



# LiveContent S1000D Release Notes

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***LiveContent S1000D 5.12***

**August 2022**

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## **New features and enhancements**

This section describes new features, feature enhancements, and other changes introduced in each version of LiveContent S1000D since LiveContent S1000D 5.2.

## What's new and changed in LiveContent S1000D 5.12

This section describes new features, feature enhancements, and other changes in this release of LiveContent S1000D.

### New features and enhancements in LiveContent S1000D 5.12

This section lists features and enhancements introduced in this release of LiveContent S1000D.

#### Security updates

This release of LiveContent S1000D contains several security updates that address vulnerabilities identified during security testing. Resolving these vulnerabilities involved incorporating upgrades to several third-party components and their dependencies.

One such update entailed removing `uniqid` and time/date injection into the API URL. Currently AJAX call manages the cache option, so there is no need to add your own cache control in the URL. This change may affect customizations.

Refer to the LiveContent S1000D Platform Requirements for specific information on currently supported platforms and OEM component versions delivered with LiveContent S1000D 5.12.

#### Platform changes

This release of LiveContent S1000D includes several changes to platform support.

### Newly supported items in LiveContent S1000D 5.12

New software components supported in the LiveContent S1000D 5.12 release.

## Operating Systems

- Microsoft Windows Server 2022, 64-bit
- Microsoft Windows 11, 64-bit

## Java

- Oracle Java JDK 17.0.3, 64-bit
- Temurin OpenJDK with Hotspot JRE 17.0.x, 64-bit

## Web Browsers

- Mozilla Firefox ESR 91.10, 32- or 64-bit
- Google Chrome 102, 32- or 64-bit
- Microsoft Edge Chromium 102, 32- or 64-bit

## Deprecated items in LiveContent S1000D 5.12

The following platform support was deprecated in the 5.12 release of LiveContent S1000D.

## Operating Systems

- Microsoft Windows Server 2016, 64-bit
- Red Hat Enterprise Linux 7.9 or later, 64-bit

## Java

- AdoptOpenJDK with Hotspot JRE 11.0.15, 64-bit
- Oracle JDK 11.0.15, 64-bit

## Items no longer supported in LiveContent S1000D 5.12

Software components no longer supported in the LiveContent S1000D 5.12 release.

## Operating Systems

- Apple iOS 14 for iPad
- Windows 2016 64 bit Server

## Java

- Oracle Java Runtime Environment (JRE) 1.8.0\_261, 32-bit
- Java 8.x, 64-bit

# What's new and changed in LiveContent S1000D 5.11

This section describes new features, feature enhancements, and other changes in this release of LiveContent S1000D.

## New features and enhancements in LiveContent S1000D 5.11

This section lists features and enhancements introduced in this release of LiveContent S1000D.

### Security updates

This release of LiveContent S1000D contains several security updates that address vulnerabilities identified during security testing. Resolving these vulnerabilities involved incorporating upgrades to several third-party components and their dependencies.

One such update entailed removing `uniqid` and time/date injection into the API URL. Currently AJAX call manages the cache option, so there is no need to add your own cache control in the URL. This change may affect customizations.

Refer to the LiveContent S1000D Platform Requirements for specific information on currently supported platforms and OEM component versions delivered with LiveContent S1000D 5.11.

### Publishing LiveContent S1000D Mobile-ready content

LiveContent S1000D Publish has been enhanced to enable publishing content for display using the new LiveContent S1000D Mobile app for iPad tablet.

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**Note:** The LiveContent S1000D Mobile solution requires a separate license token. For more information, contact RWS Support at <https://gateway.sdl.com>.

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For more information about this enhancement, refer to the following topics in the LiveContent S1000D Mobile documentation available at <https://docs.rws.com>.

## Platform changes

This release of LiveContent S1000D includes several changes to platform support.

### Newly supported items in LiveContent S1000D 5.11

New software components supported in the LiveContent S1000D 5.11 release.

#### Operating Systems

- Red Hat Enterprise Linux 8.1 or later (64-bit)
- Apple iOS 15 (iPad OS)

#### Java

- Oracle JavaJRE 1.8\_301 (64-bit) (deprecated)
- Oracle JDK 11.0.12 (64-bit)
- AdoptOpenJDK OpenJDK with Hotspot JRE 11.0.12 (64-bit)

#### Web Browsers

- Mozilla Firefox ESR 91.x (32- or 64-bit)
- Google Chrome 94 (32- or 64-bit)
- Microsoft Edge Chromium 94 (32- or 64-bit)

### Deprecated items in LiveContent S1000D 5.11

The following platform support was deprecated in the 5.11 release of LiveContent S1000D.

#### Operating Systems

- Windows 2016 (64 bit) Server
- Red Hat Enterprise Linux 7.9 (64-bit)
- Apple iOS 14 (iPad OS)

### Items no longer supported in LiveContent S1000D 5.11

Software components no longer supported in the LiveContent S1000D 5.11 release.

## Operating System

- Apple iOS 13 (iPad OS)

## Web Browser

- Microsoft Internet Explorer 11

# What's new and changed in SDL LiveContent S1000D 5.10

This section describes new features, feature enhancements, and other changes in the 5.10 release of LiveContent S1000D .

## New features and enhancements in LiveContent S1000D 5.10

This section lists features and enhancements introduced in LiveContent S1000D 5.10.

### Introducing built-in CGM viewing

LiveContent S1000D now allows you to view CGM graphics in an IETM without using a browser plugin, for enhanced, browser-independent display of CGMs across all supported platforms. This enhancement eliminates security risks inherent in IETM plugins.

LiveContent S1000D provides the same viewing and editing controls for CGMs as for previously supported SVGs, including support for managing hotspots and redlining.

By default CGM graphics are displayed without a plugin in all browsers except Internet Explorer, which uses isoView by default for backward compatibility with previous LiveContent S1000D releases. To configure Internet Explorer to display CGMs without the isoView plugin, change the value of the `ietm.cgm_control` configuration item in the `wietmsd_prg.xml` file to any value, except 2.

### Support for jQuery 3.5.1

LiveContent S1000D now uses the latest version of jQuery to take advantage of its enhanced capabilities.

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

### Newly supported items in LiveContent S1000D 5.10

Software for which support was added in the 5.10 release.

#### Libraries

- jQuery 3.5.1

### Deprecated items in LiveContent S1000D 5.10

Software deprecated in the 5.10 release. If you use any of these components, upgrade to a supported version before upgrading to this version of LiveContent S1000D.

#### Web browser

- Microsoft Internet Explorer 11

### Items no longer supported in LiveContent S1000D 5.10

No software was desupported in this release.

## What's new and changed in SDL LiveContent S1000D 5.9

This section describes new features, feature enhancements, and other changes in the 5.9 release of LiveContent S1000D .

### New features and enhancements in LiveContent S1000D 5.9

This section lists features and enhancements introduced in LiveContent S1000D 5.9.

### Publishing enhancements

This release introduces the LiveContent S1000D Publish tool (Windows only), which provides a user interface for generating and managing IETPs. You can also use the tool to build and manage packages of publications for distribution.

During installation or upgrade, the Publish tool `LiveContentS1000DPublish.exe` executable is delivered to the `LiveContent/PublishUI` folder on the Windows LiveContent S1000D Publishing Server. It generates and maintains log files in a `Log` directory it creates in that folder.

The labels for its menus, fields, and other controls can be localized using the new `resources.xml` file delivered by default to the `publishData` subdirectory in the LiveContent S1000D data folder.

For more information about this enhancement, refer to the following topics in the LiveContent S1000D documentation.

- *Using the LiveContent S1000D Publish tool*
- *Generating a publication*
- *Editing a publication*
- *Deleting a publication*
- *Packaging content for delivery*
- *Editing a package*
- *Deleting a package*
- *Localizing Publish tool fields and controls*
- *resources.xml*

### Client Certificate Authentication

LiveContent S1000D can now be configured to allow users to log in using Client Certificate Public Key Infrastructure (PKI) authentication. To enable client certificate authentication, a public key certificate must be obtained from a certificate authority (CA) and installed on the user's web browser. Once the user has provided authentication to the operating system, such as with a Common Access Card (CAC), LiveContent S1000D uses this certificate to authenticate the user's credentials. LiveContent S1000D client certificate authentication is based on the X.509 standard issued by the ITU Telecommunication Standardization Sector (ITU-T). You can configure LiveContent S1000D to allow users to authenticate with a Common Access Card (CAC) without supplying a password. Alternatively, a public key certificate can be obtained from a certificate authority (CA) and installed on the user's web browser to enable client certificate authentication. For further information, refer to *Using Client Certificate Authentication* in the LiveContent S1000D documentation.



## Support for the S1000D `infoNameVariant` element

In S1000D Issue 5.0, a new, optional `infoNameVariant` element was added as a child of the `dmTitle` element. This element extends the information included in a document title.

When it exists, the value of the `infoNameVariant` element is appended to info name.

For more information about this enhancement, refer to the following topics in the LiveContent S1000D documentation.

- *Customizing the TOC*
- *Publication configuration directives and environment variables*

## S1000D Issue support

Support for older S1000D Issues 1.6, 1.7, 1.8, 1.8.1, 1.9, 2.0, and 2.1 has been added in this release.

## UTF-8 XSL stylesheet encoding

In this release, UTF-8 character encoding is used for the LiveContent S1000D XSL stylesheet (instead of ISO-8859-1 encoding, which was used in previous versions).

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

## Newly supported items in SDL LiveContent S1000D 5.9

A list of new software components that are supported in the SDL LiveContent S1000D 5.9 release.

### Operating Systems

- Red Hat Enterprise Linux 8.1 64-bit
- Apple iOS 14 (iPadOS)

### Java

- Oracle Java JRE 1.8\_261 (64-bit)
- Oracle JDK 11.0.8 (64-bit)
- AdoptOpenJDK with Hotspot JRE 11.0.8 (64-bit)

### Web Browsers

- Mozilla Firefox ESR 78.3
- Google Chrome 85
- Microsoft Edge Chromium 86
- Apple Safari for iOS 14

### Deprecated items in LiveContent S1000D 5.9

The following platform support was deprecated in the 5.9 release of LiveContent S1000D.

- Apple iOS 13

### Items no longer supported in SDL LiveContent S1000D 5.9

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.9 release.

### Operating Systems

- Microsoft Windows 2012 R2 64-bit
- Apple iOS 12


## What's new and changed in SDL LiveContent S1000D 5.8

This section describes new features, feature enhancements, and other changes in the 5.8 release of LiveContent S1000D .

### New features and enhancements in LiveContent S1000D 5.8

This section lists features and enhancements introduced in LiveContent S1000D 5.8.

#### Enhanced navigation

To provide easier and more flexible access to LiveContent S1000D features, several controls were moved from the main navigation panel to a customizable auxiliary menu you access by clicking the hamburger icon (  ) in the upper left corner of the screen. The following controls are now available on this auxiliary menu.

- **History**

- **Applicability**
- **Suspend and Resume**
- **Attachments**

By reducing the number of icons on the main navigation panel, display of publications is enhanced, particularly on tablets and other devices with smaller screens.

In addition, a new **Toggle Left Panel** icon (  ) has been added to the Top bar banner, allowing you to hide the Auxiliary navigation menu.

For more information about LiveContent S1000D navigation, refer to *Exploring the user interface* in the LiveContent S1000D documentation.

## Multi-language support for XSL styles

This release of LiveContent S1000D includes support for multiple languages in XSL files. This enhancement allows you to display XSL style text values, application control text, and error and warning messages in a language you specify for a collection or IETM.

To enable this enhancement, delivered XSL files have been modified to include variables in place of some previously hard-coded text. For programs that do not require localization, customized XSL files containing hard-coded text values can still be used.

Configuring languages for XSL localization is done in a collection's `wietmsd.xml` configuration file. XSL localization can be applied to an entire collection or to one or more specific IETMs. When configured at the IETM level, individual IETMs in a single connection can use different languages, allowing flexibility in distributing content in multiple languages.

For more information about multi-language support for XSL styles, refer to *Localizing a publication or collection* in the LiveContent S1000D documentation.

## Support for Saxon Professional Edition

LiveContent S1000D now uses Saxon Professional Edition (Saxon PE) for XSL transformation and XML parsing. This edition offers more robust capabilities, enhanced performance, and greater extensibility than Saxon Home Edition (Saxon HE), which was used by earlier versions of LiveContent S1000D. Saxon PE offers functionality not included with Saxon HE, providing benefits including the following.

- **Improved language support**  
Saxon PE provides better language support by more fully conforming with XSLT 3.0, XPath 3.1, and XQuery 3.1 standards.
- **Enhanced performance**  
The Saxon PTree binary format enhances performance by improving serialization and re-parsing speeds without requiring significantly more disk space than the original XML.
- **Greater extensibility**  
Saxon PE enables greater extensibility by providing access to EXSLT and EXPath extension functions, reflexion (for Java and .NET), Saxon extension basic functions, SQL, XSLT element extensibility, and advanced run-time localization.

- **Improved interface support**

Saxon PE supports additional interfaces, including JDOM, JDOM2, AXIOM, DOM4J, and XOM for the input and output of transformations and queries (Java only). In addition, Saxon PE implements the standard XQJ API for query processing (Java only).

For details about the differences between Saxon PE and HE, including links to descriptions of the advanced features of Saxon PE, refer to the [Saxon 9.9 product comparison \(Feature Matrix\)](#) on the Saxonica web site.

## Support for jQuery 3.4.1

LiveContent S1000D now uses the latest version of jQuery to take advantage of its enhanced capabilities.

## Support for Google Chrome

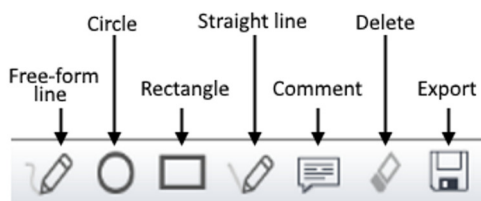
You can now access an IETM in LiveContent S1000D using the Google Chrome browser.

## SVG graphics support enhancements

The following enhancements have been made to LiveContent S1000D support for SVG and SVGZ graphics.


- **Redlining SVG graphics**

You can now mark up SVG and SVGZ graphics using tools available on the graphics toolbar when such a graphic is displayed in the content panel or in a tear-off page. A new control has been added to the graphics bar displayed when you view an SVG or SVGZ graphic, allowing you to expand the bar to display icons representing redlining tools you can use to mark up the graphic as in the following sample.



For more information about these redlining tools, refer to *Redlining an SVG image* in the LiveContent S1000D documentation.

- **Highlighting hotspots**

A new control has been added to the graphics bar displayed when you view an SVG or SVGZ graphic in the main content panel or in a tear-off page, allowing you to display all the hotspots in the graphic (if any exist). Clicking the **Highlight hotspots** control (  ) temporarily highlights the hotspots in the graphic, providing a way to more easily locate clickable hotspots.

For more information about this enhancement, refer to *Configuring SVG hotspot highlighting* in the LiveContent S1000D documentation.

## S1000D Support for hotspot links in figure legends

You can now create S1000D-compliant links within a figure legend to hotspots in the related figure graphic. When a user clicks such a link in the figure legend, the associated hotspot in the related figure graphic is highlighted.

## Support for hotspot links to another DM

You can configure a hotspot in an SVG or CGM graphic to link to a location in the document section of a different DM. When a user clicks the hotspot, the referenced DM is loaded and the display scrolled to the referenced location.

## Customizable graphics labels

You can customize the labels for the graphics in a PDF document or IETM. By default, each graphic is marked with a label reading `Fig X` where `X` is the sequential number of the graphic. Using the configuration item `image.title_prefix` in language property configuration files (such as `..\data\etc\config\resources-english.prop`), you can specify text to replace the prefix `Fig` in graphics labels during XSL FO transformation.

This enhancement gives you more control over the output of content and enables you to localize the graphics labels.

For more information about this enhancement, refer to the following topics in the LiveContent S1000D documentation.

- *Customizing graphics labels*
- *resources-xx.prop*

## Support for the HTML5 SAP Visual Enterprise Viewer

LiveContent S1000D now supports viewing multimedia content natively in an HTML5 SAP Visual Enterprise Viewer without the need for an SAP plugin, improving browser independence. To display SAP media in the HTML5 viewer, only a supported SAP media file, stored in the `figures` folder, is required. You can reference such a file as you would any other figure object.

Most functionality of the native HTML5 SAP Visual Enterprise Viewer, including the zoom, rotate, pan, and highlighting functions, is similar to that of the SAP plugin-based viewer. LCS controls for interacting with SAP graphics, such as **Play Next Step** and **List All Steps** also work the same way. Differences in functionality between the native HTML5 and plugin-based viewers include the following.

- Left and right toolbars available in the plugin-based viewer do not appear in the native HTML5 version.
- Hovering the mouse over a part in the native HTML5 viewer does not cause its name to display as a tooltip as it does in the plugin-based viewer.

For more information about the SAP Visual Enterprise Viewer, refer to *SAP Enterprise Viewer* in the LiveContent S1000D documentation.

## Security banners and content portion marking

You can configure LiveContent S1000D to display a banner showing the highest security classification assigned to any of the content in a publication or DM.

In addition, you can configure the application to display a marking showing the security classification for each individual portion of content (such as a heading, paragraph, or step) within a publication.

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**Note:** Refer to [s1000d.org](http://s1000d.org) for information about S1000D security classifications.

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If enabled, the security banner for a publication is displayed at the top of the LiveContent S1000D user interface and reflects the security level assigned to the IETM. The security banner for a DM is displayed directly below the navigation panel (above the main content panel) and reflects the security level assigned to the content of the DM.

Security banners are color-coded based on security level. You can customize the color of the banner for a security level by editing the HTML class associated with it. The text that appears in the banner is derived from values defined in the applicable language resource (`resources-xx.prop`) file, allowing you to edit or localize the text.

This functionality is delivered turned off. To enable it at the application level, edit the collection's `wietmsd_prg.xml` file. To enable it at the publication level, edit the publication's `wietmsd.xml` file.

For more information about this enhancement, refer to the following topics in the LiveContent S1000D documentation.

- *Displaying security banners and portion markings*
- *Configuring publication-level security banner text*
- *Configuring DM-level security banner text*

## Action complete indicators

You can now configure LiveContent S1000D to add check boxes to the steps in procedure DMs at the application level (affecting all publications), or for a specific publication. A user can select the check box for a step to indicate that the step has been completed. Each time a check box is selected or deselected, that action is recorded as an entry in the audit trail for the applicable document, including the following information.

- The type of action (checking or unchecking the check box)
- The number and text of the step on which the action was performed
- The date and time the action was performed

This functionality is delivered turned off. To enable it at the application level, edit the `ietm.show_steps_checkbox` configuration item in the collection's `wietmsd_prg.xml` file, setting its value to 1. To enable it at the publication level, edit the `show_steps_checkbox` configuration item in the publication's `wietmsd.xml` file, setting its value to 1.

For more information about this enhancement, refer to *Enabling Action Complete Indicators*.

## Warnings and Cautions acknowledgment


You can configure LiveContent S1000D 5.8 to require the user to acknowledge a Warning or Caution before proceeding. The user's acknowledgment of the Warning or Caution is then recorded in the Audit Trail log.

This feature is delivered turned off. To enable it for a collection, edit the `ietm.disable_wcn` configuration item in the collection's `witmsd_prg.xml` file, setting its value to 0.

When enabled, this feature causes Warnings and Cautions to be displayed in a pop-up dialog containing an **OK** button the user must click to dismiss the dialog. A new language resource, `ctrl.acknowledge.popup.ok` can be added to language resource (`resources-xx.prop`) files, enabling you to localize the text of the **OK** button.

For more information about setup required for Warnings and Cautions acknowledgment, refer to *Enabling Warnings and Cautions acknowledgment* in the LiveContent S1000D documentation.

## Viewing S1000D emergency procedures


A new control has been added to the main navigation panel, allowing you to view all the S1000D emergency procedures in a publication. Clicking the **Emergency Procedures** control (  ) displays all the emergency procedures in the open publication in the left panel.

**Note:** Refer to [s1000d.org](http://s1000d.org) for the definition of an emergency procedure, which varies by specification issue.

For more information about this enhancement, refer to the following topics in the LiveContent S1000D documentation.

- *Viewing S1000D emergency procedures*
- *Configuring S1000D emergency procedures display*

## Viewing session history

A new control has been added to the main navigation panel, allowing you to view the history of the current session. Clicking the **History** control (  ) on the auxiliary navigation menu displays a list of the data modules visited in current session in the left panel. The maximum number of items in the history list is configurable using a new property, `maxLength`, in the `components.xml` configuration file. By default, up to 200 items are displayed.

You can suppress the display of the **History** icon on the Navigation panel, preventing users from accessing session history functionality.

For more information about this enhancement, refer to the following topics in the LiveContent S1000D documentation.

- *Viewing session history*
- *Configuring session history display*

## Support for references in Reason for Update

LiveContent S1000D now supports including a `simpleRefPara` element within the `reasonForUpdate` element in an S1000D Issue 4.2 publication, allowing you to include links to updated DMs in the publication's Reason for Update section. Child elements of a `simpleRefPara` element (such as `externalPubRef` and `dmRef` elements) are rendered in the Revision Highlights report as links to the updated DMs.

You can configure the styles applied to `externalPubRef` and `dmRef` elements in the links in the `...\etc\FullSupport\etc\skins\Skin_name\templates\skin.css` file (where *Skin\_name* is the name of the applicable skin).

## Content loading spinner

Because a large DM can take several seconds or more to be displayed, LiveContent S1000D now displays a spinner graphic while a DM loads to show that processing is underway. While the content loads, the LiveContent S1000D window is disabled.

By default, the spinner is displayed beginning one-half second after the user selects a DM for display. You can customize the amount of time before the spinner is displayed by modifying the new `loadingMsgDisplayTime` property in the appropriate `components.xml` file. For more information about this enhancement, refer to *Configuring the content loading spinner*.

---

**Important:** With the 5.8.0 release, you may see changes in your publish times depending on the release from which you are upgrading. If you are publishing from Contenta S1000D to LiveContent S1000D, improvements were made in Contenta S1000D 5.7.1 (and included in Contenta S1000D 5.8.0) that may improve content export times significantly depending on the composition of the data. During performance testing of various publications, some content export times have shown minimal decrease in export times, while others have taken up to 50-100% shorter than in 5.7.0. However, some features added in LiveContent S1000D 5.8.0 require additional processing at publish time, which can impact performance depending on the composition and size of a publication. During performance testing, some publish processes have shown no increase in LiveContent S1000D publish times, while others have increased up to 20% over previous releases.

---

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

## Newly supported items in SDL LiveContent S1000D 5.8

A list of new software components that are supported in the SDL LiveContent S1000D 5.8 release.



## Operating Systems

- Apple iOS (iPadOS) 13

## Web Browsers

- Google Chrome

## Items no longer supported in SDL LiveContent S1000D 5.8

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.8 release.

## Operating Systems

- Apple iOS 11

# What's new and changed in SDL LiveContent S1000D 5.7

This section describes new features, feature enhancements, and other changes in the 5.7 release of LiveContent S1000D .

## New features and enhancements in LiveContent S1000D 5.7

This section lists features and enhancements introduced in LiveContent S1000D 5.7.

### HTML5 support enhancements

LiveContent S1000D now supports the audio, video, and animation file types available with HTML5 natively in most browsers, eliminating the need for the plug-ins (such as Adobe Flash) previously required to render graphics, audio, video, and animated or interactive content. This enhancement reduces browser dependence, improving the consistency of multimedia output among supported browsers.

The following are newly supported file formats.

- `idx` and `idxz` graphics files
- `adts`, `aac`, `oga` and `ogg` audio files
- `ogv` and `webm` video files
- HTML5 `canvas` and `webGL` interactive graphics and animation files

For more information about LiveContent S1000D 5.7 support for graphics and multimedia, see the *SDL Contenta S1000D and SDL LiveContent S1000D Cross-product graphics and multimedia support* section of this documentation.

### Third-party component security enhancements

In this release, a number of third-party components (packages and libraries) were removed or updated to eliminate known security risks associated with them.

### Attachments to data modules enhancement

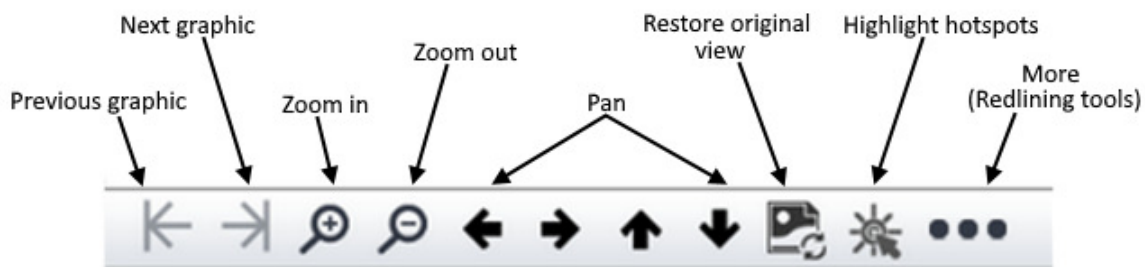
You can now attach files of any type to individual data modules in LiveContent S1000D. To enable this enhancement, an **Attachments** button has been added to the Navigation panel. Clicking this button opens a new **Attachments** window, which allows you to add, edit, delete, and view or download attachments.

For more information about this functionality, see the topic, *Working with attachments to a publication*, in the *Using LiveContent S1000D* section of the LiveContent S1000D documentation.

### SVG graphics support enhancements

As of this release, LiveContent S1000D supports compressed Scalable Vector Graphics (SVGZ) graphics.

In addition, controls were added to the graphics bar allowing you to perform the following actions when viewing an SVG illustration.



This enhancement makes it easier to work with large and detailed images by allowing you to do the following.

- zoom in
- zoom out
- pan left and right
- pan up and down
- restore the original view

## Navigation enhancements

Previously, after opening a Procedure or Process DM, the **Next** and **Previous** buttons would navigate only through the steps in the procedure or process. If preliminary or post-completion conditions existed in the module, you could not use these buttons to navigate through them. In this release, anchors have been added to allow you to use the **Next** and **Previous** buttons to step through the following in addition to the procedure or process steps.

- Preliminary Required Conditions
- Safety Conditions
- Warnings and Cautions
- Closing Conditions

In addition, you can now enable or disable the `Caution` message displayed when a user clicks **Previous Step** in a process DM.

These features are delivered turned on and can be customized by editing the following configuration properties in the `components.xml` file.

- `<prop id="require_pdm_undo_confirm">0</prop>`: Set this value to 1 to require an Undo confirmation message in a process DM when a user performs an "undo" operation, such as clicking the **Previous Step** button.
- `<prop id="require_pdm_proc_stepping">0</prop>`: Set this value to 1 to require a user to move through each step in a procedure within a PDM before moving to the next PDM node by disabling the **Next Step** button while the user is in the procedure.
- `<prop id="show_procanchor_points">0</prop>`: Set this value to 1 to display and stop at **procanchor** points in a procedure, such as Preliminary Requirements, Safety Requirements, and the like.
- `<prop id="show_stepancher_points">0</prop>`: Set this value to 1 to display and stop at **stepancher** points in a procedure, such as Warnings and Cautions.

For more information about this enhancement, see the *Customizing the LiveContent S1000D user interface* section under *Configuring LiveContent S1000D* in the LiveContent S1000D documentation.

## Extended support for DMLs

This release of LiveContent S1000D includes improved support for Data Module Lists (DMLs) for S1000D Issues 4.0 and later. The sample data delivered for S1000D Issues 4.0, 4.1, and 4.2 includes updated DML files.

## LiveContent S1000D API enhancements

This release includes the following API enhancements.

- **Specifying character encoding for API results**  
You can now configure LiveContent S1000D to return the results of API calls in either UTF-8 or ISO-8859-1 character encoding. Previously, the character encoding of content

generated by various API calls was not consistent. This enhancement improves LiveContent S1000D support for foreign languages and character entities by eliminating problems that could occur when content stored as UTF-8 was returned in a different character set.

To enable this enhancement, add the new `encode_type` configuration item to the `<ietm>` section of the `wietmsd_prg.xml` configuration file. This configitem takes as its value either `ISO-8859-1` or `UTF-8`. If this configuration item is not added, the default character set (ISO-8859-1) is used.

For more information about this enhancement, see the *Specifying character encoding* topic under *Configuring LiveContent S1000D* in the LiveContent S1000D documentation.

- **Executing XSL transformation on the server**

A new `XSL Transform` call was added to the LiveContent S1000D API. This new API call executes XSL transformation of XML content on the server, which receives a POST transaction from a client, which is returned using a specified style file. This enhancement improves browser compatibility by eliminating the transformation on the client browser. For more information about this enhancement, see the new *XSL Transform* topic in the *Extending LiveContent S1000D* section of this documentation.

- **LiveContent S1000D API documentation enhancements**

The *Extending LiveContent S1000D* section of the LiveContent S1000D documentation has been updated and reorganized to improve access to current and accurate information for developers using the API.

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

### Newly supported items in SDL LiveContent S1000D 5.7

A list of new software components that are supported in the SDL LiveContent S1000D 5.7 release.

#### Operating Systems

- Microsoft Windows Server 2016 (64-bit)
- Red Hat Enterprise Linux 7.4 (64-bit)

#### Web Browsers

- Microsoft Edge for Windows 10

## Items no longer supported in SDL LiveContent S1000D 5.7

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.7 release.

### Operating Systems

- Microsoft Windows 8.1
- Red Hat Enterprise Linux 6.8
- Apple iOS 10

### Web Browsers

- Mozilla Firefox ESR 52.4.1

## What's new and changed in SDL LiveContent S1000D 5.6

This section describes new features, feature enhancements, and other changes in the 5.6 release of LiveContent S1000D .

## New features and enhancements in LiveContent S1000D 5.6

This section lists features and enhancements introduced in LiveContent S1000D 5.6.

### Redesigned desktop user interface

The LiveContent S1000D desktop user interface has been completely redesigned to incorporate enhancements previously made to the tablet UI, thus synchronizing the tablet and desktop interfaces.

### Desktop and tablet UI Enhancements

Enhancements to the desktop and tablet user interfaces include:

- Generic Forms  
Access to Generic Forms has been made simpler and easier.
- Preliminary Requirements  
The Preliminary Requirements panel is now accessed using a button on the top navigation panel, allowing you to access Preliminary Requirement more easily and quickly.
- Screen Splitter

The bars separating the panels of the LiveContent S1000D user interface have been improved to make repositioning them by clicking and dragging easier and more responsive. In addition, the bars are now more easily customized, allowing you enhanced control of their default placement, width, and color.

## HTTP compression

You can now configure the LiveContent S1000D server to automatically compress large files before transmitting them to the browser. This enhancement improves LiveContent S1000D performance when loading large files such as Scalable Vector Graphics (SVGs), which typically can be compressed to reduce file size by up to 80%. Some other types of content that can be compressed include the following.

- Javascript
- JSON
- HTML
- XML
- CSS
- PDF
- plain text

Server-side HTTP compression is applied only to content read directly from the server file system. Content generated dynamically (via API calls that include database content requests), transformed content, or similarly server-processed content is not compressed.

To enable file compression for a collection, the following new configuration items must be set in the `<ietm/>` section of its associated `wietmsd_prg.xml` configuration file.

| Configuration item                           | Description   |
|--|---|
| <code>send_compressed_content</code>         | By default, files are transmitted uncompressed; set this configuration item to <code>1</code> to enable compression.                    |
| <code>need_compress_content_file_type</code> | Specify a comma-delimited list of the file extensions of types of content to be compressed.   |
| <code>min_file_size_kb</code>                | Specify, in kilobytes, the minimum file size to be compressed. Files smaller than the size specified here are transmitted uncompressed. |

For more information about configuring this functionality, see the topic, *Compressing large files* in the *Implementing LiveContent S1000D* section of the LiveContent S1000D documentation.

## Improved and simplified UI customization and configuration

LiveContent S1000D has been redesigned to rely on a combination of HTML, XML, CSS, and Javascript configuration files, providing a streamlined method to control the display of the user interface. Control objects within the LiveContent S1000D UI (such as icons and buttons) are generated dynamically at runtime, getting their display attributes from resource files you can edit to customize their appearance and behavior.

Control objects can be defined with various states, such as whether a control is enabled, disabled, or highlighted. The state of a control is based on a set of predefined conditions. When a condition changes, the state of a UI control can change based on the new condition. For example, when moving from a procedure data module with graphics and preliminary requirements to a process data module, the states of the **Next Step** and **Previous Step** buttons can be changed from enabled to disabled.

For more information about configuring this functionality, see the topic, *Customizing the LiveContent S1000D user interface* in the *Implementing LiveContent S1000D* section of the LiveContent S1000D documentation.

## Support for SDI image conversion tool for transforming CGM graphics to SVG

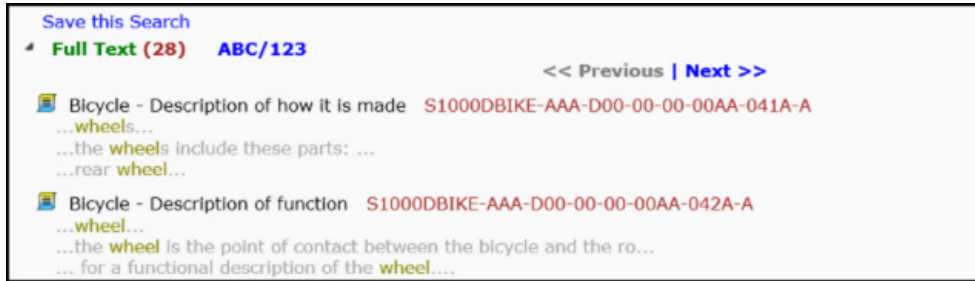
LiveContent S1000D version 5.6 supports an SDI image conversion tool, providing an additional option for converting CGM graphics in your publications into Scalable Vector Graphics (SVG) format. Converting from CGM to SVG results in images better compatible with all browsers supported by LiveContent S1000D across all supported platforms. As with earlier releases, LiveContent S1000D continues to support the Larson Software Technology Convert CGM to Vector image conversion tool.

## CGM graphics replaced by SVG in sample data sets

Previously, the sample data delivered with LiveContent S1000D included CGM graphics. In this release, most of those graphics have been converted to Scalable Vector Graphics (SVG), a file type supported by all browsers and platforms supported by LiveContent S1000D. This enhancement allows you to view the sample graphics on any supported browser running on any supported platform.

## Search results display enhancements

The new **Title/DMCode (ABC/123)** link allows you to toggle between the title view and document code view in LiveContent S1000D full text and categorical search results:



In addition, a unique icon for each document type in the publication is now displayed in full text search results. The administrator can customize these icons. These enhancements better align the appearance and behavior of search with that of the table of contents.

## Documentation enhancement

As of this release, LiveContent S1000D documentation is available on the SDL Documentation Center at "<https://docs.rws.com/LCS512>" on page 53. This enhancement gives you access to the latest, most up-to-date information about installing, upgrading, managing, using, and extending LiveContent S1000D. The Documentation Center includes a downloadable .zip file ("LiveContent S1000D full documentation download as HTML" on page 0) containing the full product documentation in HTML format, which you can provide to users without internet access.

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

## Newly supported items in SDL LiveContent S1000D 5.6

A list of new software components that are supported in the SDL LiveContent S1000D 5.6 release.

### Operating Systems

- Apple iOS 11 (browser support only)
- Apple iOS 10 (browser support only)

### Web Browsers

- Apple Safari for iOS 11 (for iPad)
- Apple Safari for iOS 10 (for iPad)
- Firefox ESR 52.4.1 (32-bit or 64-bit )



## Miscellaneous

- Oracle JRE 1.8.0\_151 (64-bit)
- Oracle JRE 1.7.0\_80 (64-bit)

## Items no longer supported in SDL LiveContent S1000D 5.6

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.6 release.

## Operating Systems

- Apple iOS 9
- Apple iOS 8
- Microsoft Windows 7

# What's new and changed in SDL LiveContent S1000D 5.5

This section describes new features, feature enhancements, and other changes in the 5.5 release of LiveContent S1000D .

## New features and enhancements in LiveContent S1000D 5.5

This section lists features and enhancements introduced in LiveContent S1000D 5.5.

### Sharing illustrations, multimedia, and other media types

LiveContent S1000D had stored illustrations, multimedia, and media types in a single **figures** folder, which is located within the IETP's publication hierarchy. To reuse the same illustrations across multiple IETPs, these illustrations had to be duplicated in every IETP that uses them. This is no longer the case. You can now share assets contained in multiple folders across multiple publications, so that all publications (inside the collection) may reuse assets stored in multiple folders.

---

**Note:** This feature is not available when publishing from Contenta S1000D.

---

See the configuration topic *Sharing illustrations, multimedia, and other media types* for more information.

## Encrypting illustrations or other media types

You can secure assets (illustrations or other media types) across all publications in your IETP by specifying LiveContent configuration options. The LiveContent publishing process will then encrypt the illustrations using the 128-bit Advanced Encryption Standard (AES) algorithm.

---

**Note:** This feature is not available when publishing from Contenta S1000D.

---

See the configuration topic *Encrypting illustrations or other media types* for more information.

## How LiveContent launches CD images

LiveContent S1000D has changed the default behavior for how it launches CD images. The new behavior is to immediately launch the IETP content from within the CD image. You can configure LiveContent to revert back to the old behavior, which is to prompt you to either install the CD image, or run the IETP within the CD image. See *Launching CD images* for information on modifying the autoplay CD behavior.

## Suppressing highlighting in search results

Search result matches appear highlighted in the **main content** window. If you find this distracting, you can click an icon in the toolbar to suppress highlighting from the search results. This icon acts as a toggle to show/hide highlighting.

---

**Restriction:** Search Highlighting applies to simple search (**Find**) and full text search only; categorical search and large table search are not supported.

---

See *Removing search highlighting*.

## Customizing the TOC

You can configure LiveContent S1000D to display one of the following in the IETP's TOC Title:

- **infoname** only
- **techname** only
- both **techname** and **infoname**

---

**Note:** This feature is not available when publishing from Contenta S1000D.

---

See *Customizing the TOC* for more information.

## Support for Tablet Display

LiveContent S1000D now detects the device on which an IETP is viewed and applies an alternate skin to content displayed on a tablet or touch screen monitor. SDL delivers a skin named **carbonM** to the skins folder, with screen elements and UI controls optimized for tablet display. To support this functionality, a new configuration option, `app.skin_name_alt`, has been added to the `wietmsd.xml` configuration file. By default, this option is set to **carbonM**. You can customize the skin used for tablet display by copying and editing this skin or creating one of your own, and setting the value of `app.skin_name_alt` to the name of the desired skin.

See *Customizable presentation layers* for more information.

## Process DM enhancement

Process data modules functionality has been enhanced to include support for multiple `<preset>` declarations within a dm node. Previously, processing would stop when a node containing more than one `<preset>` declaration was encountered.

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

### Newly supported items in SDL LiveContent S1000D 5.5

A list of new software components that are supported in the SDL LiveContent S1000D 5.5 release.

#### Operating Systems

- Red Hat Enterprise Linux 6.8 (64-bit)
- iOS 9 (browser support only)

#### Web Browsers

Mozilla Firefox 46 (32-bit for Windows, 64-bit for Linux)

#### Miscellaneous

- Oracle JRE 1.8.0\_92 (64-bit)
- Oracle JRE 1.7.0\_80 (64-bit)

## Items no longer supported in SDL LiveContent S1000D 5.5

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.5 release.

### Operating Systems

- Microsoft Windows 2008 R2 (64 bit) Server
- Microsoft Windows 8 (version 8.1 is still supported)
- Apple iOS 7
- Red Hat Linux 5

### Web Browsers

- Internet Explorer 10
- Internet Explorer 9

## What's new and changed in SDL LiveContent S1000D 5.4

This section describes new features, feature enhancements, and other changes in the 5.4 release of LiveContent S1000D .

### New features and enhancements in LiveContent S1000D 5.4

This section lists features and enhancements introduced in LiveContent S1000D 5.4.

---

**Important:** Effective with SDL LiveContent S1000D 5.3, the application is 64-bit. If you are currently running SDL LiveContent S1000D Version 5.3, you can upgrade to SDL LiveContent S1000D Version 5.4. If you are currently running with an SDL LiveContent S1000D version prior to 5.3, a full install of SDL LiveContent S1000D Version 5.4 is required. Therefore, you must uninstall the previous versions, install Version 5.4, and then republish your IETPs in the 64-bit environment. Please see *What's new and changed in SDL LiveContent S1000D 5.3* for more information on 64-bit support and pre-requisites.

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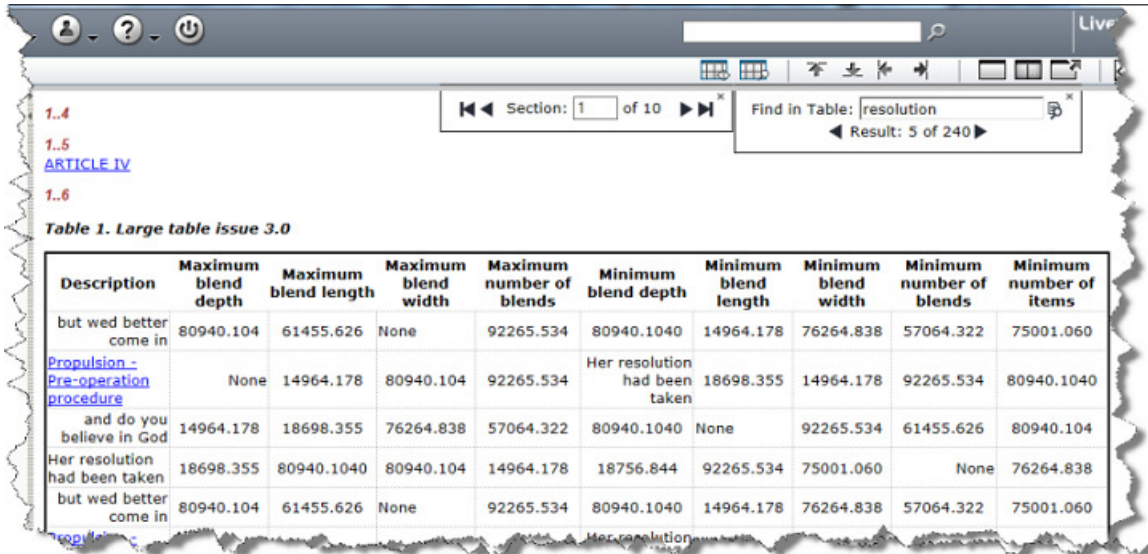
---

**Note:** The `autoplay_cdonly.exe` launcher is available upon request for Version 5.4. Please open a ticket with Customer Support and one will be provided to you via FTP. This launcher provides the ability to skip the choice of "run from CD" or "install local". The "run from CD" option is assumed. This launcher will become the default deliverable in Version 5.5.

---

## Displaying Large Sets of Table Data

To improve IETP user interface responsiveness, support has been added for very large tables that includes breaking table row data that exceeds a configurable limit into subsets, which you can page through. The size of the subset is also configurable.

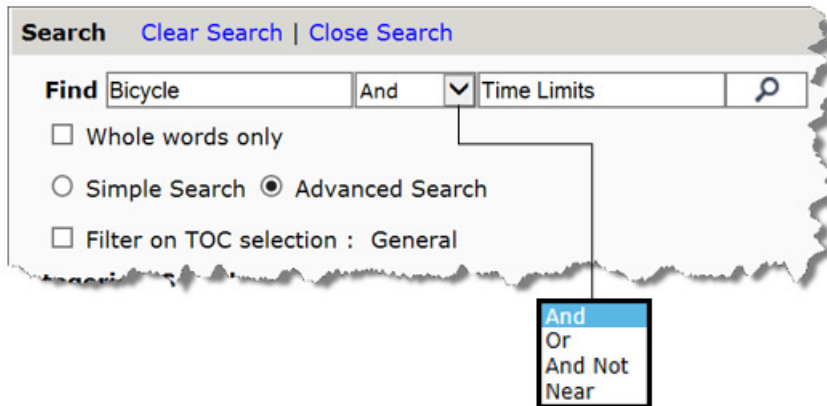


You can search across multiple subsets of very large tables. When navigating between hits for a search term, matching table subsets will automatically be loaded into view, and search terms will be highlighted.

## Redesigned Search

SDL LiveContent S1000D has a redesigned search interface, and includes the following enhancements:

- The *Clear Search* command has been relocated from the upper-right to the upper-left of the search interface.
- The *Close Search* command, located in the upper-left of the search interface, lets you dismiss the search results panel, returning you to the module you were last viewing.
- The *Categorical Search* command now includes Starts With, Contains, and Ends With radio buttons, which you can use to further refine your search expression.
- *Advanced search* now includes two fields that separate conditional operators, which makes it easier for you to specify complex expressions in your query by choosing conditional operators from a drop-down list.



See *Searching a Publication* for more information on using Search.

## SVG Support in HTML5

As an alternative to proprietary CGM images, we have extended support for Scalable Vector Graphics (SVG), including hotspots. SVG is an OpenSource standard and is natively supported in all major HTML5 browsers.

See *Scalable images with hotspot links* in the SDL LiveContent S1000D configuration topics for more information on scalable images with hotspot links.

## Process Data Module Support

Process data module support has been extended to provide better handling of missing or incorrect Global Variables, *variablePreset*, and *noValueelements*.

## Multi-spec Support

These specifications are in use today in specific customer implementations; however, SDL does not currently provide styles or any further out-of-the-box capabilities other than the included low-level parser support.

- ATA 2200
- MIL-38784
- MIL-40015B
- NAV-81927
- STD-28784C

## Improved Language Support

Localization support has been enhanced with additional user interface elements and error messages supported in language resource files, including French localization.

## Accessing Product Documentation

The SDL LiveContent S1000D product documentation is available in PDF format from the product installation at the following location:

`Install_Dir\LiveContent\documentation`

The SDL LiveContent S1000D documentation—including an Acrobat Catalog search index—is also available as a .zip download from the following FTP Site:

`ftp://SDLdoc2:ReadTheDoc@ftp.sct.sdl.com/download`

Once you download the .zip file and decompress it, double-click *search\_lcs* in Acrobat Reader, then search away.

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**Tip:** In Acrobat Reader, press **Alt+** to retrace your path.

---

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

### Newly supported items in SDL LiveContent S1000D 5.4

A list of new software components that are supported in the SDL LiveContent S1000D 5.4 release.

#### Web Browsers

64-bit Mozilla Firefox, Version 40

### Items no longer supported in SDL LiveContent S1000D 5.4

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.4 release.

## Web Browsers

64-bit Mozilla Firefox, all versions below 40.

# What's new and changed in SDL LiveContent S1000D 5.3

This section describes new features, feature enhancements and other changes in the 5.3 release of LiveContent S1000D.

## New features and enhancements in LiveContent S1000D 5.3

This section lists features and enhancements introduced in LiveContent S1000D 5.3.

### Improved Performance

LiveContent S1000D is now a 64-bit application. This allowed us to increase the performance of the publishing and viewing process leveraging the 64-bit operating systems, and browsers that are in use by most of our customers. This will require that the 64-bit version of the Java Runtime Environment be installed on any server that performs Publishing or Delivery, and on any system where Version 5.3 IETPs are launched.

As the initial 64-bit implementation of LiveContent S1000D , there is no direct upgrade path. A full install is required; therefore, you must uninstall the previous versions, install the new version, and republish your IETPs in the 64-bit environment.

---

**Note:** The Contenta S1000D Version 5.3 release remains a 32-bit application; therefore, it still requires the 32-bit version of the Java Runtime Environment.

---

Publish performance enhancements use multithreading and parallel processing to significantly reduce the time required to publish an IETP.

### Redesigned Search

LiveContent S1000D has a redesigned search interface, and includes the following enhancements:

- Type-ahead categorical search—A Google-like, type-ahead search used for categorical searches. As you enter characters, the match list dynamically updates based on your input. This replaces the Wordwheel.
- Filter by Branch—You can limit the span of the search to only the branch node you select in the TOC. The search will then be focused only on the branch you select, and all



its children. If nothing is selected in the TOC, the search will include the entire publication.

- **Filter by Applicability**—You can search based on conditions that you set in the IETP. Only viewable content will be affected by a search operation.
- **Logical And operator**—In Catagorical Search, you can use a logical `And` operator to search for categorical items such as part number 'XYZ-999' when the cage code is 'ABCDF.' For example: `XYZ-999 And ABCDF`.
- **Filter by DMC**—in Catagorical Search, `Data Module Code` is a new categorical search option, which matches hits on the `dmCode` element.
- **New Advanced Search options**—Added the `And Not` and `Near` logical operators. The `Near` operator will match up to 12 words surrounding the search entry. You can use the `And Not` logical operator for specifying exclusions in your search. For example, `gauge And Not pressure` returns all matches that include "gauge" but are not "pressure gauge."

See *Searching a Publication* for more information on using Search, and *Configuring search categories for a publication* for more information on configuring the `Data Module Code` categorical search type.

**Improved IETP Support** Improved support for IETPs include the following enhancements:

- **Improved HTML Support**—support for the HTML 5 standard. You do not have to run Internet Explorer in compatibility mode.
- **Improved Stylesheet Support**—XSL 2.0 for styling IETPs. It is backward compatible with previous XSL standards.
- **Mobile OS support** includes Windows Surface Tablet 8.1 (with full functionality, both online and offline) and iOS 8.

## PDF Foldouts

A single PDF can now accommodate different page sizes and page orientations (portrait, landscape). This lets you combine disparate content, such as Figures, when printing from an IETP. Tables are not supported in PDF foldouts.

## Security Update

User accounts and profiles are saved to an XML database rather than to a file system.

## Reorganized Product Documentation

The LiveContent S1000D product documentation has been reorganized as follows:

| Pre-5.3 Publication Name   | 5.3 Publication Name   |
|--|--|
| <i>SDL LiveContent S1000D Release Notes 5.2, 5.1</i>                               | <i>Merged into a cumulative SDL LiveContent S1000D Release Notes 5.3, 5.2, 5.1</i>   |
| <i>SDL LiveContent S1000D API Guide</i>  | <i>Renamed as SDL LiveContent S1000D API Reference Manual</i>  |
| <i>SDL LiveContent S1000D Configuration Guide Unix</i>                             | <i>Merged into the SDL LiveContent S1000D Implementation Manual</i>  |
| <i>SDL LiveContent S1000D Configuration Guide Windows</i>                          |  |
| <i>SDL LiveContent S1000D Delivery Server Installation and Configuration Guide</i> | <i>Merged into the SDL LiveContent S1000D Delivery Server Installation and Upgrade Manual</i>  |
| <i>SDL LiveContent S1000D Product Verification Windows</i>                         | <i>Merged into the SDL LiveContent S1000D Delivery Server Installation and Upgrade Manual and the SDL LiveContent S1000D Publishing Server Installation and Upgrade Manual</i>   |
| <i>SDL LiveContent S1000D Product Verification Unix</i>                            |  |
| <i>SDL LiveContent S1000D Product Verification Windows</i>                         | <i>Merged into SDL LiveContent S1000D Delivery Server Installation and Upgrade Manual and the SDL LiveContent S1000D Publishing Server Installation and Upgrade Manual</i>   |
| <i>SDL LiveContent S1000D Product Verification Unix</i>                            |  |
| <i>SDL LiveContent S1000D Publishing Server Windows</i>                            | <i>Merged into the SDL LiveContent S1000D Publishing Server Installation and Upgrade Manual</i>  |
| <i>SDL LiveContent S1000D Publishing Server Unix</i>                               |  |
|  | Publications carried forward with no name changes, but revised content: <ul style="list-style-type: none"> <li>• <i>SDL LiveContent S1000D User Guide</i></li> <li>• <i>SDL Contenta Cross-Product Graphics and Multimedia Support</i></li> <li>• <i>Style Position Paper</i></li> <li>• <i>Trademark Notice</i> (referenced from all publications)</li> </ul> |

## Accessing Product Documentation

The LiveContent S1000D product documentation is available in PDF format from the product installation at the following location:

`Install_Dir\LiveContent\documentation`

The LiveContent S1000D documentation—including an Acrobat Catalog search index—is also available as a .zip download from the following FTP Site:

`ftp://SDLdoc2:ReadTheDoc@ftp.sct.sdl.com/download`

Once you download the `.zip` file, and decompress it, double-click `search_1cs` in Acrobat Reader, then search away.

**Tip:** In Acrobat Reader, press `Alt+` to retrace your search path.

## Platform changes

This release of SDL LiveContent S1000D includes several changes to platform support.

### Newly supported items in SDL LiveContent S1000D 5.3

A list of new software components that are supported in the SDL LiveContent S1000D 5.3 release.

#### Operating Systems

- Microsoft Windows Surface Tablet, Version 8.1 (with full functionality, both online and offline)
- Apple iOS, Version 8

#### Web Browsers

64-bit Mozilla Firefox, Version 37

#### Miscellaneous

- 64-bit Oracle Java Runtime Environment, Version 8
- Saxon XML parser (to support XSL 2.0)

### Items no longer supported in SDL LiveContent S1000D 5.3

A list of software components that are no longer supported in the SDL LiveContent S1000D as of the 5.3 release.

#### Operating Systems

- 32-bit Microsoft Windows Server, Version 2008 R2
- 32-bit Microsoft Windows, Versions 7, 8, and 8.1
- 32-bit Red Hat Enterprise Linux, Versions 5 and 6

## Web Browsers

- 32-bit Microsoft Internet Explorer, all versions
- 32-bit Mozilla Firefox, Version 37, all versions

## Miscellaneous

- 32-bit Oracle Java Runtime Environment, all versions
- Xalan XML parser
- HTML Framesets
- Audit Trail schema

# What's new and changed in SDL LiveContent S1000D 5.2

This section describes new features, feature enhancements, and other changes in the 5.2 release of LiveContent S1000D .

## New features and enhancements in LiveContent S1000D 5.2

This section lists features and enhancements that were introduced in LiveContent S1000D 5.2.

### Native HTTPS Support

Native HTTPS support is available with this version release. The underlying HTTP server has been replaced with Jetty. Jetty is a standards-based, open source web server that supports both HTTP and HTTPS. The Jetty web server and other core Jetty components are hosted and stewarded by the Eclipse Foundation.

There are no administration or user changes required for customers who plan to continue using HTTP.

Customers who want to implement HTTPS will need to

- obtain and install an SSL certificate for the Jetty web server, and
- configure LiveContent S1000D to use an SSL connection with the Jetty server. Refer to one of the following guides as appropriate for detailed instructions on the required setup:
  - *Configuration Guide for Windows*: The "Configuring HTTPS" section near the end of Chapter 1, Overview.
  - *Configuration Guide for UNIX*: The "Configuring HTTPS" section near the end of Chapter 1, Overview.

- *Delivery Server Installation and Configuration Guide: Chapter 2, Configuring HTTPS.*

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**Note:** When running LiveContent S1000D with HTTPS and a fully qualified hostname, Internet Explorer's Protected Mode must be disabled in order to view graphics in Arbortext IsoView. To disable Protected Mode, modify the following Internet Explorer browser settings under **Internet options**:

- Click the **Security** tab, uncheck **Enable Protected Mode**, and click **OK**. (Internet Explorer must be restarted before this change will take effect.)
  - Click the **Advanced** tab and scroll down to the **Security** section. If the **Enable Enhanced Protected Mode\*** setting exists, uncheck it and click **OK**. (Internet Explorer must be restarted before this change will take effect.)
- 

## Platform changes

This release of LiveContent S1000D includes several changes to platform support.

### Newly supported items in LiveContent S1000D 5.2

The following software components are newly supported in the LiveContent S1000D 5.2 release.

- Java 1.7.0\_51
- Microsoft Windows 2012 R2
- Microsoft Internet Explorer 11

### Items no longer supported in LiveContent S1000D 5.2

The following software component is no longer supported in the LiveContent S1000D 5.2 release.

- Microsoft Internet Explorer 8

## 1 New features and enhancements

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**2**

## **Known Issues in LiveContent S1000D**

A list of known issues in LiveContent S1000D.

| Issue No. | Description  |
|-----------|--|
| CRQ-24379 | Footnotes in tables are not handled correctly for viewer and print.  |
| LCS-11399 | On Microsoft Windows 11, Uninstall does not delete some files.<br><b>Workaround:</b> manually delete files left behind.  |
| LCS-10146 | Large table functionality may fail.<br>On a desktop, the table may be displayed, but the user unable to navigate. In the LiveContent Mobile app, the table may not be displayed.   |
| LCS-9649  | In the HTML5 CGM viewer, redlining cannot be deleted. Redlines reappear when the CGM is reopened.  |
| LCS-8541  | When installing LiveContent S1000D on Linux, the console may display an error message: <ul style="list-style-type: none"> <li>./install.bin: line 3578: //Fix: No such file or directory</li> <li>./install.bin: line 3579: //: Is a directory</li> </ul> You can safely ignore these messages and proceed with the installation.    |
| LCS-6591  | LCS installed from CD image stops running on attempt to install Incremental Updates.<br>To work around this issue, file and folder paths in <code>properties.xml</code> should be updated with correct paths.  |
| LCS-3395  | 'Or' in Categorical Search doesn't work correctly for multiple words from different categories<br>In Categorical Search, using the <i>Or</i> operator with words from different categories causes some search results to be displayed under the incorrect category.  |
| LCS-3388  | Revision Highlights report lists elements with ADD and MODIFY changes in different ways for Issue 3.0<br>In the Revision Highlights report for S1000D Issue 3.0, elements with a <code>change=add</code> attribute and those with a <code>change=modify</code> are incorrectly displayed differently from one another.               |
| LCS-3057  | Dialog buttons labels do not match labels defined in spec for issue 4.1<br>The labels for some dialog box buttons are not consistent with the labels defined in S1000D Issue 4.1.  |
| LCS-3056  | Support Equipment Applicability Filtering does not consistently filter out support equipment<br>Support Equipment Applicability functionality sometimes fail to correctly filter out support equipment.  |
| LCS-2843  | IPD Column heads and links are not consistent across S1000D Issue Illustrated Parts Catalog elements are not displayed consistently in some cases.   |
| LCS-2798  | Procedural Step Number does not align with text when Procedural step has more than one para with applicability<br>If a procedural step has more than one paragraph with applicability, the filtered view with the text of only one of the paragraphs displayed incorrectly shows the text one line below the Procedural Step number. |



| Issue No. | Description   |
|-----------|---|
| LCS-1372  | Dialog boxes do not display when a variable is tested for <noValue>.  |
| LCS-1279  | Certain entities in a DM cause errors during publishing.  |
| LCS-752   | The back button loads the previous DM; however, it loads the first graphic, not the graphic that was displayed when leaving the DM.   |
| LCS-671   | <p>Adding applicability to paras contained in procedural steps introduces an "extra" carriage return in the step.<br/> Note that the first step does not have applicability on the Para. In the case of the second step, there are several possible paras, each of which has its own applicability. When the para is selected, it has an "extra" carriage return that causes it to be displayed 1 line below the number of the step.</p> <p>This appears to be a style sheet issue.</p> |
| LCS-670   | <p>When using the step mode in the viewer to navigate into a step with multiple figure references, the graphic window is updated to the last figure referenced in the step.<br/> This issue has been noted in versions 4 and Version 5 of Live Content.<br/> When using the step mode in the viewer to navigate into a step with multiple figure references, the graphic window is updated to the last figure referenced in the step, rather than the logical first figure.</p>         |





## **Fixed issues**

This section lists issue fixes that are included in each release of LiveContent S1000D.

## Issues fixed and closed in LiveContent S1000D 5.12

Issues fixed and closed in LiveContent S1000D 5.12.

| Issue ID  | Description  |
|-----------|--|
| CRQ-29368 | IETMs cannot always display a PDF in the figures window                                |
| CRQ-29228 | Repeated Section Numbers and Titles sometimes occurs in TOC                            |
| CRQ-29092 | Large table paging does not work when there are table footnotes for desktop and Mobile |
| CRQ-28938 | table.xsl rendering enhancment   |
| CRQ-28732 | Company Code is not displayed for a user   |
| CRQ-28695 | LiveContent not passing through attributes for toc                                     |
| CRQ-28337 | LiveContentPublish perl Linux script is missing perl line                              |
| CRQ-28071 | Applied Applicability incorrectly filters out data module                              |
| CRQ-27365 | LiveContent S1000D 5.10 CGM viewer hotspots are not working                            |
| CRQ-24379 | Footnotes not handled correctly in tables for viewer and print                         |
| CRQ-6717  | LCS helper attributes DISPLAY and EXT for symbols not set properly during publish      |

## Issues fixed and closed in LiveContent S1000D 5.11

Issues fixed and closed in LiveContent S1000D 5.11.

| Issue ID  | Description  |
|-----------|--|
| SRQ-18776 | Update to Log4j version 2.17 to eliminate security vulnerability reported against version 2.11         |
| CRQ-24278 | Predefined Categorical Search "fignumSearch" is not working. partNoSearch for SMR codes is not working |

## Issues fixed and closed in LiveContent S1000D 5.10

This section contains issues fixed and closed in LiveContent S1000D version 5.10.

| Issue     | Description  |
|-----------|--|
| CRQ-23498 | Dropping "space" character after <inlineSignificantData> element                                       |
| CRQ-22470 | When attempting to create a user with the same value as the CN in the certificate, the name is cut off |

## Issues fixed and closed in SDL LiveContent S1000D 5.9

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.9.

| Issue No. | Description   |
|-----------|---|
| CRQ-21026 | Search fails if user can't write to the file system                           |
| CRQ-20801 | Java update breaks LCS  |
| CRQ-19444 | IETM will not launch when folder name contains Korean characters              |
| CRQ-18935 | Graphics are cut-off when you print the DM                                    |
| CRQ-18651 | LCS Server intermittently hangs when Firefox is the default browser for IETMs |
| CRQ-17675 | Issues Loading/Referencing Data Modules from "rightPanel"                     |

## Issues fixed and closed in SDL LiveContent S1000D 5.8

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.8.

| Issue No. | Description  |
|-----------|--|
| CRQ-16990 | Multimedia support issues  |
| CRQ-16510 | Search fails to return his when string contains "/"  |
| CRQ-13593 | User Management information missing when Korean Characters used  |
| CRQ-13242 | Documentation clarification needed for manually setting applicability in the LiveContent configuration documentation |
| CRQ-12633 | Document updates for changing panel orientation to vertical for the graphics and content panels                      |
| CRQ-11594 | Splitter and graphics panel do not display when orientation is changed to Vertical in panels.xml                     |
| LCS-2964  | Target field is set to "undefined" after editing and saving Bookmark/Note  |
| LCS-1876  | Setting applicability with large tables can cause empty table sections   |
| LCS-1496  | PDM Stepping Back within a dmLoop  |
| LCS-1495  | PDM Variable Declaration Dialog  |

## Issues fixed and closed in SDL LiveContent S1000D 5.7

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.7.

| Issue No. | Description   |
|-----------|---|
| CRQ-8738  | LCS large table processing fails with UTF-8 characters  |
| CRQ-9285  | DOC: LCS 5.6 Linux installer prompts for Perl location  |
| CRQ-9407  | LCS Print to PDF causes incorrect figure sheet numbers to display in figure title                                     |
| CRQ-9571  | dmSeqAlts gets into endless loop  |
| CRQ-9731  | LCS sheet counter in TOC is not correct when applicability is set   |
| CRQ-9896  | 32-bit TIF Graphic Fails to appear in PDF   |
| CRQ-9974  | Categorical Search in LiveContent S1000D Table Title Search is not supported by default as doc specifies              |
| CRQ-10386 | When using the type ahead/autocomplete feature while doing a categorical search, the list is sometimes not populated. |
| CRQ-11835 | Nested dmSeqAlts cause IETM to hang   |

## Issues fixed and closed in SDL LiveContent S1000D 5.6

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.6.

| Issue No. | Description  |
|-----------|--|
| LCS-3351  | If procedural step with para element contains reasonForUpdate, the step will be duplicated when Highlight Changes option |
| LCS-3350  | Applicability dialog doesn't display long list of items  |
| LCS-3349  | Maintenance Planning DMs in issues 4.0 and 4.1 are not displayed; Print is not styled properly                           |
| LCS-3329  | Preliminary Requirements do not work with reasonForUpdate switched off   |
| LCS-3325  | Generic form is not correctly displayed  |
| LCS-3316  | Legend fails to display in tear off window in IE 11  |
| LCS-3315  | If <graphic> contains reasonForUpdate, the graphic panel and the graphic will be not displayed                           |
| LCS-3291  | Clear button on Customer Satisfaction Form doesn't clear all the fields  |
| LCS-3245  | Previous/Next Fig buttons are always active in Tear Off window   |
| LCS-3081  | If procedural step with two para elements contains reasonForUpdate, the updated part will be incorrectly displayed       |
| LCS-2939  | Some Korean data is not displayed in LCS   |
| LCS-2773  | Highlight Changes doesn't work correctly   |
| LCS-2711  | Address issue related to incorrect target returned by HTTP request   |
| LCS-2647  | Format of 4.1 Support Equipment Table is missing a /   |
| LCS-2646  | Format of Preliminary Requirement Tables (Conditions, Spares, etc.) incorrect according to spec.                         |
| LCS-2639  | Table title categorical search does not work when applicability is set   |
| LCS-2611  | Categorical search on TOC Titles is not returning results  |
| LCS-2600  | 'Print all Figures' doesn't contain the Fig Number   |
| LCS-2525  | iPad - The space is displayed as '%20' if Save Search contains it in the title   |
| LCS-2522  | Tablet - Two vertical scroll bars appear on Search Results tab   |
| LCS-2519  | 'Received unknown command: none' appears during opening Process DM   |

| Issue No. | Description   |
|-----------|---|
| LCS-2516  | Sync TOC button should center selected DM in ToC window               |
| LCS-2459  | Address issue of dmseqAlt's in a process dm get into a loop           |
| LCS-2369  | Document_ID attribute not added to the document header during publish |
| LCS-2059  | Process DM's break with dmseq element                                 |
| LCS-1491  | Character entities displayed in viewer are not rendering in PDF       |

## Issues fixed and closed in SDL LiveContent S1000D 5.5

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.5.

| Issue No. | Description   |
|-----------|---|
| LCS-674   | Para element appears in wrong place.<br>For example, <code>&lt;para&gt;</code> elements that come after a <code>&lt;/table&gt;</code> element, but before <code>&lt;/proceduralStep&gt;</code> element, are displayed at the beginning of the procedure rather than at their proper location. Content should be displayed after the table.  |
| LCS-1573  | Cross site scripting (XSS) (Reflected) vulnerability was detected in 56 URLs.   |
| LCS-1575  | The Path Traversal attack technique allows an attacker access to files, directories, and commands that potentially reside outside the <code>web document root</code> directory. An attacker may manipulate a URL in such a way that the website will execute or reveal the contents of arbitrary files anywhere on the web server. Any device that exposes an HTTP-based interface is potentially vulnerable to Path Traversal. |
| LCS-1784  | Variable initialization fails to initialize to <code>&lt;noValue&gt;</code> and it fails to conditionally test for <code>&lt;noValue&gt;</code> for Issue 3.0 data.   |
| LCS-2022  | XML External Entity (XXE) attacks are a class of vulnerability where a user-provided document type definition (DTD) is parsed by the web application. A DTD is a set of markup that defines how the main XML body should be structured. This issue yields an external location on where to load the DTD file. This can be abused in many different ways.  |
| LCS-2023  | Cross-site scripting (XSS) allows an attacker to embed code (JavaScript, VBScript, ActiveX, HTML, or Flash) into a vulnerable application to trick a user into executing the script on his or her machine. The use of XSS might compromise private information, manipulate or steal cookies, create requests that can be mistaken for those of a valid user, or execute malicious code on the victim's system.                  |
| LCS-2115  | Process dm stops working when it hits a dm-node with two <code>&lt;preset&gt;</code> declarations   |



| Issue No. | Description  |
|-----------|--|
| LCS-2369  | <i>Document_ID</i> attribute not added to the document header during publish |

## Issues fixed and closed in SDL LiveContent S1000D 5.4

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.4.

| Issue No.             | Description  |
|-----------------------|--|
| LCS-1030              | Cannot uninstall LiveContent on a Windows 8 system.<br><br>Uninstalled LiveContent by running "Uninstall LCS" from the <i>Start</i> menu. As result values in the Windows Registry were removed, the <i>LiveContent_home</i> folder was also deleted but the <i>LCS_Data</i> folder was not.                                     |
| LCS-1145              | Assertions to Global Properties do not work.<br><br>Changing a value of a Global Property in the state table via the <i>assertion</i> element, whether in a dialog or in a <i>variablePreset</i> or <i>variablePostset</i> . Added support for <i>globalvariableref</i> to modify the value of a global variable set in the CCT. |
| LCS-1286              | Fatal publish error.<br><br>Customer reported four errors during publish. Two fatal errors show up in the console, but did not get recorded in the <i>info.log</i> during publish. Modified the code to add more debug/progress messages.  |
| LCS-1334 and LCS-1541 | Java launch bitness code testing.<br><br>Updated the search algorithm.   |
| LCS-1371              | LiveContent S1000D mistakenly runs from the CD. Fixed autoplay to exit without launching LiveContent if the Java version check fails.  |
| LCS-1408              | Process DM issues involving <i>variablePreset</i> initialization and <i>noValue</i> initialization.<br><br>Fixed <i>variablePresets</i> directly under a <code>&lt;process&gt;</code> tag.   |
| LCS-1413              | Performance Issues Launching an IETM via <code>autoplay_cdonly.exe</code> .<br><br>Resolved performance issues.  |
| LCS-1436              | Need to resolve Process Data Module <i>noValue</i> issues.<br><br>Resolved Issue 3.0 variable declarations being initialized to <i>noValue</i> , even if they already existed.   |

| Issue No.             | Description   |
|-----------------------|---|
| LCS-1443              | Need to resolve Process Data Module Global Variable <i>userassert</i> issues.<br><i>UserEntry</i> assertions are no longer updating the Global variables. Instead, they create new, local variables.  |
| LCS-1465              | Whole-word Searching is not working consistently.<br><br>When searching for multiple words (fault code) and using the "Near" operator, the search will not work unless "Whole words only" is selected.<br><br>Whole-word search now behaves consistently. |
| LCS-1469              | Need to resolve conditional testing not returning <code>TRUE</code> when the variable has no value.<br><br>Conditional <i>assert</i> testing of variables now returns <code>TRUE</code> , even when the variable is not set.                              |
| LCS-1491              | Character entities displayed in the viewer are not rendering in PDF output.<br><br>PDF output now displays character entities.  |
| LCS-1543 and LCS-1554 | Errors occur in <code>process.xml</code> when opening a Process DM.<br><br>Simplified the processing of the <i>variablePresets</i> under a <code>process</code> element, which eliminated the errors.   |
| LCS-1731              | Cannot run publication after build and packaging.<br><br>Updated the <code>launch.ini</code> file to resolve the issue.   |

## Issues fixed and closed in SDL LiveContent S1000D 5.3

This section contains issues fixed and closed in SDL LiveContent S1000D version 5.3.

| Issue No. | Description  |
|-----------|--|
| LCS-475   | Next/previous breaks with suspend/resume while in a Process DM.  |
| LCS-619   | Periods in an ID attribute fail.<br>This is limited to <code>referredFragment</code> ; however, the cause of the problem is because the <code>xpath_query</code> and its API call fail when searching for an ID that contains a <code>'</code> (period). |

| Issue No. | Description   |
|-----------|---|
| LCS-639   | <p>Formatting of <code>dmRefAddressItems</code> tag.</p> <p>The <code>dmRefAddressItems</code> tag inserts a space between the link and whatever comes after the link, even if it is a period. Request to remove the whitespace.</p>  |
| LCS-662   | <p>Misses a huge amount of content in the TOC.</p> <p>When you publish a publication module that contains a data module followed by publication modules, the publication modules are not shown in the TOC menu, making the rest of the section inaccessible to the user.</p>  |
| LCS-663   | <p>Hotspots with <code>categorySequenceNumberValues</code> that have leading zero's fail.</p> <p>Remove the leading "D" in the <code>CategorySequenceNumberValue</code> from the <code>CategorySequenceNumberRef</code> and matching element. Publishing content does not work</p> <p>Gives error "Unable to find part: xxxx". Issue is in the <code>cvDocHandler.js</code> code.</p>   |
| LCS-666   | <p>Graphics printed to PDF output are too small.</p> <p>Graphics used to print in larger rotated size but broke in one of the latest updates.</p>   |
| LCS-674   | <p><code>Para</code> element in wrong place.</p> <p><code>&lt;para&gt;</code> elements after a <code>&lt;/table&gt;</code> element but before <code>&lt;/proceduralStep&gt;</code> are displayed at the beginning of the procedure rather than their proper location.</p>   |
| LCS-751   | <p><code>Stderr</code> handling with <code>LinuxLaunch.jar</code> causes LiveContent S1000D to freeze.</p> <p>We believe the root cause of the lockup is in <code>LinuxLaunch.jar</code> when using <code>Runtime.exec()</code> you need to be reading both <code>stdout</code> and <code>stderr</code>. The following error is filling up the <code>stderr</code> pipe causing the application to hang. The work around is to spawn a thread to read <code>stderr</code>. We believe that the best approach is to fix <code>LaunchThread.java</code> in <code>LinuxLaunch.jar</code></p> |
| LCS-753   | <p>Informal tables have no titles, which causes them to show up in the TOC as empty icons.</p> <p>In the S1000D spec, an informal table is defined as a table without regular table title line, table head and table footer (ver 3.0 Chap 6.2.2 para 9.2). Because these tables do not have a title, they display on the TOC's List of Tables as blank entries - an icon only. Suggest that only tables with titles be included in the List of Tables (and counted when generating a 'Table x.' prefix for a table title in the body of text).</p>  |
| LCS-757   | <p>Resuming after suspend generating error dialog for unrelated graphic in Process DM.</p>  |
| LCS-776   | <p>TOC references graphic sheet number, but fails to increment correctly. Customer reported that the (Sheet 1 of 2) numbering scheme is working fine for graphic pane, but it fails to number correctly for the TOC.</p>  |

| Issue No. | Description  |
|-----------|--|
| LCS-777   | Issue 4.1 hotspot internal references do not display <code>applicationStructureName</code> after the word Hotspot.   |
| LCS-947   | Java Heap error running LiveContent Publish. Customer published large IETP content in version 5.2, but it fails with Java Heap error. Failed - Java Heap memory error.   |
| LCS-984   | The CD image launcher loads slower every time it is run. Every time a CD image is run, that CD image takes longer and longer from double-clicking the icon to the <b>Run From CD/Local Install/Exit</b> screen coming up, and also generates a longer and longer log file.   |
| LCS-997   | String Operation "notEqual" is not working. In LiveContent Version 5.2 with S1000D Issue 4.1 data, a <code>dmNode</code> in a Process Data Module that has a <code>refApplicID</code> pointing to an applic in the <code>referencedApplicGroup</code> that has a compound expression with a check for a Boolean Variable with no value assigned fails to filter as expected. Variables that have been declared or assigned 'noValue' are not appearing in the state table and are not handled properly while processing DMs. |
| LCS-1049  | Figure as the first item in a procedural step causes step numbering text alignment to be off.  |
| LCS-1068  | Step graphics should display in order as you move into the step. As you move to each step in a <code>proceduralStep</code> , the first graphic referenced should appear, not the last.   |
| LCS-1146  | Acronym term with <code>internalRefid</code> does not work.<br><br>Acronym term and definition can be defined in a DM and given an ID for later reference. Later in the DM the <code>&lt;acronymterm&gt;</code> element can point to the <code>internalRefid</code> and expect to have the acronym output. It does not display at all.   |

## Issues fixed and closed in SDL LiveContent S1000D 5.2

This section lists issues fixed and closed in LiveContent S1000D version 5.2.

| Issue No. | Description  |
|-----------|--|
| LCS-453   | The image title_list parameter API call fails to overwrite figure titles when printing to PDF.                                 |
| LCS-501   | No support for the Issue 4.x randomList element's listItemPrefix attribute (only the Issue 3.x prefix attribute is supported). |
| LCS-539   | No support for the Issue 4.x sequentialList element (only the Issue 3.x seqlist element is supported).                         |



# Acknowledgments

LiveContent S1000D includes open source or similar third-party software.

### **ActiveState ActivePerl**

ActivePerl is the industry-standard, commercial-grade Perl distribution used by millions of developers around the world for easy Perl installation and quality-assured code.

### **AdoptOpenJDK**

AdoptOpenJDK provides prebuilt OpenJDK binaries from a fully open source set of build scripts and infrastructure.

### **Annogen**

Annogen is a framework which helps you work with JSR175 Annotations. In a nutshell, Annogen generates a proxy layer in front of your Annotations.

### **Apache Axis2**

Apache Axis2 is a Web Services / SOAP / WSDL engine, the successor to the widely used Apache Axis SOAP stack. There are two implementations of the Apache Axis2 Web services engine - Apache Axis2/Java and Apache Axis2/C.

### **Apache Batik SVG Toolkit**

Batik is a Java-based toolkit for applications or applets that want to use images in the Scalable Vector Graphics (SVG) format for various purposes, such as display, generation or manipulation.

### **Apache FOP**

Apache FOP (Formatting Objects Processor) is a print formatter driven by XSL formatting objects (XSL-FO) and an output independent formatter. It is a Java application that reads a formatting object (FO) tree and renders the resulting pages to a specified output. Output formats currently supported include PDF, PS, PCL, AFP, XML (area tree representation), Print, AWT and PNG, and to a lesser extent, RTF and TXT. The primary output target is PDF.

### **Apache Geronimo**

Apache Geronimo is an open source server runtime that integrates the best open source projects to create Java/OSGi server runtimes that meet the needs of enterprise developers and system administrators.

### **Apache Neethi**

Apache Neethi provides general framework for the programmers to use WS Policy. It is compliant with latest WS Policy specification which was published in March 2006. This framework is specifically written to enable the Apache Web services stack to use WS Policy as a way of expressing it's requirements and capabilities.

### **Apache XML Graphics Commons**

Apache™ XML Graphics Commons is a library that consists of several reusable components used by Apache Batik and Apache FOP. Many of these components can easily be used separately outside the domains of SVG and XSL-FO.

### **Apache XMLSchema**

XMLSchema is a lightweight Java object model that can be used to manipulate and generate XML schema representations. You can use it to read XML Schema (xsd) files into memory and analyze or modify them, or to create entirely new schemata from scratch.

### **backport-util-concurrent**

This package is the backport of java.util.concurrent API, introduced in Java 5.0 and further refined in Java 6.0, to older Java platforms. The backport is based on public-domain sources from the JSR 166 CVS repository, the dl.util.concurrent package, and the Doug Lea's collections package.

### **Hammer JS**

Javascript library for recognizing touch events and gestures.

### **InstallAnywhere**

InstallAnywhere is the leading multi-platform development solution for application producers who need to deliver a professional and consistent cross installation experience for physical, virtual and cloud environments. From a single project file and build environment, InstallAnywhere creates reliable installations for on-premises platforms - Windows, Linux, Apple OS X, Solaris, AIX, HP-UX, and IBM iSeries - and enables you to take existing and new software products to a virtual and cloud infrastructure.

### **iTextSharp**

iText is a PDF library that allows you to CREATE, ADAPT, INSPECT and MAINTAIN documents in the Portable Document Format (PDF):

- Generate documents and reports based on data from an XML file or a database
- Create maps and books, exploiting numerous interactive features available in PDF
- Add bookmarks, page numbers, watermarks, and other features to existing PDF documents
- Split or concatenate pages from existing PDF files
- Fill out interactive forms
- Serve dynamically generated or manipulated PDF documents to a web browser

iText is used by Java, .NET, Android and GAE developers to enhance their applications with PDF functionality. iTextSharp is the .NET port.

### **ICU (International Components for Unicode)**

ICU is a mature, widely used set of C/C++ and Java libraries providing Unicode and Globalization support for software applications. ICU is widely portable and gives applications the same results on all platforms and between C/C++ and Java software.

### **Infonyte-DB**

Infonyte-DB provides a comprehensive, lightweight solution for querying and storing large, distributed XML documents. It is based on two major components, the PDOM engine which is a persistent implementation of the W3C DOM (Document Object Model) API, and the XQL engine which is a web-aware query engine supporting the XQL query language.

### **iOS**

iOS is a mobile operating system created and developed by Apple Inc. exclusively for its hardware.

### **Jalopy**

Jalopy is a source code formatter/beautifier/pretty printer for the Java programming language. It is aimed to provide a full-featured, yet free alternative to the well-known

Jindent. Plug-ins for Ant, Eclipse, IDEA, JBuilder, JDeveloper, jEdit, NetBeans.

### Java Runtime Environment (JRE)

This is part of Java Development Kit (JDK), a set of programming tools for developing Java applications.

### JAXB

The goal of the JAXB project is to develop and evolve the code base for the Reference Implementation (RI) of JAXB, the Java Architecture for XML Binding. The JAXB specification is developed through the Java Community Process following the process described at [jcp.org](http://jcp.org). This process involves an Expert Group with a lead that is responsible for delivering the specification, a reference implementation (RI) and a Technology Compatibility Kit (TCK). The primary goal of an RI is to support the development of the specification and to validate it. Specific RIs can have additional goals; the JAXB RI is a production-quality implementation that is used directly in a number of products by Oracle and other vendors.

### Jettison

Jettison is a collection of Java APIs (like STaX and DOM) which read and write JSON. This allows nearly transparent enablement of JSON based web services in services frameworks like CXF or XML serialization frameworks like XStream.

### Jetty

The Jetty Web Server provides an HTTP server and Servlet container capable of serving static and dynamic content either from a standalone or embedded instantiations. Starting from Jetty version 7, the Jetty webserver and other core components are hosted by the Eclipse Foundation.

### JiBX

JiBX is a tool for binding XML data to Java objects. It's extremely flexible, allowing you to start from existing Java code and generate an XML schema, start from an XML schema and generate Java code, or bridge your existing code to a schema that represents the same data. It also provides very high performance, outperforming all other Java data binding tools across a wide variety of tests.

### jQuery

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

### jQuery Highlight

Highlights the search keywords/terms in a preview.

### jQuery-JSON

A JSON plugin for jQuery, provides simple ways to convert to JSON and back again.

### jQuery Splitter

A splitter plugin for jQuery.

### jQuery UI

jQuery UI is a set of user interface interactions, effects, widgets, and themes built on top of the jQuery JavaScript Library.



**jQuery UI Touch Punch**

Javascript plugin for adding touch support to jQuery.

**Oracle JavaBeans Activation Framework**

With the JavaBeans Activation Framework standard extension, developers who use Java technology can take advantage of standard services to determine the type of an arbitrary piece of data, encapsulate access to it, discover the operations available on it, and to instantiate the appropriate bean to perform said operation(s).

**Oracle JavaMail**

The JavaMail API provides a platform-independent and protocol-independent framework to build mail and messaging applications. The JavaMail API is available as an optional package for use with the Java SE platform and is also included in the Java EE platform.

**Red Hat Linux**

Red Hat Enterprise Linux OpenStack Platform delivers an integrated foundation to create, deploy, and scale a secure and reliable public or private OpenStack cloud. Red Hat Enterprise Linux OpenStack Platform combines the world's leading enterprise Linux and the fastest-growing cloud infrastructure platform to give you the agility to scale and quickly meet customer demands without compromising on availability, security, or performance.

**Saxon**

Saxon is an XSLT processor for transforming XML documents into HTML, text, or other XML document types. It implements XSL Transformations (XSLT) and XML Path Language (XPath) and can be used from the command line, in an applet or a servlet, or as a module in other program.

**SDI Convert**

SDI Convert provides graphics file conversion for CAD, CAE, Maps, Seismic & Well Logs.

**StAX**

StAX is a standard XML processing API that allows you to stream XML data from and to your application. This StAX implementation is the standard pull parser implementation for JSR-173 specification.

**svg-pan-zoom**

JavaScript library that enables panning and zooming of an SVG in an HTML document, with mouse events or custom JavaScript hooks.

**Syncro Soft Oxygen XML Author**

XML editor for structured authoring.

**Woden**

The Woden project is an incubation sub-project of the Apache Web Services Project to develop a Java class library for reading, manipulating, creating and writing WSDL documents, initially to support WSDL 2.0 but with the longer term aim of supporting past, present and future versions of WSDL.

**Woodstox**

Woodstox is a high-performance validating namespace-aware StAX-compliant (JSR-173) Open Source XML-processor written in Java.

### **Xerces Java Parser**

The Xerces Java Parser 1.4.4 supports the XML 1.0 recommendation and contains advanced parser functionality, such as support for the W3C's XML Schema recommendation version 1.0, DOM Level 2 version 1.0, and SAX Version 2, in addition to supporting the industry-standard DOM Level 1 and SAX version 1 APIs.