



Adobe

What's New for LiveCycle® ES

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Adobe® LiveCycle® ES

Update 1

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Adobe® LiveCycle® ES Update 1 What's New for LiveCycle ES for Microsoft® Windows®, Linux®, and UNIX®

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What's New for LiveCycle ES

This version of Adobe® LiveCycle® ES (Enterprise Suite) Update 1 (8.2) introduces many new features that improve the way you create and deploy customer engagement applications.

LiveCycle ES is comprised of a single installer, a foundation layer, and a series of solution components. The single installer allows you to installation of multiple solution components based on your product license key. All of the solution components are deployed on a common architecture layer that is commonly known as *Adobe LiveCycle Foundation*.

This document outlines the new features that are introduced in this release of LiveCycle ES in general and in each of its solution components:

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Key new features in LiveCycle ES

LiveCycle ES 8.2 builds upon the initial LiveCycle ES 8.0.x product and provides additional capabilities that makes customer engagement applications simpler to develop and deploy. This version of LiveCycle ES focuses on three main areas:

- Enhanced development tools
- Additional solution components
- Enhanced platform certifications

Enhanced development tools

Updates to Adobe LiveCycle Workbench ES to enhance the productivity of a developers. Improved functionality includes new capabilities such as record and playback, process validation, and enhancements to process perspectives and property sheets for key services.

Additional solution components

LiveCycle ES now provides the following additional solution components that extend the support for content-centric use cases:

- Adobe LiveCycle Content Services ES
- Adobe LiveCycle PDF Generator 3D ES
- Adobe LiveCycle ES Connector for IBM® Content Manager

LiveCycle Content Services ES

LiveCycle Content Services ES is a fully integrated set of content services that range from a scalable enterprise content repository to social collaboration tools such as wikis and blogs. This new solution component offers content management capabilities that extend the LiveCycle ES platform by enabling customers to rapidly build content-driven and content-intensive customer engagement applications with a low total cost of ownership (TCO).

LiveCycle PDF Generator 3D ES

LiveCycle ES expands its coverage for content generation through LiveCycle PDF Generator 3D ES, which allows template-based batch conversion of CAD files to PDF files.

LiveCycle ES Connector for IBM Content Manager

LiveCycle ES now provides extended coverage of connectors to include IBM Content Manager so that customers can leverage their existing content management investments and store content that is created using LiveCycle ES.

Enhanced platform certification

LiveCycle ES now includes the following enhanced functionality:

- Additional support for new versions of Adobe clients, including Adobe Reader® 9, Adobe Acrobat® 9, Adobe Flex® 3, and Adobe AIR™. LiveCycle ES includes enhanced support for documents that are created using LiveCycle ES and that are processed using Adobe Reader 7.0 and later.
- Expanded options for the turnkey installation. In addition to the turnkey installation for Red Hat® JBoss® Application Server that is provided with LiveCycle ES, this version includes a turnkey installation for BEA WebLogic Server®.
- Single sign-on (SSO) for Microsoft® Windows® lets users navigate to LiveCycle Workspace ES without having to authenticate, and 508 compliance lets users with disabilities use Workspace ES through screen readers such as JAWS.
- Safari browser and Sharepoint support for Workspace ES. Workspace ES viewable through the Safari browser or integrated as a portlet within a SharePoint portal.
- Expanded platform support.

Additional support for Adobe clients

LiveCycle ES now adds direct support for the new versions of Adobe technologies. Your applications can seamlessly interact with Adobe Reader 7, 8.x, and 9 without requiring modifications and, if you want to take advantage of the latest features of a specific Adobe Reader version, you can tune your application to do so. In addition to supporting the latest versions of Adobe Reader, LiveCycle ES also supports Flex 3 and Adobe AIR.

Expanded installation and upgrade options

In addition to the turnkey installation for JBoss Application Server that was provided with LiveCycle ES 8.0.x, LiveCycle ES 8.2 provides a turnkey installation for WebLogic Server. This WebLogic installation automatically installs and configures WebLogic Server.

Adobe LiveCycle Configuration Manager also contains many updates, including the ability to configure an IBM WebSphere® Application Server and WebLogic Server cluster for a LiveCycle ES deployment.

A new command line mode for LiveCycle Configuration Manager allows you to run LiveCycle Configuration Manager in an automated console-based mode. To build the configurations for this, you can use either LiveCycle Configuration Manager in GUI mode once or edit the samples provided with LiveCycle ES.

For existing LiveCycle ES 8.0.x customers, LiveCycle ES 8.2 also provides enhancements to improve the upgrade experience. Complete upgrade instructions are provided for upgrading from LiveCycle 7.x and LiveCycle ES 8.0.x to LiveCycle ES 8.2.

Expanded platform support

LiveCycle ES now supports additional versions of operating systems, application servers, and databases including these:

- 64-bit JVM/OS
- Red Hat JBoss 4.2
- BEA WebLogic 10

- Red Hat AS/ES 5.0
- IBM DB2® 9.1
- MySQL 5
- JBoss, Sun™ Solaris™, Oracle® combination

What's new in LiveCycle Workbench ES

LiveCycle Workbench ES is a unified, Eclipse-based development tool used for building application assets such as PDF forms, form guides, processes, output templates, components, and Flex applications. New features to enhance the productivity in the development of process and form design include the enhancements listed in the sections that follow.

Process Design enhancements

These new features are included in Workbench ES 8.2:

- Process record and playback
- Process validation
- Modeling elements
- Viewing relationships between assets
- Visual scale and update
- Improved archived file creation

Process record and playback

Using the new process record and playback feature in Workbench ES, you can examine and troubleshoot exactly what is happening after a process executes.

With process record and playback, you can turn recording on for a particular process and then, as you run the process, the steps in that process are recorded. From the playback perspective, you can view the results. When you open the playback perspective, you immediately have a visual representation of the process with the routing followed highlighted in green. You can then step forward and back through the process steps. As you move through each step of the process, the Variables view shows you which process data has changed. When the value of a variable changes, it is highlighted in green. You can also see the value of each variable at that point in the process.

For documents and forms, you can open the document to view its state at that point in the process. You can also see the value of XML and other complex variables. When an error is returned, the step is highlighted in red.

You can go back and view past recordings as the recorded data is stored on the server. The record and playback feature can also be disabled at the server level, allowing more security and performance enhancements in a production environment.

Process validation

Using the new process validation feature, you can troubleshoot problems with your process earlier in the development cycle. You can now right-click a process and validate it as you develop your process to see error messages.

This Validation Report view displays problems with the process design. For example, if the process is missing a start step, this is highlighted in the validation report view. A simple double-click on the entry in the report view takes you directly to the problem area to address the issue. Additional documentation is available from within the report for each of the messages.

Modeling elements

Workbench ES now provides an easy way to add modeling elements by allowing you to select basic types of elements to add to your process. The new toolbar contains abstract elements that allow you to quickly draw basic process steps and a flow in the early stages of the process development. Later, you can specify the actual service operations or event types for each element. For example, when you drag the Activity element to your process, you are prompted for more details.

You can add the details when prompted or define an activity element for the step later, in which case, a generic activity will be created. By defining the service later, you can sketch the high-level flow first and return to add more detailed definitions later.

The services are also categorized and descriptions are provided in the dialog box.

Viewing relationships between assets

The relationship viewer allows you to manage assets, such as fragments, schemas, forms, and images. Relationships displays a list of all of the files that reference that form, fragment, or image. This view provides details such as when the resource was last changed, who originally created it, and who changed it last.

Before you modify or delete a resource (for example, an image), you can quickly check if it is referenced by other resources, such as different forms or fragments.

Visual scale and update

Workbench ES now includes improvements to the visual layout of a process diagram. Enhancements provide visual improvements as well as the ability to fit more content on process design space. This reduces the need for scrolling and searching.

Improved archived file creation

The import and export features make it easier to move LiveCycle ES resources from one system to another. You can export multiple processes and assets and include endpoint and service configurations in the archived file. An archived file can also only contain assets. The new wizard guides you through the process of creating an archive.

Form Design enhancements

These new features and enhancements are included in Adobe LiveCycle Designer ES 8.2, which is delivered as part of Workbench ES:

- Typographical controls
- Hyphenation
- Hyperlinks
- Tab order authoring
- Line-breaking control in dynamic documents
- Web service authentication
- Import filters
- Guide Builder enhancements
- Accessibility for form guides at run time

Typographical controls

Designer ES now supports more advanced typographical controls on form text and data. These controls allow forms and documents to more closely mirror documents that are created by using a variety of desktop publishing tools and provides a more aesthetically pleasing look.

Pair kerning: Automatically reduces the space between certain character pairs in proportional fonts.

Horizontal and vertical scaling: Allows text to be stretched or compressed in either direction without changing the font size.

Letter spacing: Allows for the uniform adjustment of space between characters in text. Leading provides visual cues to associate text objects with other objects, such as is common in a table of contents.

Hyphenation

Designer ES can now automatically hyphenate form text. You can specify hyphenation rules for the formatting of data when merged with templates on the server or in form fields in Adobe Reader 9.

Hyperlinks

In this version of Designer ES, you can now create and apply a hyperlink to text within a form or document that points to an HTTP address or mailto. Adobe Reader 9 supports the creation of hyperlinks within data.

Tab order authoring

The tab order user interface is completely new and allows for easier authoring and maintenance of form tab orders.

Line breaking control in dynamic documents

Designer ES now provides additional control over page breaking behaviors on dynamic documents and forms. You can design text objects to break across pages and adjust page breaking to prevent widowed and orphaned lines of text, and keep adjacent objects such as titles and paragraph together. You can also control these behaviors through XHTML mark-ups in form data.

Web service authentication

When Designer ES, Adobe Reader 9, or the Forms and Output services connect to a web service, that connection can be authenticated through user names and passwords, digests, or certificates at the transport level or through user names and passwords at the SOAP message level.

Import filters

The import filters are improved to support the Word 2008.DOCX format and to convert prebuilt scripts in Acrobat forms.

Guide Builder enhancements

Designer ES provides new features that improve productivity when creating and maintaining form guide applications.

Preview

Guide Builder now provides a number of features to improve the productivity when creating form guide applications. As you create your form guide, the panel preview shows you, in real time, what the panel you are developing will look like. A faster, full form guide preview and display of the PDF view of the form, using Flex component technology, lets you quickly see and adjust your form guide designs.

Authoring

Guide Builder now provides updated layouts and panels with improved control, navigation, help, and richness, such as charting.

Accessibility for form guides at run time

Maintaining your form guides is now improved with easier updating of bound objects, overall accessibility, and keyboard access.

What's new in LiveCycle Foundation

LiveCycle Foundation now provides a common architectural foundation that enables a solution component to participate in processes. LiveCycle Foundation provides a common invocation mechanism that ensures consistent access to components, services, and processes through a Java™ API, web services, watched folders, Remoting Service, and email. It also provides a consistent set of public APIs and SPIs. Strongly-typed Java libraries are also consistent regardless of the transport protocol used (RMI or SOAP).

LiveCycle ES includes these enhancements:

- Scripted deployment
- Process archive and deletion

- Hot backup capability
- User Management enhancements
- JMX support
- IPv6 support

Scripted deployment

Scripted deployment lets you automate the deployment of applications from a development environment to a staging or production environment.

The contents of a LiveCycle ES archive file are extended to include service configurations, endpoint information, and security profiles. A set of sample scripts are available for you to use as a starting point when modifying environmental parameters such as port numbers and host names that differ from one environment to another.

Process archive and deletion

LiveCycle ES now provides a set of APIs and sample scripts so that administrators can delete completed processes, including the ability to define queries (for example, to delete all purchase order processes with a value under \$10,000 that were completed more than six months ago). This allows you to better manage the process data and audit information within the database.

Hot backup capability

LiveCycle ES is designed to be deployed in a mission-critical environment where appropriate disaster recovery procedures are in place. To help ensure recovery from failure, LiveCycle ES now provides the ability to back up the LiveCycle ES system while it is running. This allows maintenance of longer uptimes, while at the same time minimizing data loss in the event of a catastrophe.

User Management enhancements

LiveCycle ES now contains a number of major enhancements to User Manager. The key feature is single sign-on (SSO), which enable customers to log in using the Microsoft Windows authentication mechanism without needing to authenticate with any out-of-box LiveCycle ES user interfaces such as Workspace ES or LiveCycle Administration Console. SSO extends to PDF forms rendered within Adobe Reader that leverage web services for prepopulation, look-ups, and data submission. In these cases, the authentication token is leveraged to authenticate the web service call. The same pattern is also applied to applications that are built using Flex and remoting to call LiveCycle ES services. In addition to SSO, better support is available for common LDAP servers and the ability to push users for synchronization.

JMX support

To enable system administrators to fine-tune their environment and view availability through tools such as HP OpenView or IBM Tivoli, LiveCycle ES also adds the ability to view system level metrics, such as the number of invocations per second through the JMX standard.

IPv6 support

LiveCycle ES now provides support for Internet Protocol version v6 (IPv6), the successor to the current Internet protocol version that is in general use on the Internet.

What's new in LiveCycle Process Management ES

Adobe LiveCycle Process Management ES 8.2 includes the following improved functionality:

- Ability to define business calendars and have processes escalate based on definitions
- Improved email handling, including the ability to define email templates on a per-task basis
- New Out-of-Office support feature, which supports task delegation when a user is out of the office
- Ability to initiate a new process from a previously archived form
- New platform certifications

Business calendars

Tasks within business processes are usually created with a predefined time for completion, reminders, and escalation rules. For example, a task has to be completed within five business days and, if escalated to a manager, the manager needs to complete the task within two business days. Administrators can now create business calendars, configure non-working days, and map these calendars to specific people based on their location, business unit, and so on. When tasks are scheduled, these non-working dates are taken into account. You can configure multiple business calendars to meet your organizational needs (for example, you can configure calendars based on a geographic area or for an organizational structure such as Customer Support).

Email notifications

Email notifications are a common mechanism for notifying users that a task is assigned, escalated, or needs to be completed. In LiveCycle ES, the email notifications can be modified on a per-task basis, enabling more contextual content and flexibility.

Out of office

A common problem occurs when tasks are assigned to users who are out of the office due to business travel or vacation. In LiveCycle ES, users can leverage Workspace ES to define when they are out of the office and assign tasks to be either delegated to another person or remain in their task list.

Initiate from archive

Users sometimes use the same information to initiate processes. Workspace ES makes this easier by adding an option to allow users to invoke new processes from a previously archived forms.

What's new in LiveCycle Forms ES

Adobe LiveCycle Forms ES includes the following new features:

- Ability to swap a cascading style sheet (CSS) for generated HTML forms for improved portal integration
- Event-based cache invalidation
- Form guide enhancements

Swap a CSS for generated HTML forms

LiveCycle ES now provides the ability to swap the CSS for the generated HTML form so that it can be controlled by the portal server. This feature also facilitates the accessibility for HTML forms when you want to emphasize particular styles that are more compliant to accessibility guidelines. Developers now have control of the form and field styles.

Event-based caching invalidation

With event-based caching invalidation, you can better control how the caching is managed for forms. For example, when only particular fragments are updated, you can have the server wipe only the affected forms that use that fragment rather than wipe the entire cache as LiveCycle ES.

What's new in LiveCycle Output ES

Adobe LiveCycle Output ES includes these enhancements:

- New network printing options
- Device profile (XDC) editor now fully integrated into Workbench ES
- New Adobe Postscript® 3 and ZPL 600-dpi basic XDC support
- New cache method based on a checkpoint date
- Updated Output IVS to support more complex test cases
- New PDF to PDF/A conversion service called *DocConverter* (see ["DocConverter service" on page 24](#))

Network printing options

LiveCycle Output ES has three new methods for submitting formatted documents to network printers:

Direct IP-based printing: Allows print jobs to be submitted directly to a network printer based on its IP address.

Common Unix Printing System (CUPS): The default print-queuing system for Linux® systems; also available on Sun Solaris.

Common Internet File Systems (CIFS): Allows access to shared printers across Windows and UNIX/Linux networks.

Device profile (XDC) editor integrated into LiveCycle Workbench ES

The device profile editor is now installed in Workbench ES, and you can edit and create XDC files in the repository and on a file system.

Adobe Postscript 3 and ZPL 600-dpi basic XDC support

Output ES now provides extended support to the basic device profile support for Zebra label printers to include the 600-dpi format. Also included is support for specific device profiles for PostScript 2 and Postscript 3 to better target PostScript print devices.

Cache method based on a checkpoint date

Output ES introduces a new manual caching scheme. The new manual cache mode is based on a checkpoint date/time and provides improved performance over the previous manual mode when introducing updated assets. Only updated assets will be reloaded into the cache.

Updated Output IVS to support more complex test cases

With the enhancements to the Output IVS, you can better test your templates and data sets. With this version of Output ES, more output options are available, including the new network printing options. You can now convert PDF files to PDF documents and measure the transaction performance.

What's new in LiveCycle Data Services ES

In LiveCycle ES, LiveCycle Data Services ES provides a number of key enhancements to improve the performance and scalability of Flex and Adobe AIR applications:

- Data management
- Remote Procedure Call (RPC) services
- Messaging
- Improved LiveCycle Foundation integration
- Performance metrics
- LiveCycle Administration Console improvements for monitoring run-time behavior

Data management

The area of data management has three key features; paging improvements, offline improvements, and improved subtype support.

Paging improvements

With this version of Data Services ES, you can very efficiently do on-demand paging directly to the database while keeping the clients up to date with the latest changes. Additionally, changes are only pushed for pages that they are currently viewing. If you have a large and rapidly changing data set, your clients can receive the most up-to-date view of their data with the lowest operational overhead on both client and server. Using the new APIs on the client, you can release data as the user scrolls through the data set and the message is communicated to the server so that you continue to receive changes only for the data that is currently displayed to the user.

You also can enable this advanced paging feature on association properties. This feature dramatically helps you manage complex object models that have deep and large collections of other objects. You can

display an overview of data and keep large collection properties on the server until the client requests them.

The client fetches them one at a time. Updates to these properties are also sent incrementally. Adding a record to a collection involves sending only the new record, new location, and ID of the record to the server. The Assembler service is notified of the incremental change so that it can easily incrementally apply this change to the database.

Offline Improvements

Using the SQL database contained in the Adobe AIR run-time, we use the offline support that was introduced in the previous version of Data Services ES to persist data directly to a SQL database. With very little additional code, you can use an application written to use data management offline with complete access to any data and queries that you executed online by simply specifying a cache ID and either using the auto-save option or explicitly saving queries or items that you want to persist offline for retrieval later.

Improved subtype support

With this version of Data Services ES, data management supports object models where associations are added in a subtype. You can define a destination for each class that parallels the object hierarchy by using a new *extends* attribute. A subclass can add additional associations.

Remote Procedure Call (RPC) services

RPC services offers several new features and enhancements.

Customizable client/server object serialization: This feature lets you define a proxy class for a given class or instance of an object that you are serializing to or from a Flex client that controls how that class or instance is serialized or deserialized into Java. You can substitute a different instance, transmit properties from non-public fields or read-only properties, exclude properties from serialization, or dynamically control the ActionScript class instantiated for a given instance of a Java class.

Streaming HTTP channel: A new channel implementation that uses a single persistent HTTP connection to stream data from a server to client with less latency. This approach uses the streaming post method to complement the long polling approach added for real-time HTTP messaging in the previous version of Data Services ES.

Both of these channel implementations use the application server's standard request handling logic, making it easy to deploy them behind firewalls. However, these implementations are not as scalable as the RTMP and HTTP NIO channels in Data Services ES as they dedicate a thread for each real-time connection.

Improved RTMP Performance and Scalability: Supports more concurrent users on the same server infrastructure.

Java 1.5 enumeration support: Enumerated types are serialized to string values in ActionScript by default.

Messaging enhancements

Messaging includes these enhancements:

Smaller message envelope: You now can use an option to enable on all Action Message Format (AMF) channels. This reduces the bandwidth that is required for the message wrapper used in all Data Services ES messages.

Improved JMS Support: JMS adapter has a number of improvements. You can define consumers by using Java code. Your Java code is called when a message arrives and you can use the ActionScript message adapter to deliver that message to Flex clients. This allows the use of subtopics and a more efficient way to publish one JMS message to large numbers of Flex clients.

Improved integration with LiveCycle Foundation

You can now define data management data sources with components (the mechanism you use to write new components within LiveCycle ES). This capability allows you to take advantage of the *auto sync* feature of data management or push changes to clients in real time.

Components are also available that enable you to manipulate managed data sources as part of a process. LiveCycle ES also supports SSO for LiveCycle ES Remoting applications and can support LiveCycle ES services that use the enumerated data type.

Performance metrics

With this version of Data Services ES, you can easily monitor message counts, latency, and the bandwidth usage of your application.

Improved LiveCycle Administration Console

You now can use a separate web application that you install into the Data Services ES server to monitor the run-time behavior of the server in real time. You can monitor the number of clients that are connected, the traffic over each channel, which destinations are enabled, and configure and control logging without restarting the server.

What's new in LiveCycle PDF Generator ES

Adobe LiveCycle PDF Generator ES includes these enhancements:

- Acrobat conversion of HTML to PDF and Image to PDF
- Client print driver installation
- New PDF to PDF/A conversion service called *DocConverter* (see ["DocConverter service" on page 24](#))

Option to use Acrobat to convert HTML to PDF and Image to PDF

A toggle is now provided on the configuration page for the Generate PDF service that enables Acrobat to convert the HTML and Image file types to PDF. In the Administration Console, you can click Services > Applications and Services > Service Management, and then click GeneratePDFService.

Client print driver installation

This version of LiveCycle ES provides a print driver that prints to the Generate PDF service. This print driver is installed like any other print driver on the desktop; it is installed through Windows Start menu > Control Panel > Printers and Faxes. Simply point to the URL address that PDF Generator ES is hosted on and install the driver. Then, from any application on the desktop, users can take advantage of the centralized PDF generation that PDF Generator ES provides.

What's new in LiveCycle ES Connectors for ECM

Adobe LiveCycle ES Connectors for ECM includes these features:

- A new ECM connector known as LiveCycle ES Connector for IBM Content Manager
- Support expanded for ECM platforms
- New operations in the Process Engine Connector service for IBM FileNet
- New service operations for dynamic folder creation in ECM

Connector for IBM Content Manager

In this release, LiveCycle ES Connectors for ECM expand coverage to include IBM Content Manager. The new Connector for IBM Content Manager provides service operations for creating and updating content items, locating items by their attributes, retrieving documents and their attributes, and establishing and navigating item relationship.

Support expanded for ECM platforms

In addition to the ECM platforms that are supported in LiveCycle ES 8.0.x, LiveCycle ES 8.2 supports these platforms:

- EMC Documentum 5.3 and D6
- IBM FileNet P8 3.5.x and 4.x
- IBM Content Manager 8.3

New operations in the Process Engine Connector service for IBM FileNet

A set of service operations are available as part of the new Process Engine Connector service for IBM FileNet. These operations allow customers to visually link LiveCycle process variables with the FileNet workflow parameters.

New service operations for dynamic folder creation in ECM

Connectors for ECM now allow developers to create an ECM folder tree dynamically, based on the content and data that is driven by LiveCycle ES applications.

LiveCycle Content Services ES

LiveCycle Content Services ES is a new solution component for this version of LiveCycle ES. The solution component brings content management capabilities to LiveCycle ES. These features are included:

- Process automation
- Information protection
- Document output

Content Services ES also includes an Office plug-in for easy access to content from within Microsoft Office. The office plug-in lets you open, save, and edit documents stored in Contentspace ES from MS Word, Excel, and Power Point. You can also use the plug-in to browse content spaces and documents, view document details, launch workflows, view tasks, and search for and check out documents. The plug-in is available for downloading from Contentspace ES at Company Home > LiveCycle ES Client Plugins > Content Services Plugins.

Process automation

Content Services ES can leverage LiveCycle ES for business events by invoking processes based on content events, such as adding new documents to the repository. Or, a process can wait for content events to occur, such as a completed document review.

Users can perform the following tasks using Content Services ES:

- Attach files, such as reports to a form, and submit the form. After the form is submitted, both the data and the attachments are saved, and can be opened and viewed in the same form layout.
- Access different form applications or content types in the same portal.
- Search and browse by association between processes and documents, and by process and document attributes.

Process initiation

Developers can invoke processes from Contentspace ES and leverage Workspace ES to review and approve content.

Form rendering

Developers can set up the following rendering tasks:

- Prepopulate forms by using content or metadata
- Render forms with attachments from Content Services ES
- Update forms with a new version of assets referenced during run time
- Keep form template versions consistent during the life cycle of the process

Data storage

Content Services ES stores metadata in a database and content in a file system. Using a database immediately brings in the benefits of databases such as transaction support, scaling, and administration capabilities. Content is stored in the file system to allow for large content, random access, streaming, and options for different storage devices.

Archiving

Administrators can archive content from completed processes in Content Services ES. For example, an administrator can create a final package of documents that leverage the Assembler service or store multiple documents in the repository. In another scenario, a mortgage application is approved, and the final record is archived in PDF/A format and placed in a records management system with a proper archive policy.

Information protection

Content Services ES can leverage Adobe LiveCycle Rights Management ES to automatically apply policies to content that is stored in the repository. Using Rights Management ES, organizations can protect PDF documents. The policies are applied transparently to content when users retrieve content from the repository and save it on the local file system, send content by email to someone who is external to the organization, or place content on devices such as USB keys.

Document output

Content Services ES has prebuilt actions that let developers automatically convert documents to other formats (for example, from Word to PDF).

Additionally, developers can configure actions to start short-lived processes for assembling a set of documents within a shared space into a package, generating PDF files from three-dimensional content, or converting content to PDF/A format for archiving.

What's new in LiveCycle Rights Management ES

LiveCycle Rights Management ES includes these features:

- Expanded native file support for Microsoft Office documents, video protection, and extended manufacturing/CAD integration
- Improved authentication, directory services integration
- Additional usability enhancements

Expanded native file support

Additional support of Microsoft Office documents

In LiveCycle ES, AdobeLiveCycle Rights Management ES Extension for Microsoft Office extends upon the existing English-only Word and Excel 2003 integrations. Now available is the functionality to protect native PowerPoint presentations so that people can distribute confidential presentations and ensure that information in presentations is not leaked to unauthorized users. Usage is carefully audited, and persistent version control is now possible with presentations. Support is also extended to the newer Office 2008 release. This release of the LiveCycle ES also provides English, French, German, and Japanese localizations of the product so that non-English speaking customers can increase the level of security in their native file format collaboration.

New video protection

With this release, you can now use Adobe Media Player to view FLV files that are created using Adobe Flash® technology and that are protected by the new Adobe Flash Media Rights Management Server product that is based on the Rights Management ES 8.2. Now, you can restrict corporate training videos to only their intended recipients and provide new video workflows and monetization possibilities based on the same set of SDKs and APIs that are available through Rights Management ES.

Support for PTC Pro/Engineer Wildfire 4

The PTC Pro/Engineer WildFire 4 product, includes direct protection of their native CAD documents. By using Pro/E along with this version of Rights Management ES, customers can distribute product manufacturing instructions and CAD materials with the same level of protection and value proposition in securing PDF files with Acrobat 9 and Rights Management ES. This partnership release enables secure collaboration and versioning during the product design phase and simplifies collaboration with external parties during a bidding, Request for Quotation (RFQ), or manufacturing phase.

Improved authentication, directory services integration

LiveCycle ES includes a number of improvements to the core rights management solution architecture. Using clients such as Acrobat and Adobe Reader 9, customers can cache credentials, minimizing the need to enter a user name and password upon opening numerous protected documents.

This release also includes improved LDAP integration with various vendors, which provide support for Sun One Virtual List View (VLV), Tivoli dynamic groups, and Active Directory referrals.

With the new concept called *Hybrid Domains*, you can develop custom integrations with large user repositories by *pushing in* updates on demand for user account information while continuing to authenticate and verify credentials with a repository outside of LiveCycle ES.

Together with Acrobat 9, customers can increase the encryption level from the FIPS-certified industry-standard AES-128 to the AES-256 level preferred by several governmental agencies.

Additional usability enhancements

This release of LiveCycle ES has significant incremental improvements to how administrators and end users interact with the system.

Single sign-on: Administrators who switch between the administrator and end-user web pages in LiveCycle Administration Console to create and manage personal policies no longer need to log in multiple times.

Web UI authentication: Web UI authentication can use Kerberos or Netegrity SiteMinder control for managing access to the administrator and end-user web pages. Customers who deployed Microsoft

Active Directory internally or are using SiteMinder do not need to enter their user name or password when they open these web pages to create policies, manage documents, or view audit information.

Administrators can create personal MyPolicy policies: This version of the product loosens the restriction that prevented administrators from gaining access to creating their own personal policies in the Admin UI.

Customize “Denied Access Message”: You can now create customized messages on a per-policy basis to better inform users about the document and next steps.

Better authentication information for administrators: Administrators who try to help end users determine why they are receiving authentication failure messages can look at additional secure information to find out why a failure occurred.

What's new in LiveCycle Digital Signatures ES

Four major improvements have been made to LiveCycle Digital Signatures ES:

- Server side signing with user held keys
- Dynamically controlled signature field attributes
- Fine grained control over signature process definition using Workbench ES
- Acrobat 9 Compatibility

Servers-side signing with user-held keys

With this version, you can develop a web front end (RIA) to the signing experience. You can select one or more statements to approve (or sign) a document and involve the server to prepare the document hash, which is sent to the client (user computer). Users place their signature by using their private key (digital ID that they continue to possess).

Added benefits include these:

- Server-side auditability is possible
- Strong proven crypto capabilities from a reliable vendor
- Integration with process management and document workflows bringing a human element of approval into the server-based workflows
- Appeals to the risk-management professionals who write off server-side signing as only for processes

Dynamic control

LiveCycle ES allows you to design forms such that you can control the signature properties dynamically on the client for fields that have already been rendered. In addition, you can add new fields and additional control.

Fine-grained control over signature process definitions

This design-time control is available to process designers. This version of Digital Signatures ES enhances the property sheet to fine-tune several details of the sign or verify process. These include detailed PKI aspects of revocation configuration, timestamps, and embedding revocation information.

Acrobat 9 compatibility

New in this version is the ability to process JavaScript scripts that affect locked fields as a post-signing activity. The signature validation status is appropriately changed if the JavaScript affects these fields.

What's new in LiveCycle Reader Extensions ES

These enhancements are included in LiveCycle Reader Extensions ES 8.2:

- Support for unlimited credentials
- Evaluation default messages

Support for unlimited credentials

Large scale *enterprise* purchases of Reader Extensions ES can now get a credential that does not count the number of documents that are rights-extended.

Evaluation default messages

Reader Extensions ES now makes the evaluation process clearer. This is achieved on the server by placing the intended use string in the credential in the opening default message in the Reader Extensions ES user interface. Now, all evaluation users will receive the appropriate message, but the message still can be overridden by the user. Also, Adobe Reader 9 provides better error messages when a credential expires.

LiveCycle PDF Generator 3D ES solution component

LiveCycle PDF Generator 3D ES is a new solution component for this version of LiveCycle ES. This solution component provides the capability to convert 3D documents. These features are included:

- Superset of LiveCycle PDF Generator ES
- Includes Adobe Acrobat Professional Extended
- New 3D specific administrative screens, Job Option files, file settings, and so on
- Support for CATIA and U3G
- Support for mechanical assemblies
- Master file with assemblies of parts
- Submission of a folder with an XML description and all of the parts
- Supported on Windows only
- New PDF to PDF/A conversion service called *DocConverter* (see ["DocConverter service" on page 24](#))

What's new in shared LiveCycle ES services

Assembler service

These enhancements and changes apply to Forms ES, Output ES, and PDF Generator ES:

- Bates numbering
- 508 accessibility for headers, footers, and watermarks
- Ability to use process variables within DDX
- Ability to call an external URI from within a DDX script

Bates numbering

Bates numbering is a feature primarily used in legal discovery proceedings. When documents are entered into evidence, each page is stamped sequentially with a unique identifier for the case. Pages can then be referred to precisely during the proceedings.

508 accessibility for headers, footers and watermarks

Headers, footers, and watermarks are now tagged using Document Description XML (DDX) for accessibility, allowing all pertinent information in the document to be available as required.

Use of process variables within DDX

DDX is a powerful scripting language that is used to generate assemblage of documents. When used in a process through Workbench ES, DDX can, at times, now access the process variables that the process uses. These variables can be called by name instead of referenced through a process map or variable list and will be a large time-saver for business analysts.

Call an external URI from within a DDX script

This feature provides the ability to call a Universal Resource Identifier (URI) from within the DDX. The Assembler service can now call out for data or call another service to process a document. This allows for simplified process diagrams in Workbench ES. For example, in LiveCycle ES 8.0, a process may have had to branch one way if a document had one signature and another way if it had two signatures. With LiveCycle ES 8.0, this branch can be managed through a single call to the Assembler service to determine the number of signatures and the call to the appropriate service to support those signatures.

Convert PDF service

These enhancements and changes apply to PDF Generator ES and Output ES:

- Convert PDF documents to image formats including TIFF, PNG, PSD, GIF and more
- Convert PDF documents to PostScript

Convert to Image

This release provides:

- A new API for resolution and size of image
- Default used to be the size and resolution of the PDF page getting converted. With the new API, the library itself will scale to the correct size and resolution as specified by the call.

Convert to PostScript

The To PostScript service needed to be able to take advantage of the more sophisticated printers that are available today. The enhanced API allows all of the controls that a driver can manage without the use of a Postscript Printer Definition (PPD) file. New controls are available for the page size (both custom and standard), number of copies, and pages ranges. The orientation of the pages is implied from the size instead of an explicit landscape versus portrait parameter. Support for using a set of known printer marks, color bars, and registration marks is also included. For details about how to use these APIs in order to have greater control over the printing process, see [Programming with LiveCycle ES](#).

Encryption service

The Encryption service can now decrypt documents that are encrypted with AES 256 or AES256 crypto. This applies on to Acrobat 9 compatible docs.

DocConverter service

The new DocConverter service converts documents to PDF/A:

- Transforms PDF forms, XML forms (created in Designer ES), and PDF forms created in Acrobat to PDF/A-1B
- Converts signed or unsigned PDF documents (Digital Signatures ES required)
- Validates the compliance of a PDF/A file and converts it if necessary

The DocConverter service is supported on all standard LiveCycle ES platforms and does not require calls to Acrobat to convert or report on compliance.

You must have Output ES to use the DocConverter service with XML forms created in Designer ES.