator

Problem Summary	Resolution Summary	Verification or Validation Scenario
The vendor's transfusion verification software application and hardware are required to execute transfusion verification related changes in VBECS. The interface requires installation configuration to enable communication with the vendor server and application. *No CR numbers are associated as all applied to internal development and were not software corrections*	VBECS 1.6.0 implements the VBECS portion of the pre-transfusion interface to an independent/vendor transfusion verification application.	Test Scenario Group 7 includes instructions for minimal negative validation testing.

VistA Software Dependencies

See the list in the *VistA Blood Establishment Computer Software (VBECS) 1.6.0 Patch Installation Guide* for the VistA patches that must be in place for VBECS 1.6.0 to function as designed.

1. VBEC*1.0*27
2. LR*5.2*412 bundled for installation with VBEC*1.0*27
3. OR*3.0*332 (Displays the ISBT 128 eight digit product code in CPRS' Blood Bank reports.)
4. LR*5.2*382 is required to support the information and interface needed for the COTS system BCE COTS Vendor Application availability.

The transfusion verification vendor application returns details of the blood unit administration to the patient's Computerized Patient Record System (CPRS) record. This is an independent transmission and is not part of VBECS 1.6.0.

VBECS User Documents

See each guide's revision history for change details:

- *VistA Blood Establishment Computer Software (VBECS) 1.6.0 Patch Installation Guide*
- *VistA Blood Establishment Computer Software (VBECS) 1.6.0 Technical Manual-Security Guide*
- *VistA Blood Establishment Computer Software (VBECS) 1.6.0 Release Notes*
- *VistA Blood Establishment Computer Software (VBECS) Known Defects and Anomalies*
- *VistA Blood Establishment Computer Software (VBECS) 1.6.0 User Guide (*HD/ 339277 & HD 400511-DR 3762, HD 356628-DR 3597)

Customer Support

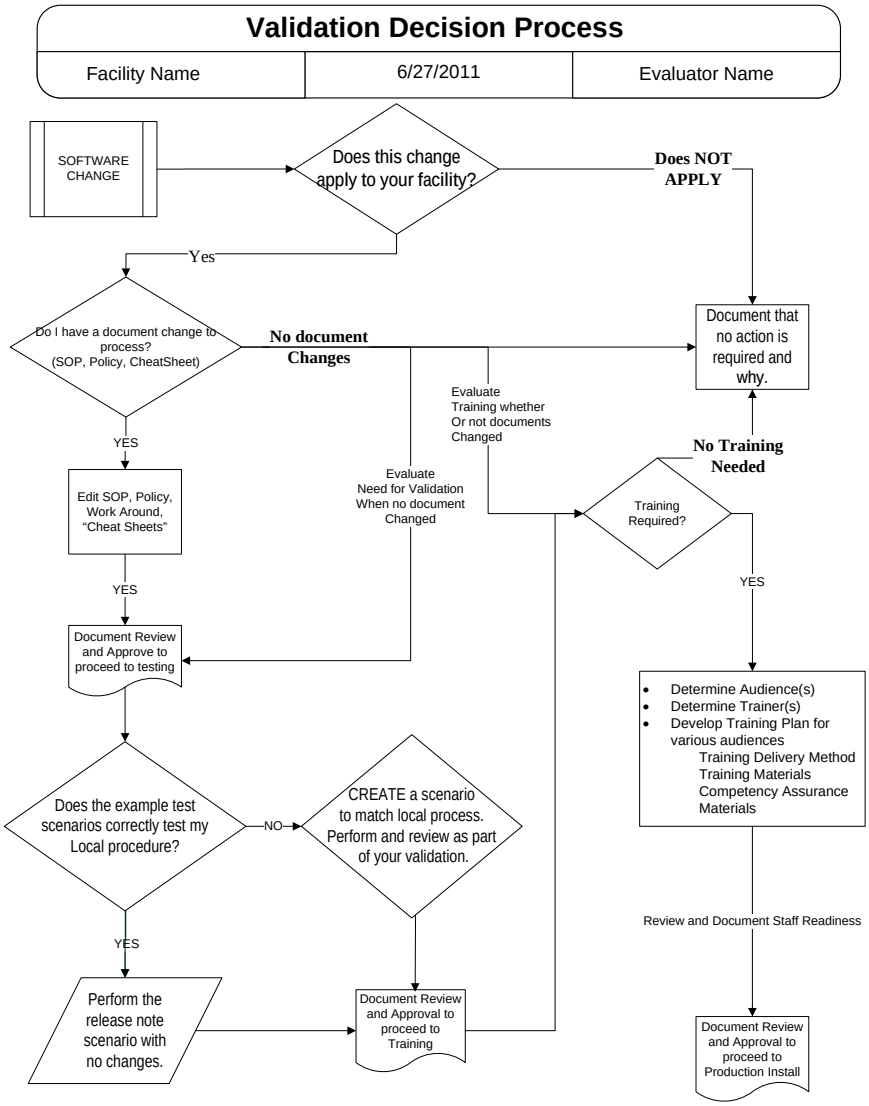
See the Customer Support section of the VistA Blood Establishment Computer Software (VBECS) 1.6.0 User Guide.

References

ICCBBA Blood Product Database updates, Version 3.45.0 (December 2010) through and including ICCBBA Version V 4.1.0, (July 2011)

Appendix A: Validation Planning and Example Test Scenarios

The following is a flowchart to help assess any one change and plan accordingly.



These are <u>examples</u> of possible test scenario not step-by-step scripts. Each site is responsible for evaluating changes for their intended use and for establishing additional validation test scenarios (as appropriate).

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Test Scenario Group One	
Test Objective: Verify that the QC rack marked "QC Testing Documentation Offline" behaves as a rack where QC was entered online. **Scenario 1 (**Reagents ➔ Enter Daily QC Results**):** Verify the rack appears on the "retest rack" tab after saving it with a "QC Testing Documentation Offline" check box.	
Data	Select a rack from the Test Rack(s) tab. Check the QC Testing Documentation Offline box. Save the rack with the indication of "QC Testing Documentation Offline" box checked. Click the close button to exit the option. (The OK button on the main window does not enable.) This rack may or may not have previous online QC records.
User	No specific user role is required.
Steps	1. Open Reagents ➔ Enter Daily QC Results.
Expected Outcome	☐ The selected rack no longer appears on the Test Rack(s) tab. ☐ The selected rack appears on the Retest Rack(s) tab.
Scenario 2 (Patient Testing): Verify the rack displays as "yes" in Testing Details in Patient Testing.	
Data	Use the rack set up in Scenario 1 Data or set up a rack with those conditions. Place a CPRS Order and accession at least 1 diagnostic test that is available for selection on the PTL. Optionally, reflex tests or an RBC order where serologic crossmatch can be added (remember this order will appear on the Component order tab for selection.
User	No specific user role is required.
Steps	1. Open Patients ➔ Patient Testing, select an order that requires serologic testing. 2. View the Testing Details window.
Expected Outcome	☐ The selected rack appears in the rack list as Tested "Yes".
Scenario 3 (Unit Testing Options): Verify the rack displays as "yes" in Testing Details in Unit Testing options.	
Data	Use the rack set up in Scenario 1 Data or set up a rack with those conditions. View the Testing Details window in the unit testing options ABO/Rh Confirmation and Unit Antigen Typing that are required for review.
User	No specific user role is required.
Steps	1. Open the Testing Details window in ABO/Rh Confirmation. 2. Open Unit Antigen typing, view the available racks for testing, the selected rack is displayed.
Expected Outcome	1. ☐ The selected rack appears in the rack list as Tested "Yes". 2. ☐ The selected rack appears in the rack list.

Test Scenario Group Two	

Test Objective: Verify the messaging when attempting to bring a unit into inventory. When sufficient blood unit information is entered, the following additional checks are made to ensure its uniqueness in this order after the following fields are already the same as a record on file:
• VBECS Division
• Unit ID
• Product type code (Codabar Only)
For example: Product Code: 12000 will present a choice of Product type code: Platelets or Washed Platelets
• Product code
  • Codabar (5 digits)
  • ISBT 128 (8 alphanumeric characters).
• Expiration date.	

Scenario 1: Verify If a unit record in the division is found and the unit status is "Transferred," additional checks are made to ensure that the ABO/Rh and unit expiration date are identical to the existing unit record. If they match, the existing unit record is made available, and a warning message is displayed asking if this is a "Re-entry" of a previously processed unit: **Codabar Note:** If you use a product that displays normal and washed products, pick the same one as you shipped out. If you do not, you are not re-entering the same unit. **Transfusion Only Note:** Select different patients as the restricted for patient prior to shipping out the unit and returning it in a second Incoming shipment event to allow you to verify that the record is correctly updated.	
Data	Process a unit with a donation type of "V" voluntary allogeneic through Shipments, Outgoing Shipment. Confirm the invoice to update the unit status to "transferred". Verify the unit status by checking the unit status in the header of the Unit History Report.
User	No specific user role is required.
Steps	1. Shipments➔Incoming Shipment, enter in the unit from Data. 2. Enter all fields through the expiration date. 3. Transfusion Only facility: select a Restricted for Patient. The SAVE button enables. 4. The new confirmation message displays. 5. Click OK to save the unit record.
Expected Outcome: Full Service	Step 2: In a Full Service Facility Type, you will receive the following message: *You are attempting to reenter a unit in inventory. If this is not what you want to do, select No and clear the unit. If this is correct, select Yes and save the unit. ***Any changes to unit information must be done in Edit Unit Information. ******
Expected Outcome: Transfusion Only	Step 2: In a Transfusion Only Facility Type, you will receive the following message: *If this is not what you want to do, select No and clear the unit. If this is correct, select Yes and save the unit. You must select a Restricted For Patient at this time. ***Any additional changes to unit information must be done in Edit Unit Information.**** The following are available for data entry: Restricted For Patient. Step 5: The unit record is updated with the newly selected restricted for patient.
Reports:	Review the Unit History Report, Incoming Shipment section. The report documents each incoming shipment processing activity. Transfusion Only Facility Type reports will also reflect the restricted for patient information for each incoming shipment processing activity.

Test Scenario Group Two	
Scenario 2: Verify that attempting to re-enter a unit with a past expiration date AND is in inventory is not allowed. The unit in inventory must have an active unit status, limited, available, assigned, crossmatched, transfused, modified, or discarded. Note: The unit may not be inactivated or shipped out/transferred. *If you want to check this rule with the unit in various status as an expired unit, repeat this scenario with the unit statused as you desire, with the exception of 'transferred' or 'inactivated'.*	
Data	Select an expired unit.
User	No specific user role is required.
Steps	1. Shipments➔Incoming Shipment, enter in the unit from Data. 2. Attempt to enter that unit into inventory by entering data in all fields through the expiration date.
Expected Outcome	The expected response is the same for either facility type setting. If a unit record in the division is found and has an expiration date in the past, the system displays a warning message stating that the unit information already exists in the division and that this unit cannot be added: "The blood unit record already exists in the division."
Scenario 3: Optionally, attempt to re-enter a unit that is inactivated, a duplicate entry is allowed.	
Data	Select an inactivated unit from inventory.
User	No specific user role is required.
Steps	1. Shipments➔Incoming Shipment, enter in the unit information for the selected data unit. 2. Enter all fields through the expiration date. 3. Transfusion Only facility: select a Restricted for Patient. The SAVE button enables. 4. The new confirmation message displays. 5. Click OK to save the unit record.
Expected Outcome:	Unit record is processed as a new unit.
Reports:	Both the inactivated and new unit records are available. Review the Unit History Report, Incoming Shipment section. The report documents each incoming shipment processing activity. Transfusion Only Facility Type reports will also reflect the restricted for patient information for each incoming shipment processing activity.
Scenario 4: Optionally, attempt to re-enter a unit that is **transferred**, re-entry is allowed.	
Data	Select a transferred unit from inventory.
User	No specific user role is required.
Steps	1. Shipments➔Incoming Shipment, enter in the unit from Data. 2. Enter all fields through the expiration date. 3. **Transfusion only facility:** select a Restricted for Patient. The SAVE button enables. 4. The new confirmation message displays. 5. Click OK to save the unit record.

Test Scenario Group Two	
Expected Outcome: Full Service	Step 2: In a Full Service Facility Type, you will receive the following message: You are attempting to reenter a unit in inventory. If this is not what you want to do, select No and clear the unit. If this is correct, select Yes and save the unit. ***Any changes to unit information must be done in Edit Unit Information. ***
Expected Outcome: Transfusion Only	Step 2: If this is not what you want to do, select No and clear the unit. If this is correct, select Yes and save the unit. You must select a Restricted For Patient at this time. ***Any additional changes to unit information must be done in Edit Unit Information.*** In a Transfusion Only Facility Type: The following are available for data entry: • Restricted For Patient Step 5: The unit record is updated with the newly selected restricted for patient.
Reports:	Review the Unit History Report, Incoming Shipment section. The report documents each incoming shipment processing activity. Transfusion Only Facility Type reports will also reflect the restricted for patient information for each incoming shipment processing activity.

Test Scenario Group Three	
Test Objective Scenario 1: Verify that selecting a 'not started' and a partially completed order in the same batch allows the data to be saved normally for both orders. Note: *Revise this scenario to mimic your variations in workflow.* Do not test this using multiple partially completed orders with different previously selected test methods (KDA CR 3118).	
Scenario 1: Verify that a partially completed order of either testing phase and a NOT STARTED order may be selected together and may be saved with different test methods.	
Data	Select two patients. Process orders for testing that will require the selection of Testing Details (i.e., TAS, ABS, RBC). Partially complete one of the orders. Note the Testing Details phase selected for validation records. Do not start testing on the second. It must be available on the PTL (Patients, Patient Testing).
User	No specific user role is required.
Steps	1. Patients➔Patient Testing (if you use an RBC order and a TAS or ABS, you may need to select from both tabs) 2. Select orders 1 and 2 for testing. 3. Select the QC rack. The testing details (grid format) is grayed out 4. Complete both tests. Save the results.
Expected Outcome:	Step 3: The testing details grid format is already selected as saved with the partially completed test and is not editable. Step 4: Both tests are saved successfully.
Reports:	Testing Worklist Report: Both tests are displayed as tested. Patient History Reports: Testing is displayed as completed.

Test Scenario Group Three	
Test Objective Scenario 2 and 3: Verify that the system responses regarding physician notification due to issuance of blood products related to subsequently entered test results appears appropriately for the correct patient order. Note: The scenario is written for a positive ABS entry only as this was the problem reported in the Remedy ticket though the message is triggered by other positive testing entries and may be varied to support that validation locally. The system responds to other testing interpretations such as a patient ABO/Rh discrepancy, the unit XM is incompatible with the patient, the patient ABS is positive, the patient DAT is positive, or the unit is antigen positive where antigen negative is required on the tested specimen.	
Scenario 2: Verify that the message does not appear for patient A when a test result indicating incompatibility is entered AFTER the unit was released from the patient with incomplete testing and issued to a different patient.	
Data	Two patients: Order a Type and Screen and RBC for each, accession and accept the orders. Enter one or more blood units that is ABO/Rh compatible for both patients. **Patient A:** Enter results for the TAS. 1. Enter the ABO/Rh results and interpretation. Do not enter ABS results or interpretation. 2. RBC order: Select a unit for patient A. *(It does not need to be crossmatched or issued, just selected.)* **Patient B:** Enter unremarkable results and interpretations for TAS.
User	No specific user role is required.
Steps	Patient A: 1. Blood Units➔Release Unit from Patient Assignment, release the unit assigned to patient A. Patient B: 2. Blood Units➔Select Units; select the unit released from patient A in Step 1. 3. Patients➔Issue Blood Components, issue the unit. Patient A: 4. Patients➔Patient Testing, enter a positive ABS test interpretation.
Expected Outcome:	Step 4: No message or override appears when testing is entered, as the unit was not issued to the patient.
Reports:	Exception Report: no override captured related to Step 4. Patient History Reports: Testing is displayed as completed.
Scenario 3: Verify that the message appears for patient A when a test result indicating incompatibility is entered and the unit is issued to the patient with incomplete testing.	
Data	Order a Type and Screen and RBC. Accession and Accept the order. Enter results for the TAS. 1. Enter the ABO/Rh results and interpretation. Do not enter ABS results or interpretation. 2. RBC order: Select and issue a RBCunit.
User	No specific user role is required.
Steps	1. Patients➔Issue Blood Components, issue the unit processing the overrides associated with incomplete testing at issue. 2. Patients➔Patient Testing, enter a positive ABS test interpretation.
Expected Outcome:	Step 2: A message or override appears when the test interpretation is entered as the unit was issued to the patient.
Reports:	Exception Report: Exception type: Unit ER issued, testing problem was recorded properly. Patient History Reports: Testing is displayed as completed.

Test Scenario Group Four	
Test Objective: Verify that multiple users can handle different units on the same component order in Select Unit and Issue Unit.	
Scenario 1: Verify that multiple staff members may handle various stages of a blood product order for the same patient order. Note: *Revise this scenario to mimic your variations in workflow.* Attempts to use the same blood unit by multiple users will result in a data lock, which is expected functionality unrelated to this correction.	
Data	Select a patient; process at least one FFP, RBC, or PLT component order for the patient to the PTL. Login the number of units required.
User	No specific user role is required. Two users are required to perform the steps.
Steps	User one: 1. Assign half of the blood units to the order. 2. Hand off this batch to user two. 3. Coordinate with User two; assign the rest of the units to the order when they are issuing the units you selected previously. User two: 1. Coordinate with User one, issue the first half of the order while they are selecting additional units for the order.
Expected Outcome	User one may add units to the selected component order while user two is issuing units. User two may issue units while unit one is adding units to the component order.

Test Scenario Group Five **(Generic Script, Repeat as needed for each product code that you may receive from your blood supplier.)**	
Test Objective: Demonstrate that the blood product code can be processed throughout VBECS for patient transfusion.	
Scenario 1 (Incoming Shipment): Verify the unit can be processed into the facility's inventory using Incoming Shipment.	
Data	N/A
User	No specific user role is required.
Steps	Add a blood unit with the indicated product code to the facility inventory (Shipments, Incoming Shipment).
Expected Outcome	The product code can be associated with your shipper.
Scenario 2 (Modification): Verify the unit can be processed through enabled modification process(es). Note: Perform only real life modification patterns. Processing a single blood unit through multiple modifications may not present a target.	

Test Scenario Group Five **(Generic Script, Repeat as needed for each product code that you may receive from your blood supplier.)**	
Data	Log in (Shipments, Incoming Shipment) a blood unit with the indicated product code.
User	No specific user role is required. Note: If the unit is to be modified repeatedly, a Traditional Supervisor may Remove the Final Status to allow use of the same blood unit in multiple modifications.
Steps	Modify the blood unit in an applicable modification.
Expected Outcome	Blood unit with the indicated product code can be modified to a transfusable product code.
Scenario 3 (Selection and Issue): Verify the unit can be processed through normal path for patient transfusion.	
Data	Place and accession the appropriate orders for the patient Accept the orders in VBECS (Orders, Accept Orders).
User	No specific user role is required.
Steps	1. Assign the Unit (Blood Units, Select Units). 2. Optionally, print the BTRF and Caution Tag. 3. Issue the Unit (Patients, Issue Blood Components).
Expected Outcome	Blood unit with the indicated product code can be issued for patient transfusion.

Test Scenario Group Six **Test Objective: Verify specific modification processes as detailed in each scenario.**	
Scenario 1: Verify that ISBT 128 labeled units with a product code containing divisions codes (7^{tn} and 8^{tn} characters of the product code) may be split (divided) in VBECS, for example E04210VA0, E04210VB0. Note: Local policy may dictate which component class is used for testing.	
Data	Enter an ISBT 128 labeled unit with a product code division code in the product code of any component class. Note: If you receive such product codes, use those. If you do not routinely receive multiple portions of a blood unit collection with product code division codes, the division is entered A0 (zero), B0 (zero), etc.
User	No specific user role is required.
Steps	1. Select Blood Units➔Modify Units 2. Select Split modification. 3. Select the unit entered in Data (must have product code division codes in the product code) 4. Process the modification completely. (Optional: relabel verification)
Expected Outcome	The unit is successfully divided into multiple portions. The product code division code will reflect the split enumeration in the 8th digit of the product code as a lower case a-z.

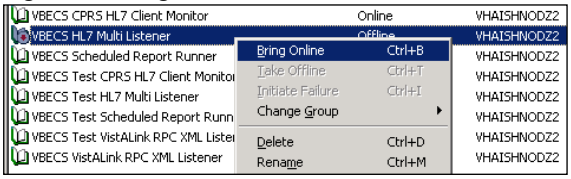
Test Scenario Group Six	
Reports:	Select a Unit History Report, click the Find Button, review the select unit window for the original and created blood units where the portions appear on the list in one view.
Scenario 2: Verify that a missing target is presented where previously missing for your enabled modification methods. Note: Local policy dictates the component class and modification method is used for testing. If you continue to have a missing target, contact the National Help Desk to report the specific processing performed on the unit prior to the final modification.	
Data	Enter a blood unit and process it to readiness for your modification. Note: If you are performing sequential modifications on the unit, record your sequence should you encounter a missing target in the final modification.
User	No specific user role is required.
Steps	1. Blood Units➔Modify Units 2. Select the modification. 3. Select the unit entered in data. 4. Process the modification completely. (Optional: relabel verification)
Expected Outcome	The unit is successfully modified to a different product code.
Reports:	Review the Select Unit window for the report as you select a Unit History Report for the original and created blood units.

Test Scenario Group Seven	
Test Objective: Verify that errant enabling and configuration of the BCE COTS interface does not interfere with established messaging and secondly that errors are recorded for review. **Scenario 1:** Verify that enabling and configuration of the BCE COTS interface when no vendor server is available does not stop established processing of HL7 messaging. Note: This scenario describes only CPRS order processing as patient update and merge are processed via the same HL7 processor and do not require independent testing to verify the processor continues to function normally. 🗣 Regarding viewing the Application Error Log entries: when you are supported by a regional support system, please alert the appropriate IT support members of your testing to minimize confusion and prevent alarm. Alternately, you may determine it is not necessary to test at this time and leave it unchecked. 📣 Regarding viewing the interface related error emails: if you are part of a regional support system, please alert the appropriate IT support members of your testing or configure this test to send the email to you instead of the normal production support group.	
Data	Before beginning, verify current configuration, activity, and status of the existing interfaces, VistALink, CPRS, Patient Update and Patient Merge. Make sure that the VBECS-OERR HL7 link in VistA is not Shutdown. 1. Open VBECS Administrator, Select Configure Interfaces, CPRS. Record the values shown on the screen. Interfaced Application: Connection Method: IP Address _____ Port _____ VBECS Application: IP Address _____ Port _____ Message Options: ACK Timeout: _____ Re-Transmit Attempts: _____ Purge Criteria: Completed Messages: _____ Messages in Error: _____ Interface Failure Alert Recipient: Email Address: _____ Logging Configuration: Log Events and HL7 Messages to Event Log: Must be checked. 2. Open VBECS Administrator. Select Configure Interfaces, BCE COTS. Uncheck the Interface Disabled checkbox (lower left corner of the window). 3. 📣🗣 Fill in all required fields so that they match recorded values from the CPRS interface as above. Note: Logging Configuration must be checked or Scenario 2 will not work. 4. A confirmation message appears (*You are about to enable the BCE COTS interface. Please set all required interface properties and save them. Continue?)*, click yes. 5. Click the "Test Connection" button to enable the Save button. If the "Test Connection" fails, contact IRM to verify the VBECS-OERR link is running. 6. Click Save and then Yes. 7. Exit VBECS Administrator.
User	📣🗣Server Administrator access is required to view the Event Log. VBECS Administrator access is required to configure the BCE COTS interface. No specific user role is required to process the unit in VBECS.

Test Scenario Group Seven	
Steps	After the BCE COTS interface is enabled in Data. 1. Place at least one CPRS diagnostic test order. 2. Accession the order in Lab. 3. Accept the order in VBECS (Accept Orders). 4. Complete the order placed in Step 1 (Patient Testing).
Expected Outcome	1. Verify the CPRS order details have a pending status for the VBECS and Lab order. 3. Verify the CPRS order details have an active (a) status for the VBECS order. 4. Verify the CPRS order details have a status of complete (c) for the VBECS order.
Reports:	See the CPRS order details as directed in Expected Outcome.
Scenario 2: Verify that enabling and configuration of the BCE COTS interface when no vendor server is available does not prohibit unit processing in VBECS and sends error messages and alerts as expected. **Notes:** Updating Post Transfusion information for the unit in VBECS does not message the vendor product. That message is delivered from the vendor product and is not testable at this time. 🗣 Regarding viewing the Application Error Log entries: when you are supported by a regional support system, please alert the appropriate IT support members of your testing to minimize confusion and prevent alarm. Alternately, you may determine it is not necessary to test at this time and leave it unchecked. 📣 Regarding viewing the interface related error emails: if you are part of a regional support system, please alert the appropriate IT support members of your testing or configure this test to send the email to you instead of the normal production support group.	
Data	Before beginning, verify current configuration, activity, and status of the existing interfaces, VistALink, and CPRS in your test account. Make sure that the VBECS-OERR HL7 link in VistA is NOT shutdown. 1. Create an RBC order in CPRS and accept it in VBECS. 2. Prepare a unit processing during the scenario. 3. Repeat Scenario 1 Data steps (2-7) to enable the BCE COTS interface, if it was disabled at the end of Scenario 1.
User	📣🗣 Server Administrator access is required to view the Event Log. VBECS Administrator access is required to configure the BCE COTS interface. No specific user role is required to process the unit in VBECS.

Test Scenario Group Seven	
Steps	Log into VBECS: 1. Assign at least one unit associated with the RBC order.(Select Unit, XM as needed) 2. Optionally, Issue at least one unit associated with the RBC order. 3. Optionally, Return from Issue at least one unit associated with the RBC order. 4. Optionally, Release from Assignment one unit associated with the RBC order. 5. Ensure the error messages have been processed prior to proceeding. Exit VBECS and Log into VBECS Administrator: 1. REMOVE all BCE COTS entries and disable the BCE COTS interface. 2. A message appears (*You are about to disable BCE COTS interface. It will cause VBECS to stop sending and receiving messages via that interface. Continue?), Click Yes.* 3. Close the window as all fields are disabled.
Expected Outcome	Email alerts with the Subject "Error Sending Message" are sent and events for unit processing event after Steps 1-4 are created. • Verify the email group receives an email alert when the order is processed for the patient in Steps 1-4. • The BCE COTS interface creates Application Events in the Error log for each processing event in Steps 1-4. (See Event Viewer) ✓ *Verify the BCE COTS interface disabled checkbox is checked.*
Reports:	1. Failure alert messages regarding the BCE COTS interface are sent and received. 2. Application Error Log (See Event Viewer) entries appear with sources reading: "Outbound message to BCE_COTS" and "VBECS HL7 Client Monitor".

Test Scenario Group Eight	
Test Objective: Verify the change in email notification regarding server errors. **Scenario 1:** Verify that the email notification is received within 5 minutes of the error.	
Data	None.
User	VBECS Server Administrator
Steps	1. Login to the cluster as a server administrator. 2. Open **Cluster Administrator.** 3. Select the **Active Resources** folder under the active node (it will be empty on the passive node). 4. Right click on **VBECS HL7 Multi Listener** and select **Take Offline**.

Test Scenario Group Eight	
Expected Outcome	Within 5 minutes, you should receive an email similar to the one in **Figure 1**. **Figure 1: Example of alert email** Alert: (monitor) - VBECS HL7 Multi Listener Source: VHAISHCLUZ1.vha.med.va.gov Path: Last modified by: System Last modified time: 12/30/2011 10:29:49 AM Alert description: Please see the alert context for details. Alert view link: "http://VHAISHOPSQD:51908/default.aspx?DisplayMode=Pivot&AlertID=%7b0635f1eb-8ded-49d9-a4c9-d1c90613f3a4%7d" Notification subscription ID generating this message: {F9C03FB9-F1D4-0902-BB4A-64F423C866EA}
Closeout: Turn on the Multi Listener	After you have verified the email receipt: bring the Listener on line for use. 5. Right click on **VBECS HL7 Multi Listener** and select **Bring Online**. **Figure 2: Bring Online** 

Appendix B: Blood Product Table Updates

The following product codes display abbreviated short names. The full name associated with the product code can be found in VBECS under Tools, Blood Products.

Table 1 Product Codes with Abbreviated Short Names	
Product code	**Information**
E7094	PLT Pool Thaw DMSO OPN LKPR PLS R/PA BFCT 4DNR DR 4185
E7095	PLT Pool Thaw DMSO OPN LKPR PLS R/PA BFCT 5DNR DR 4185
E7096	PLT Pool Thaw DMSO OPN IRD LKPR PLS R/PA BFCT 4DNR DR 4185
E7097	PLT Pool Thaw DMSO OPN IRD LKPR PLS R/PA BFCT 5DNR DR 4185

The ICCBBA Product Description Database, Version 4.0.1 April 11, 2011, corrected spacing inconsistencies in the product description for those products containing attribute values of EF5 (>=200mL<400mL) and EF6 (>=400mL<600mL). VBECS is been updated to reflect the edits of the long names that do not affect the product code handling processes.

TABLE 2 PRODUCT CODES THAT HAD CORRECTIONS TO THE FULL NAME

E0845	**E0846**	**E0847**	**E0848**	**E0860**	**E0861**	**E0862**	**E0863**
E0885	**E0886**	**E0887**	**E0888**	**E0900**	**E0901**	**E0902**	**E0903**
E0925	**E0926**	**E0927**	**E0928**	**E0940**	**E0941**	**E0942**	**E0943**
E0965	**E0966**	**E0967**	**E0968**	**E0980**	**E0981**	**E0982**	**E0983**
E1005	**E1006**	**E1007**	**E1008**	**E1020**	**E1021**	**E1022**	**E1023**
E1045	**E1046**	**E1047**	**E1048**	**E1060**	**E1061**	**E1062**	**E1063**
E1085	**E1086**	**E1087**	**E1088**	**E1100**	**E1101**	**E1102**	**E1103**
E1125	**E1126**	**E1127**	**E1128**	**E1140**	**E1141**	**E1142**	**E1143**
E1168	**E1169**	**E1170**	**E1171**	**E1172**	**E1173**	**E1187**	**E1188**
E1189	**E1190**	**E1191**	**E1192**	**E1207**	**E1208**	**E1209**	**E1210**
E1211	**E1212**	**E1226**	**E1227**	**E1228**	**E1229**	**E1230**	**E1231**
E1256	**E1257**	**E1258**	**E1259**	**E1260**	**E1261**	**E1275**	**E1276**
E1277	**E1278**	**E1279**	**E1280**	**E1295**	**E1296**	**E1297**	**E1298**
E1299	**E1300**	**E1314**	**E1315**	**E1316**	**E1317**	**E1318**	**E1319**
E1344	**E1345**	**E1346**	**E1347**	**E1348**	**E1349**	**E1363**	**E1364**
E1365	**E1366**	**E1367**	**E1368**	**E1383**	**E1384**	**E1385**	**E1386**

TABLE 2 PRODUCT CODES THAT HAD CORRECTIONS TO THE FULL NAME

E1387	E1388	E1402	E1403	E1404	E1405	E1406	E1407
E1427	E1428	E1429	E1430	E1431	E1432	E1433	E1434
E1435	E1436	E1437	E1438	E1463	E1464	E1465	E1466
E1467	E1468	E1469	E1470	E1471	E1472	E1473	E1474
E1498	E1499	E1500	E1501	E1502	E1503	E1504	E1505
E1506	E1507	E1508	E1509	E1535	E1536	E1537	E1538
E1539	E1540	E1541	E1542	E1543	E1544	E1545	E1546
E1571	E1572	E1573	E1574	E1575	E1576	E1577	E1578
E1579	E1580	E1581	E1582	E1606	E1607	E1608	E1609
E1610	E1611	E1612	E1613	E1614	E1615	E1616	E1617
E1643	E1644	E1645	E1646	E1647	E1648	E1649	E1650
E1651	E1652	E1653	E1654	E1679	E1680	E1681	E1682
E1683	E1684	E1685	E1686	E1687	E1688	E1689	E1690
E1714	E1715	E1716	E1717	E1718	E1719	E1720	E1721
E1722	E1723	E1724	E1725	E1746	E1747	E1748	E1749
E1750	E1751	E1752	E1753	E1770	E1771	E1772	E1773
E1774	E1775	E1776	E1777	E1794	E1795	E1796	E1797
E1798	E1799	E1800	E1801	E1818	E1819	E1820	E1821
E1822	E1823	E1824	E1825	E1842	E1843	E1844	E1845
E1846	E1847	E1848	E1849	E1866	E1867	E1868	E1869
E1870	E1871	E1872	E1873	E1890	E1891	E1892	E1893
E1894	E1895	E1896	E1897	E1914	E1915	E1916	E1917
E1918	E1919	E1920	E1921	E1938	E1939	E1940	E1941
E1942	E1943	E1944	E1945	E1960	E1961	E1962	E1963
E1971	E1972	E1973	E1974	E1992	E1993	E1994	E1995
E1996	E1997	E1998	E1999	E2000	E2001	E2002	E2003
E2027	E2028	E2029	E2030	E2031	E2032	E2033	E2034
E2035	E2036	E2037	E2038	E2063	E2064	E2065	E2066
E2067	E2068	E2069	E2070	E2071	E2072	E2073	E2074
E2098	E2099	E2100	E2101	E2102	E2103	E2104	E2105
E2106	E2107	E2108	E2109	E2128	E2129	E2130	E2131
E2139	E2140	E2141	E2142	E2160	E2161	E2162	E2163
E2164	E2165	E2166	E2167	E2168	E2169	E2170	E2171
E2195	E2196	E2197	E2198	E2199	E2200	E2201	E2202
E2203	E2204	E2205	E2206	E2231	E2232	E2233	E2234
E2235	E2236	E2237	E2238	E2239	E2240	E2241	E2242
E2266	E2267	E2268	E2269	E2270	E2271	E2272	E2273
E2274	E2275	E2276	E2277	E2296	E2297	E2298	E2299

TABLE 2 PRODUCT CODES THAT HAD CORRECTIONS TO THE FULL NAME

E2307	**E2308**	**E2309**	**E2310**	**E2328**	**E2329**	**E2330**	**E2331**
E2332	**E2333**	**E2334**	**E2335**	**E2336**	**E2337**	**E2338**	**E2339**
E2363	**E2364**	**E2365**	**E2366**	**E2367**	**E2368**	**E2369**	**E2370**
E2371	**E2372**	**E2373**	**E2374**	**E2399**	**E2400**	**E2401**	**E2402**
E2403	**E2404**	**E2405**	**E2406**	**E2407**	**E2408**	**E2409**	**E2410**
E2434	**E2435**	**E2436**	**E2437**	**E2438**	**E2439**	**E2440**	**E2441**
E2442	**E2443**	**E2444**	**E2445**	**E3828**	**E3848**	**E3849**	**E3883**
E3896	**E3897**	**E3898**	**E3899**	**E3900**	**E3901**	**E3902**	**E3903**
E3904	**E3905**	**E3906**	**E3907**	**E3908**	**E3909**	**E3910**	**E3911**
E3912	**E3913**	**E3914**	**E3915**	**E3916**	**E3917**	**E3918**	**E3919**
E3987	**E3988**	**E3993**	**E4008**	**E4033**	**E4034**	**E4035**	**E4036**
E4037	**E4038**	**E4066**	**E4121**	**E4122**	**E4126**	**E4184**	**E4185**
E4400	**E4513**	**E4515**	**E4568**	**E5289**	**E5292**	**E5311**	**E5428**
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