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Unauthorized access or misuse of this system and/or its data is a federal crime. Use of all data must be in accordance with VA security and privacy policies.

The U.S. Food and Drug Administration classifies this software as a medical device. Unauthorized modifications will render this device an adulterated medical device under Section 501 of the Medical Device Amendments to the Federal Food, Drug, and Cosmetic Act. Acquiring and implementing this software through the Freedom of Information Act requires the implementer to assume total responsibility for the software and become a registered manufacturer of a medical device, subject to FDA regulations. Adding to or updating VBECS software without permission is prohibited.
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## Revision History

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| 09-08-10 | 1.0      | Modified VistA Blood Establishment Computer Software (VBECS) Version 1.5.2, Version 1.0:  
Global: Replaced “September 2010” with “January 2011” in the footer.  
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Global: Replaced “…090210” with “…010311”.  
Global: Changed “199,854,323” to “200,054,059”.  
Replaced Figures: 1, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 23, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 47 and 49.  
VBECS Version Numbers section: Split into two paragraphs and reworded 1st sentence of second paragraph.  
Execute VBECS Patch Scripts against the Cluster (Test and Production): Step 10: Revised warning box.  
Download the VBECS 1.5.2.2 Patch File section (Test and Prod):  
  - Reordered the steps by moving Step 3 to Step 1.  
  - Added Steps 2 through 6 to verify if temp folder exists on the active and passive nodes (DR 3948)  
  - Step 12 changed “VHAMASTER” to “YOUR_DOMAIN” in example.  
Prerequisite for Installation (Test): Revised Steps 1 and 3.  
Prerequisite for Installation (Production): Revised Steps 2 and 4.  
Appendix B – Server Administrative Group and VBECS Admin AD Group table columns: Updated the columns and changed “TBD” to the actual group name for VISNs 1 through 5. | BBM team   |
| 01-05-11 | 2.0      | Modified VistA Blood Establishment Computer Software (VBECS) Version 1.5.1, Version 2.0:  
Global: Replaced “August 2010” with “September 2010” in the footer.  
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Global: Replaced “2.0” with “1.0” in the footer.  
Global: Replaced “…060910” with “…090210”.  
Global: Changed 1.5.1.1 to 1.5.2.1.  
Global: Changed “200,811,979” to “199,854,323”.  
Changed 1.5.0.4 to 1.5.1.1 where applicable.  
Replaced Figures: 1, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 21, 30, 31, 33, 34, 35, 37, 38, 39, 40, 41, 43 and 45.  
VBECS Versions section: Changed “In future releases, the VBECS version” to “The VBECS version”.  
Delete Patch Files section (Test and Production), Step 2 second bullet item: Added “mmddyy represents the current date”.  
Appendix A: Changed “1504” to “1534” in both examples.  
Appendix B, VBECS Admin AD Group table column: Changed “TBD” to the actual group name for the Manchester, Providence and Clarksburg facilities.  
Appendix B: Removed the extra “s” from the last column of the first row of Table 1.  
Appendix B: Removed the blank row from Row 8 of Table 1.  
Appendix B: Updated the Server Administrative Group and VBECS Admin AD Group names for Facility# 618, Minneapolis.  
Removed Appendix H and all references to Appendix H. | BBM team   |
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<td>- Moved Step 12 to after Step 9, making it the new Step 10 and renumbering the subsequent steps.</td>
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Introduction

The VistA Blood Establishment Computer Software (VBECS) system replaces the previous blood bank software (VistA Blood Bank v5.2) at the Department of Veterans Affairs (VA). The main purpose of VBECS is to automate the daily processing of blood inventory and patient transfusions in a hospital transfusion service.

VBECS is an improved Blood Bank application that facilitates ongoing compliance with Food and Drug Administration (FDA) standards for medical devices and enhances the VA Veterans Health Administration’s (VHA’s) ability to produce high-quality blood products and services to veterans. The system follows blood bank standards, standards of national accrediting agencies, FDA regulations, and VA policies.

Unauthorized access or misuse of this system and/or its data is a federal crime. Use of all data must be in accordance with VA security and privacy policies.

The U.S. Food and Drug Administration classifies this software as a medical device. Unauthorized modifications will render this device an adulterated medical device under Section 501 of the Medical Device Amendments to the Federal Food, Drug, and Cosmetic Act. Acquiring and implementing this software through the Freedom of Information Act requires the implementer to assume total responsibility for the software and become a registered manufacturer of a medical device, subject to FDA regulations. Adding to or updating VBECS software without permission is prohibited.

This document describes how server support staff members [Information Resource Management (IRM) or data center personnel] install VBECS. It describes the scripts that must be executed and the arguments that must be supplied. It specifies how to read script output and the actions that must be performed as a result of the output.

VBECS Version Numbers

The VBECS 1.5.2 patch release represents a change in how the application version will be displayed to you, the customer. In previous VBECS patch releases, the user documentation referred to the VBECS version in a 4-digit format (e.g., 1.5.0.4 – where 1.5.0 represents the patch version and 4 is the patch build number). The build number is used by VBECS support for diagnostic and troubleshooting purposes.
In this and future releases, the VBECS version will be represented with only the first 3 digits (e.g., 1.5.2) and will appear that way in all user documentation to simplify readability. The full 4-digit version can still be found under the Help, About window in VBECS (Figure 1) and will appear in patch installation guides where build specific files are referenced.

**Figure 1: Example of Help, About VBECS**

![Image of Help, About VBECS window]

**Related Manuals and Reference Materials**

None
Orientation

How This Installation Guide Is Organized

Maintain the order of the steps for successful installation.

This guide is organized as follows:

See the Installation Procedure for the Test Environment section for installing the test environment.

See the Installation Procedure for the Production Environment section for installing the production environment.

See Appendix A: Installation Logs for the location of logs that may be useful in troubleshooting.

See Appendix G: Troubleshooting Messages for examples of troubleshooting messages.

A section for notes is included at the end of the document.

Warnings

Outlined text with a caution icon is used throughout the guide to highlight warnings, limitations, and cautions:

Read and follow these caution statements and warnings.

Screen Shots

Because VBECS is a medical device, screen shots must be captured at verification points throughout the installation to meet regulatory requirements for objective evidence and documentation.

A (camera) at the beginning of each step that requires a screen capture will identify these points. For more information, see Appendix C: Instructions for Capturing Screen Shots for Installation Records.

Screen shots included in this guide are examples only and may not display actual data.

Product Support

Problems?

Contact your Information Resource Management (IRM) or Laboratory Automated Data Processing Application Coordinator (ADPAC) if you encounter problems and for training support.

VA Service Desk Primary Contact

For Information Technology (IT) support, call the VA Service Desk (VASD), 888-596-HELP (4357) (toll free), 24 hours per day, 7 days per week. [Users with access to the VASD-supported request tool (e.g., Remedy) may file a ticket in lieu of calling the VASD.]
VA Service Desk Alternate Contacts

- During business hours: As an alternate to the toll-free number, call 205-554-4710 (or 205-554-4711 through 205-554-4725), Monday through Friday (excluding holidays), 8:00 a.m. to 7:30 p.m. (Eastern Time).
- Outside business hours: Call 205-554-3459 (or 205-554-3460 through 205-554-3465, 205-554-3472, 205-554-3475, or 205-554-3482 through 205-554-3485).
- Web site: http://vaww.itsupportservices.va.gov/vasd_home.asp [VA Service Desk (VASD)]
- Email: vhacionhd@va.gov
Installation Procedure for the Test Environment

Do not deviate from the instructions in this guide.

No users are permitted on the system during the patch installation. Any users on the system at the start of the patch process will be disconnected.

Coordinate the patch installation with the blood bank supervisor. Notify the supervisor that the patch installation requires one to two hours of downtime without interruption.

Server name representations in the document:
For Region 1 sites; R01YYNODXXX01, YYY represents the Data Center location (SCR or DVR) and XXX represents the Site Code.
For all other sites; VHAXXXNODZ1, XXX represents the Site Code.

Use the Microsoft Word .doc format of the document when copying and pasting sections of the document.

Download and Verify the Contents of the VBECS Patch

1 Download the VBECS 1.5.2.2 Patch File
Prerequisites for VBECS FTP Download:
  • The installer must be a server administrator in accordance with Appendix B: Active Directory Server Administrator Groups.
  • The installer must be a member of the VBECS Admin AD Group in accordance with Appendix B: Active Directory Server Administrator Groups.

To download the VBECS 1.5.2.2 patch file from the VBECS FTP Site:

1) Complete Sub-steps a through d to save a copy of Appendix E: VBECS Patch Installation Record Form for the Test Environment to the local workstation. Any reference to Appendix E after the document is initially saved will be referring to the saved copy.
   a) Open VistA Blood Establishment Computer Software (VBECS) 1.5.2 Patch Installation Guide.
   b) Using the .doc format of this document, select the contents of Appendix E: VBECS Patch Installation Record Form for the Test Environment and copy and paste into a new Word document.
   c) Add a header to the document as “VBECS Patch Installation Record <Cluster_name> 1.5.2 Test <mmddyy>” and a footer containing “Page X of Y”.
   d) Save Appendix E: VBECS Patch Installation Record Form for the Test Environment as “VBECS Patch Installation Record <Cluster_name> 1.5.2 Test <mmddyy>”
(e.g., VBECS Patch Installation Record VHAXXXCLUZ1 1.5.2 Test 070809 or VBECS Patch Installation Record R01YYYCLUXX01 1.5.2 Test 070809); where <mmddyy> represents the current date.

2) Open a remote desktop connection to the cluster being patched.

3) Open Windows Explorer, and type `\VHAXXXNODZ1\CS` or `\R01YYYNODXXX01\CS` and press Enter (Figure 2).

**Figure 2: Verify Temp folder on NODZ1**

4) If a folder named “temp” does not exist, click **File, New, Folder**. Name this folder “temp” (Figure 3).

**Figure 3: Creating the Temp Folder**

5) In the Windows Explorer window already opened, type `\VHAXXXNODZ2\CS` or `\R01YYYNODXXX02\CS` and press Enter (Figure 4).

**Figure 4: Verify Temp folder on NODZ2**

6) If a folder named “temp” does not exist, click **File, New, Folder**. Name this folder “temp” (Figure 3).
7) Right-click **Start, Explorer**. In the address field, type `ftp://10.3.21.76:20001` (Figure 5) and press **Enter**.

**Figure 5: ftp://10.3.21.76:20001**

8) At the **User name** prompt of the Log On As dialog, type your_domain and your_user_name (e.g. YOUR DOMAIN\YOUR_USER_NAME) and at the **Password** prompt, type your password (Figure 6).

**Figure 6: Log On As**

If access problems are encountered, please file a Remedy ticket. Do not proceed until the ticket is resolved.
9) Click the Log On button. Right-click the VBECS_Patch_1.5.2.2_010311.zip and select copy (Figure 7). (** if the VBECS_Patch_1.5.2.2_010311.zip appears as a link, click and save the file in the targeted location specified in Step 10).

Figure 7: VBECS_Patch_1.5.2.2_010311.zip File

If you encounter the 'Your current settings do not allow you do download files from this location' error, see Appendix H: Adding VBECS FTP Site to the Trusted Sites in Internet Explorer for instructions on how to resolve the problem.

10) Using Windows Explorer, navigate to the C:\Temp folder. Right-click and select Paste. The VBECS_Patch_1.5.2.2_010311.zip will be copied to this location.

2 Verify the Contents of the VBECS 1.5.2.2 Patch File

1) On the remote desktop connection to the cluster already open, use Windows Explorer to navigate to the c:\temp folder.
2) Right-click on the VBECS_Patch_1.5.2.2_010311.zip file and select Extract All (Figure 8).

Figure 8: Example of Extracting Patch Contents

3) After the Extraction Wizard opens, click Next.
4) Click **Next** to extract the contents of the patch zip file to the temp directory (Figure 9).

**Figure 9: Extraction Wizard**

Select a Destination
Files inside the ZIP archive will be extracted to the location you choose.

Select a folder to extract files to.
Files will be extracted to this directory:

C:\temp\VB ECS Patch 1.5.2.2 010311

[Browse...]

[Password...]

Extracting...
5) After the extraction completes, uncheck **Show extracted files** and click **Finish** (Figure 10).

**Figure 10: Extraction Complete**

![Extraction Complete](image)

Files have been successfully extracted to the following directory:

C:\temp\VBECS_Patch_1.5.2.2_010311

To see your extracted files, check the box below:

- Show extracted files

Press finish to continue.

6) Verify that the extraction completes and a *C:\temp\VBECS_Patch_1.5.2.2_010311* folder is created.

7) Using Windows Explorer, right-click on the *VBECS_Patch_1.5.2.2_010311* folder and select **Properties** (Figure 11).

**Figure 11: Example of Folder Properties**

![Folder Properties](image)
8) In the VBECS_Patch_1.5.2.2_010311 Properties window (Figure 12), verify:
   • Size is 190 MB (200, 054, 059 bytes)
   • Contains 396 Files, 45 Folders

   ![Warning]
   If the number of files and number of bytes do not match, stop and file a Remedy ticket. Do not proceed until the ticket is resolved.

9) After verifying that the contents of the VBECS_Patch_1.5.2.2_010311 file match, check the box in Appendix E: VBECS Patch Installation Record Form for the Test Environment.

10) In the Attributes section, uncheck the **Read-only** check box (Figure 12).

11) Capture a screen shot of the VBECS_Patch_1.5.2.2_010311 Properties window.

12) Insert the screen shot in Appendix E: VBECS Patch Installation Record Form for the Test Environment.

**Figure 12: VBECS Patch folder Properties**

![Screenshot of VBECS Patch folder Properties window]
13) Click **OK**. In the Confirm Attribute Changes window, select the **Apply Changes to this folder, subfolders and files** option if it is not selected, and click **OK** (Figure 13).

**Figure 13: Confirm Attribute Changes**

14) Using Windows Explorer, navigate to the c:\temp folder.

15) Select the **VBECS_Patch_1.5.2.2_010311.zip** file.

16) While holding the **Shift** key, press the **Delete** key. Click **Yes** to confirm file deletion (Figure 14).

**Figure 14: Delete Zip File**

3 **Prerequisites for Installation**

1) VBECS 1.5.1.1 is installed and validated.

2) Verify VistA Test account is up to date with all released patches.

3) Verify that there are no active user sessions on the servers.

4) Refer to the latest approved version of the *VistA Blood Establishment Computer Software (VBECS) Installation Guide*, Appendices titled Server Configuration and Password List for details on Server Names, IP addresses, passwords, etc.

5) On the remote desktop connection to the cluster already open, execute the steps in Appendix D: Setup Detailed Folders View to show file extensions on the installation workstation.
4  Execute VBECS Patch Scripts against the Cluster

Patching the servers will require a reboot. Plan to execute the VBECS patch scripts when no active users are on the servers. The system warns active users that they will be disconnected during the configured timeout period.

After the upgrade, warning emails with the subject ‘Operations Manager Critical Error Alert’ are normal and should be ignored. They are merely noting that changes have been made to the various VBECS files which is expected during a software upgrade.

Do not run any additional applications on the server while the patch is executing.

1) On the remote desktop connection to the cluster already open, use Windows Explorer to navigate to the \c:\temp\VBECS_Patch_1.5.2.2_010311 folder and double-click the prepare.bat file (Figure 15).

2) A VBECS Patch shortcut is created (Figure 16).
3) Double-click on the **VBECs Patch** shortcut to initiate the VBECs patch configuration.
4) A VBECs Patch form will open.
5) Enter the following for the required fields (Figure 17).
   - **Cluster IP Address** – This is the IP address of the VBECs cluster [initially noted for installation on the Server Configuration Checklist in the *VistA Blood Establishment Computer Software (VBECs) Installation Guide*]. Verify this information with a system administrator. It will be used to identify the clustered servers on which the patch will be installed.
   - **Contact E-mail** – This is the email address of the contact person or group.
   - **Contact Name** – This is the full name (usually the patch installer) displayed in the patch installation shutdown message. Users will contact this person if the patch installation interferes with their work.
   - **Contact Phone** – This is the telephone number of the contact person.
   - **Message TimeOut** – This is the number of minutes current VBECs users will be warned they have to complete activities before patching disconnects their session. If there are no users on the system override the default 10 minute value by entering -1. Users will not be warned if this value is -1.
   - **SQL Server Name** – This is the name of the VBECs SQL server [initially noted for installation on the Configuration Checklist in the *VistA Blood Establishment Computer Software (VBECs) Installation Guide*]. Verify this information with a system administrator. It will be used to identify the database to be patched.
   - **VBECs Environment** – This is the VBECs environment. Select **test** to patch VBECs Test environment.

Figure 17: Example of VBECs Patch Form

6) Click **Start**.
7) A prompt to verify that all correct VistA patches are installed appears (Figure 18).

**Figure 18: Required VistA Patches Dialog**

8) Click **Yes** to proceed on required VistA patches dialog. The VBECS Patch process starts. The patch will complete within 30 minutes.

9) Refer to Figure 19 for the following:
   - A green “patch is working” animation ( ) in the bottom left of the VBECS Patch form will be in motion while the patching is in progress.
   - The blue progress bar in the middle of form ( ) will increment based on the overall patch progress.
   - VBECS Patch Process checkpoints are displayed in the lower portion of the form. A green check mark ( ) indicates that the VBECS Patch process step completed successfully.

<table>
<thead>
<tr>
<th>注意事项</th>
</tr>
</thead>
<tbody>
<tr>
<td>如果补丁的完成时间超过5分钟，请立即提交Remedy单据。在单据解决之前，不要使用VBECS。</td>
</tr>
<tr>
<td>如果补丁的完成时间超过30分钟，请立即提交Remedy单据。不要停止补丁过程，直到单据解决。</td>
</tr>
</tbody>
</table>

If the patch takes longer than 5 minutes to complete the first 3 checks, file a Remedy ticket immediately. Do not release VBECS for use until the ticket is resolved.

If a Patch fails to successfully complete within 30 minutes, file a Remedy ticket immediately. Do not stop the patch process and do not release VBECS for use until the ticket is resolved.
10) Active users (users connected to the system through remote desktop) will receive a message indicating the number of minutes they have to complete their work and log out (Message TimeOut argument entered in Step 5). The patch will not make any system changes during this timeout period (Figure 20).

Figure 20: Example of Messenger Service
11) Click **OK**, after the timeout period had expired, a message signifying the final opportunity to abort the patch installation is displayed (Figure 21).

**Figure 21: VBECS Patch: Continue Patch Message**

```
VBECS Patch

The timeout period has expired. Are you ready to continue with the patch process?

[ ] Yes  [ ] No
```

12) Click **Yes** to continue with the patch installation. **IMPORTANT:** If active users exist, their sessions on the VBECS server will be automatically terminated. Click **No** to abort the current patching attempt and restart the patch process at a later time.

13) When the patch script finishes successfully a “**VBECS Patch process completed successfully**” message will be received (Figure 22).

**Figure 22: VBECS Patch Process Complete Message**

```
VBECS Patch

The VBECS Patch process completed successfully.

[ ] Open Log File  [ ] Close
```

If a Patch Failure message is displayed, go to Appendix G: Troubleshooting Messages. If no solution to the failure message is found, please file a Remedy ticket immediately. Do not proceed or release VBECS for use until the ticket is resolved.

14) **Capture a screen shot of VBECS Patch process completed successfully.**

15) Insert the screen shot in Appendix E: VBECS Patch Installation Record Form for the Test Environment.

16) A log file will be created in the L:\VBECS_Archive\VBECSRecords\VBECS_<mmddyy>_1.5.1.1_to_1.5.2.2\test directory, with <cluster>_<nnn.med.va.gov>_VBECS_1.5.2.2_test_<hhmm>.log as the file name, where:
   - `<mmddyy>` represents the current date.
   - `<hhmm>` represents the hour and minute the patch began execution.
   - `<nnn>` represents top-level domain (e.g. ‘vha’ or ‘r01’).
   For example, vhaxxxclus1.vha.med.va.gov_VBECS_1.5.2.2_test_0928.log.

By design, there may be non-fatal errors and warnings within the log file output. Ignore warnings and non-fatal errors upon successful completion of the VBECS Patch process.

17) Record the name of the log file in Appendix E: VBECS Patch Installation Record Form for the Test Environment.

18) Click **Close** to close the VBECS Patch success message.
19) Click **Close** on the VBECS Patch main window to exit the patch application.

## 5 Delete Patch Files

To delete the VBECS 1.5.2.2 Patch files:

1) Open a remote desktop connection to the cluster, and use Windows Explorer to navigate to the `c:\temp` folder.
2) Select the `VBECS_Patch_1.5.2.2_010311` folder.
3) While holding down the **Shift** key, press the **Delete** key. Click **Yes** to confirm file deletion (Figure 23).

*Figure 23: Example of Patch Files for Deletion*

4) Check the box in Appendix E: VBECS Patch Installation Record Form for the Test Environment.
5) Print Appendix E: VBECS Patch Installation Record Form for the Test Environment and initial and date the printed copy. Save this with your records of previous VBECS installations.
6) Manually check the box on the printed copy of Appendix E: VBECS Patch Installation Record Form for the Test Environment verifying that the form was printed, initialed and dated.
7) Notify the blood bank that the patch has been successfully installed in the Test account and request the blood bank to verify that the Test account can receive orders.

---

*For new VBECS installations: Begin VistA Database Conversion in accordance with Blood Bank Pre-Implementation Data Validation, Mapping, and Conversion ADPAC Guide if the conversion process has not already been completed.*
Installation Procedure for the Production Environment

Do not deviate from the instructions in this guide.

No users are permitted on the system during the patch installation. Any users on the system at the start of the patch process will be disconnected.

Coordinate the patch installation with the blood bank supervisor. Notify the supervisor that the patch installation requires one to two hours of downtime without interruption.

Server name representations in the document:

For Region 1 sites; R01YYYNODXXX01, YYY represents the Data Center location (SCR or DVR) and XXX represents the Site Code.

For all other sites; VHAXXXNODZ1, XXX represents the Site Code.

Use the Microsoft Word .doc format of the document when copying and pasting sections of the document.

Download and Verify the Contents of the VBECS Patch

1 Download the VBECS 1.5.2.2 Patch File

Prerequisites for VBECS FTP Download:

- The installer must be a server administrator in accordance with Appendix B: Active Directory Server Administrative Groups.
- The installer must be a member of the VBECS Admin AD Group in accordance with Appendix B: Active Directory Server Administrative Groups.

To download the VBECS 1.5.2.2 patch file from the VBECS FTP Site:

1) Complete Sub-steps a through d to save a copy of Appendix F: VBECS Patch Installation Record Form for the Production Environment to the local workstation. Any reference to Appendix F after the document is initially saved will be referring to the saved copy.
   a) Open VistA Blood Establishment Computer Software (VBECS) 1.5.2 Patch Installation Guide.
   b) Using the .doc format of this document, select the contents of Appendix F: VBECS Patch Installation Record Form for the Production Environment and copy and paste into a new Word document.
   c) Add a header to the document as “VBECS Patch Installation Record <Cluster_name> 1.5.2 Prod <mmddyy>” and a footer containing “Page X of Y”.
   d) Save Appendix F: VBECS Patch Installation Record Form for the Production Environment as “VBECS Patch Installation Record <Cluster_name> 1.5.2 Prod <mmddyy>”
(e.g., VBECS Patch Installation Record VHAXXXCLUZ1 1.5.2 Prod 070809 or VBECS Patch Installation Record R01YYYCLUXXX01 1.5.2 Test 070809); where <mmddyy> represents the current date.

2) Open a remote desktop connection to the cluster being patched.

3) Open Windows Explorer, and type `\VHAXXXNODZ1\CS` or `\R01YYYNODXXX01\CS` and press Enter (Figure 24).

**Figure 24: Verify Temp folder on NODZ1**

4) If a folder named “temp” does not exist, click **File**, **New**, **Folder**. Name this folder “temp” (Figure 25).

**Figure 25: Creating the Temp Folder**

5) In the Windows Explorer window already opened, type `\VHAXXXNODZ2\CS` or `\R01YYYNODXXX02\CS` and press Enter (Figure 26).

**Figure 26: Verify Temp folder on NODZ2**

6) If a folder named “temp” does not exist, click **File**, **New**, **Folder**. Name this folder “temp” (Figure 25).
7) Right-click **Start, Explorer**. In the address field, type `ftp://10.3.21.76:20001` (Figure 27) and press **Enter**.

**Figure 27: ftp://10.3.21.76:20001**

8) At the **User name** prompt On the Log On As dialog, type **your_domain and your_user_name** (e.g. YOUR_DOMAIN\YOUR_USER_NAME) and at the **Password** prompt, type your password (Figure 28).

**Figure 28: Log On As**

*If access problems are encountered, please file a Remedy ticket. Do not proceed until the ticket is resolved.*
9) Click the Log On button. Right-click the VBECS_Patch_1.5.2.2_010311.zip and select copy (Figure 29). (** if the VBECS_Patch_1.5.2.2_010311.zip appears as a link, click and save the file in the targeted location specified in Step 10).

Figure 29: VBECS_Patch_1.5.2.2_010311.zip File

If you encounter the 'Your current settings do not allow you do download files from this location' error, see Appendix H: Adding VBECS FTP Site to the Trusted Sites in Internet Explorer for instructions on how to resolve the problem.

10) Using Windows Explorer, navigate to the C:Temp folder. Right-click and select Paste. The VBECS_Patch_1.5.2.2_010311.zip will be copied to this location.

2 Verify the Contents of the VBECS 1.5.2.2 Patch File
1) On the remote desktop connection to the cluster already open, use Windows Explorer to navigate to the c:temp folder.
2) Right-click on the VBECS_Patch_1.5.2.2_010311.zip file and select Extract All (Figure 30).

Figure 30: Example of Extracting Patch Contents

3) After the Extraction Wizard opens, click Next.
4) Click **Next** to extract the contents of the patch zip file to the temp directory (Figure 31).

**Figure 31: Extraction Wizard**

![Extraction Wizard](image)

Select a folder to extract files to.

Files will be extracted to this directory:

C:\temp\VBEC\Patch_1.5.2.2_010311

Browse...

Password...

Extracting...
5) After the extraction completes, uncheck **Show extracted files** and click **Finish** (Figure 32).

**Figure 32: Extraction Completed**

---

6) Verify that the extraction completes and a `c:\temp\VBECS_Patch_1.5.2.2_010311` folder is created.

7) Using Windows Explorer, right-click on the `VBECS_Patch_1.5.2.2_010311` folder and select **Properties** (Figure 33).

**Figure 33: Example of Folder Properties**
8) In the VBECS_Patch_1.5.2.2_010311 Properties window (Figure 34), verify:
   - **Size** is 190 MB (200, 054, 059 bytes)
   - **Contains** 396 Files, 45 Folders

   **If the number of files and number of bytes do not match, stop and file a Remedy ticket. Do not proceed until the ticket is resolved.**

9) After verifying that the contents of the VBECS_Patch_1.5.2.2_010311 file match, check the box in Appendix F: VBECS Patch Installation Record Form for the Production Environment.

10) In the Attributes section, uncheck the **Read-only** check box (Figure 34).

11) Capture a screen shot of the VBECS_Patch_1.5.2.2_010311 Properties window.

12) Insert the screen shot in Appendix F: VBECS Patch Installation Record Form for the Production Environment.

**Figure 34: VBECS Patch folder Properties**

![VBECS Patch folder Properties](image)
13) Click OK. In the Confirm Attribute Changes window, select the **Apply Changes to this folder, subfolders and files** option if it is not selected and click OK (Figure 35).

**Figure 35: Confirm Attribute Changes**

![Confirm Attribute Changes](image)

14) Using Windows Explorer, navigate to the c:temp folder.
15) Select **VBECS_Patch_1.5.2.2_010311.zip** file.
16) While holding the **Shift** key, press the **Delete** key. Click **Yes** to confirm file deletion (Figure 36).

**Figure 36: Delete Zip File**

![Delete Zip File](image)

3 **Prerequisites for Installation**

1) VBECS 1.5.1.1 is installed.
2) VBECS 1.5.2.2 is installed and validated in the Test environment.
3) Verify VistA Production account is up to date with all released patches.
4) Verify that there are no active user sessions on the servers.
5) Refer to the latest approved version of the *VistA Blood Establishment Computer Software (VBECS) Installation Guide*, Appendices titled Server Configuration and Password List for details on Server Names, IP addresses, passwords, etc.
6) Using the remote desktop connection to the cluster already open, execute the steps in Appendix D: Setup Detailed Folders View to show file extensions on the installation workstation.
4 Execute VBECS Patch Scripts against the Cluster

Patching the servers will require a reboot. Plan to execute the VBECS patch when no active users are on the servers. The system warns active users that they will be disconnected during the configured timeout period.

After the upgrade, warning emails with the subject ‘Operations Manager Critical Error Alert’ are normal and should be ignored. They are merely noting that changes have been made to the various VBECS files which is expected during a software upgrade.

Do not run any additional applications on the server while the patch is executing.

1) On the remote desktop connection to the cluster already open, use Windows Explorer to navigate to the `c:\temp\VBECS_Patch_1.5.2.2_010311` folder and double-click the `prepare.bat` file (Figure 37).

Figure 37: VBECS Patch Folder

2) A VBECS Patch shortcut is created (Figure 38).

Figure 38: VBECS Patch Shortcut
3) Double-click on the VBECS Patch shortcut to initiate the VBECS patch configuration.
4) A VBECS Patch form will open.
5) Enter the following for the required fields (Figure 39).
   - **Cluster IP Address** – This is the IP address of the VBECS cluster [initially noted for installation on the Server Configuration Checklist in the VistA Blood Establishment Computer Software (VBECS) Installation]. Verify this information with a system administrator. It will be used to identify the clustered servers on which the patch will be installed.
   - **Contact E-mail** – This is the email address of the contact person or group.
   - **Contact Name** – This is the full name (usually the patch installer) displayed in the patch installation shutdown message. Users will contact him if the patch installation interferes with their work.
   - **Contact Phone** – This is the telephone number of the contact person.
   - **Message TimeOut** – This is the number of minutes current VBECS users will be warned they have to complete activities before patching disconnects their session. If there are no users on the system override the default 10 minute value by entering -1. Users will not be warned if this value is -1.
   - **SQL Server Name** – This is the name of the VBECS SQL server [initially noted for installation on the Configuration Checklist under SQL Server Information in the VistA Blood Establishment Computer Software (VBECS) Installation]. Verify this information with a system administrator. It will be used to identify the database to be patched.
   - **VBECS Environment** – This is the VBECS environment. Select **prod** to patch VBECS Production environment.

![Figure 39: Example of VBECS Patch Form](image)

6) Click Start.
7) A prompt to verify that all correct VistA patches are installed appears (Figure 40).

**Figure 40: Required VistA Patches Prompt**

![Prompt](image)

8) Click **Yes** to proceed on required VistA patches dialog. The VBECS Patch process starts. The patch will complete within 30 minutes.

9) Refer to Figure 41 for the following:
   - A green “patch is working” animation in the bottom left of the VBECS Patch form will be in motion while the patching is in progress.
   - The blue progress bar in the middle of form will increment based on the overall patch progress.
   - VBECS Patch Process checkpoints are displayed in the lower portion of the form. A green check mark indicates that VBECS Patch process step completed successfully.

```
If the patch takes longer than 5 minutes to complete the first 3 checks, file a Remedy ticket immediately. Do not release VBECS for use until the ticket is resolved.

If a Patch fails to successfully complete within 30 minutes, file a Remedy ticket immediately. Do not stop the patch process and do not release VBECS for use until the ticket is resolved.
```
10) Active users (users connected to the system through remote desktop), will receive a message indicating the number of minutes they have to complete their work and log out (Message TimeOut argument entered in Step 5). The patch will not make any system changes during this timeout period (Figure 42).
11) Click **OK**, after the timeout period had expired, a message signifying the final opportunity to abort the patch installation is displayed (Figure 43).

**Figure 43: VBECS Patch: Continue Patch Message**

![VBECS Patch: Continue Patch Message](image)

12) Click **Yes** to continue with the patch installation. **IMPORTANT:** If active users exist, their sessions on the VBECS server will be automatically terminated. Click **No** to abort the current patching attempt and restart the patch process at a later time.

13) When the patch script finishes successfully a “**VBECS Patch process completed successfully**” message will be received (Figure 44).

**Figure 44: VBECS Patch Process Complete Message**

![VBECS Patch Process Complete Message](image)

---

14) ![Capture a screen shot of VBECS Patch process completed successfully.](image)

15) Insert the screen shot in Appendix F: VBECS Patch Installation Record Form for the Production Environment.

16) A log file will be created in the `L:\VBECS_Archive\VBECSRecords\VBECS_<mmddyy>_1.5.1.1_to_1.5.2.2\prod` directory, with `<cluster>.<nnn.med.va.gov>_VBECS_1.5.2.2_prod_<hhmm>.log` as the file name, where:

- `<mmddyy>` represents the current date.
- `<hhmm>` represents the hour and minute the patch began execution.
- `<nnn>` represents top-level domain (e.g. ‘vha’ or ‘r01’).

For example, vhaxxxcluz1.vha.med.va.gov_VBECS_1.5.2.2_prod_0928.log.

---

17) ![By design, there may be non-fatal errors and warnings within the log file output. Ignore warnings and non-fatal errors upon successful completion of the VBECS Patch process.](image)
17) Record the name of the log file in Appendix F: VBECS Patch Installation Record Form for the Production Environment.

18) Click Close to close the VBECS Patch success message.

19) Click Close on the VBECS Patch main window to exit the patch application.

5 Delete Patch Files

To delete the VBECS 1.5.2.2 Patch files:

1) On the remote desktop connection to the cluster already open, use Windows Explorer to navigate to c:\temp folder.

2) Select the VBECS_Patch_1.5.2.2_010311 folder.

3) While holding down the Shift key press the Delete key. Click Yes to confirm file deletion (Figure 45).

Figure 45: Example of Patch Files for Deletion

![Confirm Folder Delete](image)

4) Check the box in Appendix F: VBECS Patch Installation Record Form for the Production Environment.

5) Print Appendix F: VBECS Patch Installation Record Form for the Production Environment and initial and date the printed copy. Save this with your records of previous VBECS installations.

6) Manually check the box on the printed copy of Appendix F: VBECS Patch Installation Record Form for the Production Environment verifying that the form was printed, initialed and dated.

7) Notify the blood bank that the patch has been successfully installed in the Production account and request the blood bank to verify that the Production account can receive orders.

For new VBECS installations: Begin VistA Database Conversion in accordance with Blood Bank Pre-Implementation Data Validation, Mapping, and Conversion ADPAC Guide if the conversion process has not already been completed.
# Glossary

<table>
<thead>
<tr>
<th>Acronym, Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>.NET</td>
<td>Microsoft’s framework for Web services and component software (pronounced “dot net”).</td>
</tr>
<tr>
<td>CPS (formerly EPS, formerly EVS)</td>
<td>Clinical Product Support.</td>
</tr>
<tr>
<td>IRM</td>
<td>Information Resource Management.</td>
</tr>
<tr>
<td>Remote Desktop Connection (formerly Terminal Services)</td>
<td>The connectivity tool used to access VBECS on the server.</td>
</tr>
<tr>
<td>VBECS</td>
<td>VistA Blood Establishment Computer Software.</td>
</tr>
<tr>
<td>Veterans Health Information Systems and Technology Architecture (VistA)</td>
<td>Formerly the Decentralized Hospital Computer Program (DHCP) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). VistA software, developed by the VA, is used to support clinical and administrative functions at VA Medical Centers nationwide. It is written in M and, via the Kernel, runs on all major M implementations regardless of vendor. VistA is composed of packages that undergo a verification process to ensure conformity with name spacing and other VistA standards and conventions.</td>
</tr>
</tbody>
</table>
Appendices

Appendix A: Installation Logs
Parts of the installation produce logs, which can help resolve installation issues. The logs and their locations are as follows:

- VBECS Patch Scripts on the cluster.
  - When the patch is executed for the Test environment, a log file will be created in:
    - L:\VBECS_Archive\VBECSRecords\VBECS_<mmddyy>_1.5.1.1_to_1.5.2.2\test\<cluster>_<nnn.med.va.gov>_VBECS_1.5.2.2_test_<hhmm>.log as the file name, where:
      - <mmddyy> represents the date the patch was run.
      - <hhmm> represents the hour and minute the patch began execution.
      - <nnn> represents top-level domain (e.g. ‘vha’ or ‘r01’).
    For example, vhaxxxcluz1.vha.med.va.gov_VBECS_1.5.2.2_test_1534.log.
  - When the patch is executed for the Prod environment, a log file will be created in:
    - L:\VBECS_Archive\VBECSRecords\VBECS_<mmddyy>_1.5.1.1_to_1.5.2.2\prod\<cluster>_<nnn.med.va.gov>_VBECS_1.5.2.2_prod_<hhmm>.log as the file name, where:
      - <mmddyy> represents the date the patch was run.
      - <hhmm> represents the hour and minute the patch began execution.
      - <nnn> represents top-level domain (e.g. ‘vha’ or ‘r01’).
    For example, vhaxxxcluz1.vha.med.va.gov_VBECS_1.5.2.2_prod_1534.log.
Appendix B: Active Directory Server Administrator Groups

Each site has two user groups in Active Directory (VHA.med.va.gov\VBECS\VBECS Users) that support VBECS. Members of the administrative group can access the administrative component of VBECS. Members of the user group can access functional components of VBECS. Multidivisional sites share groups. Table 1 lists all group names.

Table 1: Group Names

<table>
<thead>
<tr>
<th>VISN</th>
<th>Facility #</th>
<th>Facility Description</th>
<th>Server Administrative Group</th>
<th>VBECS Admin AD Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>523</td>
<td>Boston (Boston HCS)</td>
<td>vhaBHS VbecsServerAdmins</td>
<td>vhaBHS Vbecs Administrators</td>
</tr>
<tr>
<td></td>
<td>608</td>
<td>Manchester</td>
<td>vhaMANVbecsServerAdmins</td>
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<td>vhaTOGVbecsAdministrators</td>
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<td></td>
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<td>Albany (Upstate New York HCN)</td>
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<td>vhaUNYVbecsServerAdmins</td>
<td>vhaUNYVbecsAdministrators</td>
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<td>vhaUNYVbecsServerAdmins</td>
<td>vhaUNYVbecsAdministrators</td>
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<td>vhaUNYVbecsServerAdmins</td>
<td>vhaUNYVbecsAdministrators</td>
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<td>vhaUNYVbecsServerAdmins</td>
<td>vhaUNYVbecsAdministrators</td>
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<td>vhaUNYVbecsAdministrators</td>
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<td>vhaUNYVbecsServerAdmins</td>
<td>vhaUNYVbecsAdministrators</td>
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<td>vhaUNYVbecsAdministrators</td>
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<tr>
<td></td>
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<td>R01VbecsServerAdmins</td>
<td>R01MACVbecsAdministrators</td>
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<td>v23OMAVbecsAdministrators</td>
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<td>v23BHHVbecsAdministrators</td>
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<tr>
<td></td>
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<td>v23BHHVbecsAdministrators</td>
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<td>v23MINVbecsServerAdmins</td>
<td>v23MINVbecsAdministrators</td>
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<td>v23SUXXVbecsServerAdmins</td>
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<td>St. Cloud</td>
<td>v23STCVbecsServerAdmins</td>
<td>V23STCVbecsAdministrators</td>
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<td>CPS</td>
<td>NA</td>
<td>Salt Lake City and Albany</td>
<td>R01VbecsServerAdmins</td>
<td>R01SLCVbecsAdministrators</td>
</tr>
</tbody>
</table>
Appendix C: Instructions for Capturing Screen Shots for Installation Records

Throughout the installation guide, the user is asked to capture screen shots at various points in the installation to confirm that the installation was performed correctly. These points are indicated by the camera icon: 📷.

To capture a screen shot:

1) When the screen you wish to capture is displayed, press Ctrl + Alt + Print Screen key.
2) In the VBECS Patch Installation Record Form for the Test (or Production) Environment, place the cursor where you want to insert the picture.
3) Press Ctrl + V to paste.
This page intentionally left blank.
Appendix D: Setup Detailed Folders View

1) Click **Start, My Computer**.
2) Select **View, Details** (Figure 46).

**Figure 46: Details Menu**

3) Select **Tools, Folder Options** (Figure 47).

**Figure 47: Folder Options Menu**
4) Select the View tab. Make sure the “Hide extensions for known file types” check box is clear (Figure 48).
5) Click Apply to All Folders (Figure 48).

Figure 48: Folder Options Dialog

6) At the prompt, click Yes to set the folders on your computer to match the current folder’s view settings. Click OK to close the Properties dialog.
Appendix E: VBECS Patch Installation Record Form for the Test Environment

VBECS Patch Installation Record for the Test Environment

Complete each section of this installation record as you complete the corresponding installation steps:

- Insert screen shots, as indicated.
- Replace the text in angle brackets and delete the brackets.
- To select a check box, double-click it, and then click the Checked radio button under Default value.
- Copy and paste the contents of this appendix into a separate Word document.
- Print, sign and date the completed appendix.
- Add all printed documents related to Appendix E to the package for the Validation Records.

Installation Procedure for the Test Environment

1  Download the VBECS 1.5.2.2 Patch File
N/A

2  Verify the Contents of the VBECS 1.5.2.2 Patch File
Step 9:  □ Verified the VBECS_Patch_1.5.2.2_010311 file contents.
Step 12:  Screen Shot: VBECS_Patch_1.5.2.2_010311 Properties
<Insert screen shot.>

3  Prerequisites for Installation
N/A

4  Execute VBECS Patch Scripts against the Cluster
Step 15:  Screen shot: VBECS Patch process completed successfully.
<Insert screen shot.>
Step 17:  VBECS Patch Log Output File Name

Log File:  

5  Delete the Patch Files
Step 4:  □ Deleted the VBECS 1.5.2.2 patch files on server.
Step 6:  □ Verified that Appendix E was printed, initialed and dated.

List problems occurring in the installation process.
<table>
<thead>
<tr>
<th>Name (Print.)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Give this patch installation record for the test environment to the blood bank supervisor, or follow your records retention policy.
Appendix F: VBECS Patch Installation Record Form for the Production Environment

VBECS Patch Installation Record for the Production Environment

Complete each section of this installation record as you complete the corresponding installation steps:

- Insert screen shots, as indicated.
- Replace the text in angle brackets and delete the brackets.
- To select a check box, double-click it, and then click the Checked radio button under Default value.
- Copy and paste the contents of this appendix into a separate Word document.
- Print, sign and date the completed appendix.
- Add all printed documents related to Appendix F to the package for the Validation Records.

Installation Procedure for the Production Environment

1. Download the VBECS 1.5.2.2 Patch File
   N/A

2. Verify the Contents of the VBECS 1.5.2.2 Patch File
   Step 9: \[\square\] Verified the VBECS_Patch_1.5.2.2_010311 file contents.
   Step 12: Screen Shot: VBECS_Patch_1.5.2.2_010311 Properties.
   <Insert screen shot.>

3. Prerequisites for Installation
   N/A

4. Execute VBECS Patch Scripts against the Cluster
   Step 15: Screen shot: VBECS Patch process completed successfully.
   <Insert screen shot.>
   Step 17: VBECS Patch Log Output File Name

   Log File: 

5. Delete Patch Files
   Step 4: \[\square\] Deleted the VBECS 1.5.2.2 Patch files on server.
   Step 6: \[\square\] Verified that Appendix F was printed, initialed and dated.

List problems occurring in the installation process.
Give this patch installation record for the production environment to the blood bank supervisor, or follow your records retention policy.
## Appendix G: Troubleshooting Messages

<table>
<thead>
<tr>
<th>Error Message</th>
<th>Example Screen Shot</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>An invalid IP address was specified.</td>
<td><img src="image1.png" alt="Example Screen Shot" /></td>
<td>An invalid IP was supplied as an input argument. OR The IP address was formatted correctly, but does not point to a VBECS server. Provide the correct IP Address.</td>
</tr>
<tr>
<td>All connections to the <code>&lt;Database Name&gt;</code> database must be terminated before patching.</td>
<td><img src="image2.png" alt="Example Screen Shot" /></td>
<td>A user has an active connection to the Database of the target environment. The information listed for each open connection is: 1. User Login ID 2. Computer Name 3. SQL Process ID 4. Database Name Contact the Database Administrator. Ask the DB Admin to kill all user processes running on the server.</td>
</tr>
<tr>
<td>The SQL Server does not exist or access denied.</td>
<td><img src="image3.png" alt="Example Screen Shot" /></td>
<td>The SQL Server Name supplied does not exist, cannot be accessed or the patcher does not have permission to use it. Check the SQL Server Name and Verify patches Database rights with the DB Admin.</td>
</tr>
<tr>
<td>Error Message</td>
<td>Example Screen Shot</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| VBECS application configuration file version [S.S.S.S] on <ACTIVE CLUSTER NODE> doesn't match the version this patch was intended for [T.T.T.T] Patch Process cannot continue. | ![Screenshot of VBECS Patch Failed] | The database version does not match the version the patch was coded to update.  
1. BuildNumber version found in the VBECS.exe.config file.  
2. Cluster node containing the suspect file.  
3. Target Patch version.  
Contact the VBECS Administrator to resolve build number discrepancies (i.e., this patch may already be installed). |
| The Passive Cluster node should not have active resources.                  | ![Screenshot of VBECS Patch Failed] | The Passive node has active resources.  
Contact the VBECS Administrator to resolve cluster configuration issues. |
| The Start button of the VBECS GUI Patch is disabled                        | ![Screenshot of VBECS Patch Process] | Either the patch is running or the patch has completed.  
Click Close.  
Open a new VBECS Patch form by double-clicking shortcut. |
<p>| Access denied                                                                | ![Screenshot of Access denied] | The VBECS Services were not stopped or the patch files are Read-only.     |</p>
<table>
<thead>
<tr>
<th>Error Message</th>
<th>Example Screen Shot</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>VBECS Patch Failed</td>
<td><img src="image1.png" alt="VBECS Patch Failed Screen Shot" /></td>
<td>The VBECS Group Test (VBECS Test Services) may have been stopped. Right click on VBECS Group Test and select Bring Online.</td>
</tr>
<tr>
<td>Remote Desktop Disconnected</td>
<td><img src="image2.png" alt="Remote Desktop Disconnected Screen Shot" /></td>
<td>The user applying the patch has an active session at the server (KVM) console. Log off the server console and repeat the patch process.</td>
</tr>
<tr>
<td>VBECS FTP Download Security Alert</td>
<td><img src="image3.png" alt="Security Alert Screen Shot" /></td>
<td>Refer to Appendix H: Adding VBECS FTP Site to the Trusted Sites in Internet Explorer</td>
</tr>
</tbody>
</table>
This page intentionally left blank.
Appendix H: Adding VBECS FTP Site to the Trusted Sites in Internet Explorer

1) Open a remote desktop connection to Cluster Node 1 (e.g. VHAXXXNODZ1 or R01YYYNODXXX01).
2) Open Internet Explorer and select Tools, Internet Options (Figure 49).

Figure 49: Example of Internet Explorer Window

3) Select the Security tab (Figure 50).
Figure 50: Example of Internet Explorer Internet Options Security tab
4) Select **Trusted sites** (Figure 51).

**Figure 51: Example of Internet Options Trusted Sites**

![Internet Options dialog box with Trusted sites selected](image)

- Local intranet
  - This zone is for all websites that are found on your intranet.

- Security level for this zone
  - Allowed levels for this zone: All
    - Medium-low
      - Appropriate for websites on your local network (intranet)
      - Most content will be run without prompting you
      - Unsigned ActiveX controls will not be downloaded
      - Same as Medium level without prompts

- Some settings are managed by your system administrator.
5) Click Sites (Figure 52).

Figure 52: Example of Select a Zone to View or Change Security Settings

6) Make sure **Require server verification…** is unchecked. Enter ftp://10.3.21.76 and click the Add button (Figure 53).

Figure 53: Example of Adding the VBECS FTP to the Trusted Sites

7) Close all windows.
8) Log off Cluster Node 1.
9) Repeat Steps 1through 8 for Cluster Node 2 (e.g., VHAXXXNODZ2 or R01YYYNODXXX02).
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