LiveCode 8.0.0-dp-1 Release Notes

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Overview

The LiveCode engine has undergone a large quantity of changes for the 7.0 release. The way values of variables are stored internally has been changed - in particular where before the engine used C-strings, it now uses a reference counted MCStringRef type. Every bit of code that displays text in LiveCode has been updated, and all the platform-specific API functions that manipulate characters now use the Unicode versions; as a result LiveCode is now fully Unicode compatible.

The implementation of Unicode compatibility necessitated a change to the stack file format, which means stacks saved in 7.0 format are not compatible with earlier versions of LiveCode. However you can still save stacks in legacy formats using the dropdown menu in the Save As... dialog.

The other significant change to engine internals is the work done on syntax refactoring. The code that deals with statement execution, function evaluation and property access has been cleaned up and separated out from the parsing code, and moved into distinct modules based on functionality. This represents a major first step towards being able to implement Open Language.

Known issues

Every effort has been made to ensure that externally, the engine behaviour is identical to the current unrefactored release. In other words, users should not notice any difference in functionality in their existing stacks.

- The installer will currently fail if you run it from a network share on Windows. Please copy the installer to a local disk before launching on this platform.
- The engine files are much larger than previous versions due to inclusion of ICU data

Platform support

The engine supports a variety of operating systems and versions. This section describes the platforms that we ensure the engine runs on without issue (although in some cases with reduced functionality).

Windows

The engine supports the following Windows OSes:

- Windows XP SP2 and above
- Windows Server 2003
- Windows Vista SP1 and above (both 32-bit and 64-bit)
- Windows 7 (both 32-bit and 64-bit)
- Windows Server 2008
- Windows 8.x (Desktop)

Note: On 64-bit platforms the engine still runs as a 32-bit application through the WoW layer.

Linux

The linux engine requires the following:

- Supported architectures:

- 32-bit or 64-bit Intel/AMD or compatible processor
- 32-bit ARMv6 with hardware floating-point (e.g. RaspberryPi)

- Common requirements for GUI functionality:

  - GTK/GDK/Glib 2.24 or later
  - Pango with Xft support
  - *(optional)* esd - required for audio output
  - *(optional)* mplayer - required for media player functionality
  - *(optional)* lcms - required for color profile support in images
  - *(optional)* gksu - required for privilege elevation support

- Requirements for 32-bit Intel/AMD:

  - glibc 2.3.6 or later

- Requirements for 64-bit Intel/AMD:

  - glibc 2.15 or later

- Requirements for ARMv6:

  - glibc 2.7 or later

Note: The GUI requirements are also required by Firefox and Chrome, so if your Linux distritution runes one of those, it will run the engine.

Note: If the optional requirements are not present then the engine will still run but the specified features will be disabled.

Note: It may be possible to compile and run LiveCode Community on other architectures but this is not officially supported.

Mac

The Mac engine supports:

- 10.6.x (Snow Leopard) on Intel
- 10.7.x (Lion) on Intel
- 10.8.x (Mountain Lion) on Intel
- 10.9.x (Mavericks) on Intel

Note: The engine runs as a 32-bit application regardless of the capabilities of the underlying processor.

Setup

Installation

Each distinct version has its own complete folder – multiple versions will no longer install side-by-side: on Windows (and Linux), each distinct version will gain its own start menu (application menu) entry; on Mac, each distinct version will have its own app bundle.
The default location for the install on the different platforms when installing for 'all users' are:

- Windows: <x86 program files folder>/RunRev/ LiveCode 8.0.0-dp-1
- Linux: /opt/runrev/livecode-8.0.0-dp-1
- Mac: /Applications/ LiveCode 8.0.0-dp-1.app

The default location for the install on the different platforms when installing for 'this user' are:

- Windows: <user roaming app data folder>/RunRev/Components/LiveCode 8.0.0-dp-1
- Linux: ~/.runrev/components/livecode-8.0.0-dp-1
- Mac: ~/Applications/ LiveCode 8.0.0-dp-1.app

Note: *If your linux distribution does not have the necessary support for authentication (gksu) then the installer will run without admin privileges so you will have to manually run it from an admin account to install into a privileged location.*

Uninstallation

On Windows, the installer hooks into the standard Windows uninstall mechanism. This is accessible from the appropriate pane in the control panel.
On Mac, simply drag the app bundle to the Trash.
On Linux, the situation is currently less than ideal:

- open a terminal
- *cd* to the folder containing your rev install. e.g.

```
cd /opt/runrev/livecode-8.0.0-dp-1
```

- execute the *.setup.x86* file. i.e.

```
./.setup.x86
```

- follow the on-screen instructions.

Reporting installer issues

If you find that the installer fails to work for you then please file a bug report in the RQCC or email support@runrev.com so we can look into the problem.
In the case of failed install it is vitally important that you include the following information:

- Your platform and operating system version
- The location of your home/user folder
- The type of user account you are using (guest, restricted, admin etc.)
- The installer log file located as follows:
- **Windows 2000/XP:** <documents and settings folder>/<user>/Local Settings/

- **Windows Vista/7:** <users folder>/<user>/AppData/Local/RunRev/Logs
- **Linux:** <home>/.runrev/logs
- **Mac:** <home>/Library/Application Support/Logs/RunRev

Activation

The licensing system ties your product licenses to a customer account system, meaning that you no longer have to worry about finding a license key after installing a new copy of LiveCode. Instead, you simply have to enter your email address and password that has been registered with our customer account system and your license key will be retrieved automatically.

Alternatively it is possible to activate the product via the use of a specially encrypted license file. These will be available for download from the customer center after logging into your account. This method will allow the product to be installed on machines that do not have access to the internet.

Multi-user and network install support (4.5.3)

In order to better support institutions needing to both deploy the IDE to many machines and to license them for all users on a given machine, a number of facilities have been added which are accessible by using the command-line.

Note: These features are intended for use by IT administrators for the purposes of deploying LiveCode in multi-user situations. They are not supported for general use.

Command-line installation

It is possible to invoke the installer from the command-line on both Mac and Windows. When invoked in this fashion, no GUI will be displayed, configuration being supplied by arguments passed to the installer.

On both platforms, the command is of the following form:

    <exe> install noui *options*

Here *options* is optional and consists of one or more of the following:

-allusers	Install the IDE for all users. If not specified, the install will be done for the current user only.
-desktopshortcut	Place a shortcut on the Desktop (Windows-only)
-startmenu	Place shortcuts in the Start Menu (Windows-only)
-location *location*	The location to install into. If not specified, the location defaults to those described in the *Layout* section above.
-log *logfile*	A file to place a log of all actions in. If not specified, no log is generated.

Note that the command-line variant of the installer does not do any authentication. Thus, if you wish to install to an admin-only location you will need to be running as administrator before executing the command. As the installer is actually a GUI application, it needs to be run slightly differently from other command-line programs.

In what follows <installerexe> should be replaced with the path of the installer executable or app (inside the DMG) that has been downloaded.

On Windows, you need to do:

    start /wait <installerexe> install noui *options*

On Mac, you need to do:

"<installerexe>/Contents/MacOS/installer" install noui *options*

On both platforms, the result of the installation will be written to the console.

Command-line activation

In a similar vein to installation, it is possible to activate an installation of LiveCode for all-users of that machine by using the command-line. When invoked in this fashion, no GUI will be displayed, activation being controlled by any arguments passed.
On both platforms, the command is of the form:

<exe> activate -file *license* -passphrase *phrase*

This command will load the manual activation file from *license*, decrypt it using the given *passphrase* and then install a license file for all users of the computer. Manual activation files can be downloaded from the 'My Products' section of the RunRev customer accounts area.
This action can be undone using the following command:

<exe> deactivate

Again, as the LiveCode executable is actually a GUI application it needs to be run slightly differently from other command-line programs.
In what follows <livecodeexe> should be replaced with the path to the installed LiveCode executable or app that has been previously installed.
On Windows, you need to do:

start /wait <livecodeexe> activate -file *license* -passphrase *phrase*
start /wait <livecodeexe> deactivate

On Mac, you need to do:

"<livecodeexe>/Contents/MacOS/LiveCode" activate -file *license* -passphrase *phrase*
"<livecodeexe>/Contents/MacOS/LiveCode" deactivate

On both platforms, the result of the activation will be written to the console.

Engine changes

Add revBrowser error callback messages. (8.0.0-dp-1)

Added two new callbacks sent by revBrowser.
Note that these messages are only sent from browsers opened with revBrowserOpenCEF.

Callback messages:

- browserDocumentFailed
- sent to the current card when the browser has encountered an error while loading a URL.
- browserDocumentFailedFrame
- sent to the current card when the browser has encountered an error while loading a URL into a frame.

New iOS status bar style (8.0.0-dp-1)

What has changed?

The way the status bar is displayed changed in iOS 7. Previously, if the status bar was visible, the app view was shifted down by height of the status bar (20 pixels). From iOS 7 and above, the app view is given these 20 pixels of extra height, and the status bar is displayed on top of the app view (i.e there is an overlapping). This is a feature added by Apple, to give developers control over what appears behind the content of the status bar.

Some users reported this change of behaviour as a bug, since it changed the way their existing stacks were displayed in iOS 7 and above. A quick fix to this would be updating the engine to move the app view down 20 pixels, if the status bar is opaque. However, this fix would not guarantee backwards compatibility, since some users may have already adjusted for iOS 7 status bar behaviour, and have modified their code to work with those changes.

So we decided to add a new **solid** status bar style, which is opaque and automatically shifts down the view content by 20 pixels. So the difference between â€œopaqueâ€ and â€œsolidâ€ status bar styles is the following:

| pre-iOS 7 | iOS 7+
--------|--------|---
opaque | move the stack below the status bar | the status bar will be over the top
solid | move the stack below the status bar | move the stack below the status bar

[[In App Purchase]] Calling mobileStoreRestorePurchases when there are no previous purchases to restore (8.0.0-dp-1)

What has changed

Previously, if mobileStoreRestorePurchases was called and no previous purchases were made with that user account, nothing happened.
Now, a purchaseStateUpdate message is sent with state=restored and productID=""

Specific bug fixes (8.0.0-dp-1)
(bug fixes specific to the current build are highlighted in bold, reverted bug fixes are stricken through)

   14851   **Popup won't stop displaying when displayed in mouseDown of button widget**

14665   fatal exception - Service not registered: com.runrev.android.billing.google.IabHelper

14658   Recursive array ops fail debug mode mutability assertion

14604   [LC 7] iOS mobile player 'loadstate' property never contains 'playthrough'

14602   URLEncode crashes LiveCode

14599   LCB: Text sort is inconsistent with string comparison

14588   Intermittent crash on MCPlatformWindowMaskRelease()

14587   LC 7 Server buffers output

14538   bool formatted as string does not work

14536   Return parameters require a local variable to be defined first

14531   EOF is returned when reading exactly the number of chars in a file

14525   video controller not responding

14521   IDE crashes when viewing with Inspector

14515   put URL into URL"binFile:eXample.mp3" crash on Android

14504   Strings which have been 'unnativized' by the engine lose the CanBeNative flag when copied

14483   fiddling with alphaData crashes/hangs LC 7.0.2

14480   Typo in textEncode dictionary entry

14477   Trying to get $_FILES array fails since server version 7.

14467   Unable to get line Attributes of Char Chunks in LC 7

14463   Second invocation of play command causes crash on iOS

14462   Crash related to shell command on Linux

14461   [[In-app purchase]] mobileStorePurchasedProducts returns empty on iOS

14457   Segment-based URIs yield an error since server version 7

14456   Google Play Store - No Information on Product Details

14450   Google Play Store - Extra error message when an in-app purchase fails

14441   Shell command takes much longer to run in LiveCode Server 7 than in 6

14439   Minus sign ignored when assigning value to variable at declaration

14437   Clearing a Player filename causes LC to crash.

14402   [[In App Purchase]] Calling mobileStoreRestorePurchases when there are no previous purchases to restore

14383   Android standalones can not open a new file for update on the device

14140   Location of modal stacks incorrect on OSX

14011   Printing is inconsistent

13586   LC and standalones use wrong version icon in Ubuntu Launcher

11544   iOS 7 Status Bar Hidden

Dictionary changes

- The entry for **iphoneSetStatusBarStyle** (*command*) has been updated.
- The entry for **ceil** (*function*) has been updated.
- The entry for **floor** (*function*) has been updated.
- The entry for **textEncode** (*function*) has been updated.
- The entry for **browserDocumentFailed** (*message*) has been updated.
- The entry for **browserDocumentFailedFrame** (*message*) has been updated.
- The entry for **printMargins** (*property*) has been updated.

Previous Release Notes

7.0.3 Release Notes	http://downloads.livecode.com/livecode/7_0_3/LiveCodeNotes-7_0_3.pdf
7.0.1 Release Notes	http://downloads.livecode.com/livecode/7_0_1/LiveCodeNotes-7_0_1.pdf
7.0.0 Release Notes	http://downloads.livecode.com/livecode/7_0_0/LiveCodeNotes-7_0_0.pdf
6.7.2 Release Notes	http://downloads.livecode.com/livecode/6_7_2/LiveCodeNotes-6_7_2.pdf
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