

# Adobe® Digital Enterprise Platform architecture

## Considerations for new and existing customers

This guide provides a high-level overview of the Adobe Digital Enterprise Platform (ADEP) architecture and a set of upgrade recommendations for new and existing customers. The primary intent of this guide is to describe these upgrade paths. A separate document, "Adobe Digital Enterprise Platform Technical Architecture," provides a detailed description of the ADEP architecture.

### Architecture overview

ADEP is Adobe's platform for customer experience management (CEM), which combines capabilities from Adobe LiveCycle® Enterprise Suite software and acquired technology from Day Software, as well as new features to support the development of Adobe Customer Experience Solutions.

The ADEP architecture comprises two major server stacks:

- Experience Services
- Document Services

Experience Services provides a foundation for rapidly developing applications with rich user interfaces in a variety of formats, such as HTML and SWF. These applications may access back-end data sources, provide personalized and customized composite application interfaces, and access and share content. Composite applications allow existing systems to be integrated at the user interface level for better user experiences and more rapid development.

Document Services provides a foundation for orchestrating applications to process documents and forms. Together these two services enable the creation of solutions that incorporate intuitive, web-based user experiences and integrate with back-end processes to efficiently serve and communicate with customers and employees.

Experience Services are based on Day Software's CRX (Content Repository Extreme). This server component is an OSGi-based runtime whose only dependency is a Java™ virtual machine. The design of CRX and by extension Experience Services is to provide the scalability required by web-tier applications.

The Document Services provided as part of ADEP were formerly known as the Adobe LiveCycle Enterprise Suite. Document Services extends the capabilities of a JEE application server and is designed for integration into the enterprise tier. The architecture of Document Services is identical to that of LiveCycle Enterprise Suite, allowing existing LiveCycle applications to be easily upgraded.

Together, Experience and Document Services provide the functionality required to develop Customer Experience Solutions. This architecture provides the ability to meet the demands and scale of the web to serve customers, citizens, and partners with rich user interfaces and context-aware content as well as provide business process automation and document personalization integrated into the enterprise tier.

### Packaging changes

The Adobe Digital Enterprise Platform is available in two editions: Basic and Standard. Without diving into a detailed description of all the capabilities of each edition, it is important to point out that these editions leverage the capabilities that were previously available in separate products and product families.

For the most part, individual modules such as Adobe LiveCycle Forms or LiveCycle Output will no longer be sold as standalone products. They will be purchased as part of the Basic or Standard editions of the platform. In some cases, changes to the products have been made to better support Customer Experience Solutions and the Adobe Digital Enterprise Platform. Customer Experience Solutions sit on top of the platform and utilize both the Experience Services and Document Services within the platform.

## Existing product lines

The Adobe Digital Enterprise Platform (including Customer Experience Solutions) incorporates the following product lines and components. In most cases, from a product architecture perspective, few changes have been made. This is by design to protect existing customer investments.

| Existing Product Line            | Components  |
|----------------------------------|---|
| LiveCycle Enterprise Suite       | LiveCycle Forms, Output, Process Management, Reader <sup>®</sup> Extensions, PDF Generator, Digital Signatures, Rights Management, Mobile, Editions (such as Business Transformation Edition), ECM Connectors, and Production Print |
| LiveCycle Data Services          | LiveCycle Data Services   |
| LiveCycle Mosaic                 | LiveCycle Mosaic  |
| Day CQ/CRX                       | CQ, CRX, Marketing Campaign Management, Digital Asset Management, Social Collaboration, Mobile, Targeting and Optimization, ECM Connectors  |
| Solution Accelerators            | Correspondence Management, Interactive Statements, Managed Review & Approval  |
| LiveCycle Collaboration Services | LiveCycle Collaboration Services  |

In general, the following changes are being made to these product families as they are incorporated into ADEP. Recommendations on the technical upgrade path and information on future plans for these product families are provided below.

### LiveCycle Enterprise Suite

The existing LiveCycle Enterprise Suite has been rebranded as Document Services within the Adobe Digital Enterprise Platform. While enhancements to these services have been made in this release, there are no significant architectural changes. This allows existing applications to be easily upgraded. Adobe will continue to support and develop Document Services in the future. There are no plans to discontinue these services.

#### Notes:

1. Adobe LiveCycle Business Activity Monitoring ES is not included in the ADEP release. Customers that are using Business Activity Monitoring can upgrade their LiveCycle deployments to ADEP and continue to monitor ADEP applications using their LiveCycle Business Activity Monitoring ES2 deployment.
2. Effective August 5, 2011, Adobe is migrating Adobe LiveCycle Content Services ES customers to the Adobe Digital Enterprise Platform Experience Services. The product roadmap for customers that use Content Services is to move to the new ADEP Experience Services—Core, which includes a native Content Repository built on the modern, modular CRX architecture acquired during the Adobe acquisition of Day Software.

#### Recommendations:

New customers will purchase ADEP editions—Basic or Standard—based on the capabilities that they need. Customers can be confident creating CEM applications that use the Document Services, as they will continue to be supported and developed in the future.

Existing LiveCycle customers considering new projects deployed separately from their existing applications should purchase the appropriate ADEP edition to meet their application requirements.

Existing LiveCycle customers that wish to upgrade their current implementation can do a direct technical upgrade to the new Document Services in ADEP. The upgrade process is the same as it has been for LiveCycle in the past. For this release, it is possible to do a direct upgrade to ADEP from LiveCycle Update 1 (8.2.1) and LiveCycle ES2 (9.x).

A Readiness Verification Tool and companion documentation checklist are provided to assist customers in planning for this upgrade.

## LiveCycle Data Services

LiveCycle Data Services becomes part of Experience Services, providing the data management, remoting, and messaging capabilities required to develop CEM solutions. The existing LiveCycle Data Services 3.1 module based on JEE will continue to be available, and additional capabilities will be added to it in future releases.

### Recommendations:

New customers considering applications that require data services capabilities should consider purchasing one of the ADEP editions. Since the capabilities and platform support of ADEP data services and LiveCycle Data Services 3.1 differ, some customers may require the 3.1 version on JEE.

Existing LiveCycle Data Services customers considering new projects should also consider an ADEP edition. Again, capability and platform support may dictate the use of LiveCycle Data Services 3.1. Existing LiveCycle Data Services customers using older versions should consider upgrading to the current 3.1 version on JEE.

It is not recommended at this time that existing customers upgrade to the ADEP data services capabilities in Experience Services. The ADEP data services capability will not initially have some features currently available in LiveCycle Data Services 3.1 such as NIO channels (HTTP and RTMP), throttling and reliable messaging, custom adapter support, and edge server support.

In coming releases, LiveCycle Data Services on JEE and the data services capabilities in ADEP will reach feature parity, and a technical upgrade mechanism will be provided.

## LiveCycle Mosaic

LiveCycle Mosaic has been rebranded as the Composite Application Framework and is now embedded within the Experience Services stack. The structure of Mosaic and method of data persistence have changed from previous versions. Upgrading Mosaic applications will require a customized migration plan.

Adobe will assist customers with their Mosaic application migration. Customers should contact their account managers for more information.

### Recommendations:

New customers considering applications that will use the composite application capabilities of Mosaic should purchase the Standard edition of the platform. Mosaic capabilities are now part of this edition and have been rebranded as the Composite Application Framework.

Existing Mosaic customers wishing to upgrade their Mosaic applications will need to make changes to their applications for them to operate on the Experience Services stack. Therefore, existing customers considering new Mosaic style applications should purchase and develop on the ADEP Standard edition.

Adobe will provide assistance to customers when they wish to move their Mosaic applications onto the ADEP platform.

## Day CQ/CRX

The Day CQ and CRX product lines have been incorporated into ADEP. CRX forms the foundation of the Experience Services stack, and CQ has been branded as the new Web Experience Management solution. Architecturally, these products are unchanged, enabling a smooth upgrade experience in the future.

### Recommendations:

New customers requiring the web content management capabilities of CQ should purchase and develop their applications on one of the Web Experience Management solution editions (Basic, Standard, Premium). The Web Experience Management solution incorporates all the capabilities of CQ 5.4.

Existing CQ customers wishing to start a new deployment requiring web content management capabilities should also purchase and develop their applications on one of the Web Experience Management solution editions. Existing CQ customers should upgrade to the current CQ 5.4 version but should not transition their applications to the Web Experience Management solution at this time. A technical upgrade path to Web Experience Management has not been provided as the capabilities are identical to CQ 5.4. A technical upgrade path will be provided in a future release, and since no architectural changes have been made, a smooth and easy upgrade can be expected.

## Solution Accelerators

Solution Accelerators are now referred to as Customer Experience Solutions. The existing Managed Review & Approval Solution Accelerator has been enhanced and rebranded as Integrated Content Review. Correspondence Management and Interactive Statements have been combined into the Customer Communications solution. Additional Customer Experience Solutions have also been added on top of the platform.

### Recommendations:

New customers should consider one of the available Customer Experience Solutions depending on their needs. Solutions Accelerator customers considering new projects should implement their projects on one of the new Customer Experience Solutions, most of which require the capabilities in both the Experience Services and Document Services stacks. Customers can be confident creating CEM applications that use the Document Services as they will continue to be supported and developed in the future.

Customers that have existing Solution Accelerators and wish to upgrade and utilize new capabilities available in the Customer Experience Solutions on ADEP will need to migrate their applications. This is due to some changes within the solution architecture to leverage the Experience Services within ADEP.

Adobe will assist customers with the migration of their LiveCycle ES2.5 solutions. Customers should contact their account managers for more information.

## LiveCycle Collaboration Services

LiveCycle Collaboration Services have been rebranded as ADEP Collaboration Services. No other changes to the product architecture or packaging have been made. It continues to be offered as a hosted service and is sold separately as an extension to the ADEP editions.

## Summary

The Adobe Digital Enterprise Platform combines Experience Services and Document Services to create a unified platform for the development of customer experience management applications. The platform is designed to be deployed across the web and enterprise tiers and to protect customer investments in the existing LiveCycle and Day product lines. The following table summarizes the above-mentioned upgrade considerations and recommendations for new and existing customers.

| Product Line                     | New Customers                         | Existing Customers   |                                       |
|----------------------------------|---------------------------------------|--|---------------------------------------|
|                                  |                                       | Planning to Upgrade  | Starting New Deployments              |
| LiveCycle Enterprise Suite       | ADEP Basic or Standard                | Upgrade to ADEP  | ADEP Basic or Standard                |
| LiveCycle Data Services          | ADEP Basic or Standard                | Upgrade to or stay on Data Services 3.1  | ADEP Basic or Standard                |
| LiveCycle Mosaic                 | ADEP Standard                         | Upgrade to ADEP Standard<br>Migration required—contact account manager                 | ADEP Standard                         |
| Day CQ                           | Web Experience Management solution    | Upgrade to or stay on CQ 5.4   | Web Experience Management solution    |
| Solution Accelerators            | Customer Experience Solutions         | Upgrade to Customer Experience Solutions<br>Migration required—contact account manager | Customer Experience Solutions         |
| LiveCycle Collaboration Services | Collaboration Services ADEP extension | Collaboration Services ADEP extension  | Collaboration Services ADEP extension |

