Codonics Virtua Operating Software

Version 5.1.0 Release Notes

Summary

Version 5.1.0 software provides product improvements for the Codonics Virtua® Medical Disc Publisher.

> **CAUTION:** Version 5.1.0 software is intended for use on all Virtua systems except for the Virtua-1 model. Version 5.0.0 software will not install on the Virtua-1 model (Controller serial numbers beginning with 70C).

> **CAUTION:** A full install is required when upgrading a standard Virtua system running 4.0.1 or previous software, during which all patient studies will be removed. Virtua XR/E/C will not require a full install to upgrade from previous software.

> **CAUTION:** Newer Virtua systems which utilize a single color ink cartridge require Version 5.1.0 software or later to function properly. These systems can be identified by the first three characters in the serial number of the Recorder, 84C.

This document details the changes from Version 5.1.0 software. The Virtua User's Manual, Reference Guide, Operating Software Release Notes, and Technical Briefs provide further information on the use of Virtua systems. If upgrading from an older software version, previous Virtua Release Notes can be downloaded from the Codonics website.

Adaptive Updates

This section details new features included in Version 5.1.0 software.

◆ **Support for the new Virtua Recorder.** New Virtua Recorders utilize a single color ink cartridge. These Recorders can be identified by the first three characters in the serial number of the recorder, 84C. See Virtua Reference Guide, Part Number 900-729-001, for more details on new Virtua Recorders.

Perfective Updates

This section details product improvements included in Version 5.1.0 software.

◆ **Viewer Updates.** The following viewer updates are included in Virtua 5.1.0:

  ◆ EFilm Viewer v4.1.1

  ◆ Philips viewer 3.0 SP10

  ◆ Siemens syngo fastView VX57N

◆ Allow certain special characters (%, #, &, +) to be used in passwords.

◆ Show the touchscreen calibration window during software installation.

◆ Allow screen resolution to be set properly on startup if a monitor was not connected during software install, but is connected at a later time.

◆ Ability to filter out formatting characters from reports (DICOM Structured Reports or HL7 Report Messages).

The following multi-valued parameter can be configured in the profiles\reports\report.default.txt profile:

Parameter:	**reportTextFilter**
Settings:	**"<Regular Expression Value>" [: "Replacement Text"]**
Default:	**<Regular Expression to remove and tags>**
	<Regular Expression to remove <B> and </B> tags>
	<Regular Expression to find \.br\ tags and replace with newline characters>
Description:	Configures text to be removed/replaced in the patient report content on a study disc. Values are case-insensitive regular expressions that will match certain content in all report text, and should be surrounded with double-quotes. A colon may be specified in the regular expression by escaping it with a backslash: "\:". Optionally, replacement text can be specified for each match, and should be surrounded by double-quotes. A newline in replacement text can be specified within the double-quotes as "\n".

Example 1:

Using this reportTextFilter configuration:

```
reportTextFilter = "RemoveThisText"
reportTextFilter = "ReplaceThisText" : "ReplacementText"
reportTextFilter = "<BR>" : " "
reportTextFilter = "\.br\" : "\n"
```

The system will change all report text in the following manner:

A) Remove the text "RemoveThisText".

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B) Replace the text "ReplaceThisText" with the text "ReplacementText".

C) Replace the text "<BR>" with a space character.

D) Replace the text "\.br\" with an actual newline character:

Example 2:
Using the default reportTextFilter configuration, the system will change the report text:

Diagnostic Impressions:

First Impression\.br\ Findings...

Second Impression\.br\ Findings...

Revised by:

Dr. Doctor Name

to:

Diagnostic Impressions:
First Impression
 Findings...
Second Impression
 Findings...
Revised by:
Dr. Doctor Name…

◆ **Performance Balance.** Updated the System Profile and Job Profile parameters to adjust the balance between User Interface responsiveness and DICOM Store performance. The default parameters favor User Interface responsiveness over DICOM Store performance. Storing large DICOM files may be slower than expected under some conditions, but the User Interface should remain responsive. These parameters can be changed to allow large DICOM files to be stored/recorded more quickly, but the User Interface might become temporarily unresponsive while storing larger DICOM files.

The following parameters can be configured in the profiles\system.txt profile:

Parameter:	**systemStoreSetting**
Settings:	**default** | **time** | **size** | **off**
Default:	**default**
Description:	Only modify this parameter if directed by Codonics Technical Support. Controls how Virtua balances writing files to the hard disk and keeps the user interface responsive. Modifying this setting could cause the user interface to be unresponsive while receiving large DICOM files.

default - causes both the Time and Size approaches to be used.

time - detects slow hard disk write times and adjusts process priority.

size - detects larger than average file sizes and adjusts process priority.

off - performs no process priority adjustment.

Parameter:	**systemRecordSetting**
Settings:	**default** | **on**
Default:	**default**
Description:	Only modify this parameter if directed by Codonics Technical Support. Controls how Virtua balances writing files to CD/DVD and keeps the user interface responsive. Modifying this setting could cause the user interface to be unresponsive while recording large DICOM files to CD/DVD.

default - performs no adjustment when recording files to CD/DVD.

on - adjusts how quickly large DICOM files are recorded to CD/DVD if necessary.

off - performs no process priority adjustment.

The following parameter can be configured in the profiles\job\job.XXX.txt profiles:

Parameter:	**systemStoreSettingOverride**
Values:	**none** | **default** | **time** | **size** | **off**
Default:	**none**
Description:	Only modify this parameter if directed by Codonics Technical Support. When receiving images for a particular Job Profile, overrides the System Profile setting for how Virtua balances writing files to the hard disk and keeps the user interface responsive. Modifying this setting could cause the user interface to be unresponsive while receiving large DICOM files.

none - uses whatever approach is defined in the System Profile.

default - causes both the Time and Size approaches to be used.

time - detects slow hard disk write times and adjusts process priority.

size - detects larger than average file sizes and adjusts process priority.

off - performs no process priority adjustment.

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Corrective Updates

This section details issues that have been corrected in Version 5.1.0 software.

- **Fixed I/O Priority Management.** Certain processes were not running at the correct priorities, resulting in User Interface sluggishness, slow verification times, and reduced performance in some scenarios.

- **Fixed issue generating JPEG images for DICOM images with non-conformant Window Center/Width data.** If a DICOM file contained a blank (zero-length string) for Window Center/Width field, creating a JPEG image from that file would fail.

- **Fixed display issue on ELO monitors when Auto-calibration is used.** Vertical line artifacts were sometimes observed in the background when dialog boxes were displayed.

- **Fixed a condition where Virtua ECO sometimes enters a high CPU-usage state.** A display driver issue would occasionally result in a state where excessive system interrupts would consume system resources.

- **Fixed password expiration.** This fix prevents password expiration for Hot Folder user accounts.

- **Fixed Phase 3 software install failure.** Eliminated a condition that could occasionally prevent the install from continuing past Phase 3.

Known Common Issues

This section details common issues with Version 5.1.0 software are likely to be experienced by most users.

- **Occasional boot failures.** Virtua XR systems with 5.0.0 SW or newer and an SSD connected through an IDE-converter card may fail to boot up properly some of the time. Manually powering the system off and back on should allow the system to startup properly. To permanently correct the problem, a minor hardware modification is required. See Technical Brief 901-613-002 for details.

- **Changing ink cartridges without using the Ink Cartridge Load button on the top of an 83C-series Recorder may cause a label with poor quality on the first disc printed with the new cartridges.** To prevent this issue, press the Ink Cartridge Load button before removing old ink cartridges or an old print head. This issue only applies to newer engines that use separate ink cartridges for each color.

- **Studies can be lost or corrupted if a hard power down occurs.** Loss of power during some operations can result in lost or corrupt data. An uninterruptible power supply and proper shutdown procedure are strongly recommended.

- **Compatibility problems with newer browsers.** There are minor cosmetic problems when remotely connecting with some browsers.

- **During the software installation process, there is a period of time where a static blue Windows 8 icon is displayed.** However, the LED on the optical drive is lit, indicating the installation is progressing. This period of time may be well over a minute, which could lead some users to question whether the install process has failed when it is actively installing.

- **Erroneous Drive Tray Error.** A heuristic designed to detect failing optical drives can be improperly triggered on Virtua C and Virtua E models under some heavy use scenarios. If this message is observed and the drive appears to work properly, the heuristic can be turned off.

- **Input Bin Calibration.** The calibration for the input bins for the 84C-series Recorder is slightly different from older Recorders. See Technical Breif 901-222-003 for details.

Known Uncommon Issues

This section details uncommon or obscure issues with Version 5.1.0 software that are unlikely to be experienced by most users.

- **Virtua software can fail to start up while displaying the startup splash screen.** Manually powering the system off and back on should allow startup to continue.

- **DICOM association limit may be exceeded.** DICOM clients that open many simultaneous associations might exceed Virtua's limit of 24 simultaneous connections. This can cause the system to stop receiving DICOM jobs, requiring the system to be rebooted.

- **Time-remaining indicators for jobs are inaccurate if there is more than one Jobs page.** If there is more than one page of jobs queued (eight or more jobs), the time-remaining indicator on the Discs tab will not be accurate on any pages other than the first page. Each page starts the time-estimation over again without accounting for the jobs on the previous page.

- **Special handling for Recorder cover when installing software on the Virtua ECO systems**. When media Smart Detect mode is enabled, leave the Recorder cover open when installing software. Closing the cover with Smart Detect mode enabled will cause Virtua ECO to load another disc on top of the installation disc.

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◆ **The LaunchPad does not work on Windows NT®, Windows 98® or Windows 2000® OS with Internet Explorer version lower than 5.5.** When discs created on Virtua are installed on PCs, the LaunchPad is initiated. The LaunchPad can be used on Windows 2000/XP/Vista® and Windows ME® with Internet Explorer v5.5 or higher. Users of affected platforms can use Windows Explorer to navigate to and launch viewers or open reports.

◆ **Virtua ECO status lights unexpectedly alternate green and off for longer than two minutes.** In some circumstances, Virtua ECO may show an unexpected shutdown taking longer than two minutes. The workaround is to perform a hard shutdown (press the System power button for about five seconds). Power on the system to return to normal operations when desired.

◆ **IP address conflict is not reported.** If Virtua is configured to support a range of IP addresses and there is a conflict, Virtua will not notify the user.

◆ **Successfully archived studies not marked as archived.** Aborting a Scheduled Archive while a label is being printed may not mark studies successfully archived as archived. Studies will be re-archived during the next Scheduled Archive session.

◆ **USB drive error message.** Inserting a USB drive that was improperly ejected from another PC may result in a Windows error message that overlays the User Interface screen. The message is only present for a few seconds and has no effect on the functionality of the unit.

◆ **Improper shutdown warning.** Improper shutdown of Virtua can result in a warning screen on the next start up. The screen is displayed by the Operating System and advises the user that the system was not properly shutdown and may need to be repaired. Rebooting the system clears the issue.

◆ **Automatic requeuing of interrupted jobs.** If a job is interrupted prior to being completed and a power failure occurs, the job may not resume automatically.

◆ **Removable Storage Device Error Message.** When installing Virtua 5.0.0 or later software, Windows might display a light-blue screen with the message "There was a problem with a device connected to your PC. This problem can happen when a removable storage device is removed while it is in use or is failing". If so, the user must manually power off and then power on the system in order for the installer to proceed.

◆ **Phase 3 Installation issue.** If the software appears to stay in Phase 3 of the software installation process without proceeding, take the following steps:

1. Power off the unit.

2. Re-seat the DVD drive cables (at connection points to both the Controller and the Recorder).

3. Re-seat the SmartDrive.

4. Power on.

5. Phase 3 should detect all the drives properly and proceed as normal through the rest of the install.

6. If the software installation continues to fail during Phase 3, reinstall software.

Known Issues for International Regions

◆ **No Unicode support in Viewer.** The Clarity Medical Image Viewer does not correctly display Unicode characters. It is uncommon for DICOM files to be encoded in Unicode.

◆ **Limited Viewer support for international characters.** Refer to the Clarity Viewer User's Manual (Codonics Part Number CLARITY-MNLU) for details.

◆ **No support for Indian locales.** The Tamil, India (ta_IN) locale does not correctly support Tamil characters.

◆ **Site phone numbers with country codes may be truncated on labels**. Most labels support nine characters for phone numbers for the site details. The Ink Saver label displays more characters.

◆ **Cannot set date and time from Virtua user interface in some Tier 2 locales.** The workaround for this problem is to run the system in the en_US locale (which is the factory setting), set the local time and date correctly, and then change the system to the desired operating locale. A list of Tier 2 locales and instructions for changing the locale are in the Virtua User's Manual.

Technical Support

If problems occur during software installation, contact Codonics Technical Support between the hours of 8:30AM and 5:30PM EST (weekends and U.S. holidays excluded).

Phone: +1.440.243.1198

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Get it all with just one call
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