

Overview

AEM is a Web Content Management (WCM) system that provides an enterprise solution for building websites with dynamic content. WCM provides a user friendly user interface for content creators to build and maintain websites from a predefined template. The application framework is based on Adobe CRX, Apache OSGi and Apache Sling frameworks.

Application Composition

The application tiers cover how the application will be composed of multiple layers. Within those layers they will be grouped by how they will be physically deployed.



CRX

The CRX is the content repository used by Adobe AEM and this will house all of the UI development artifacts. These artifacts are built together and deployed as a single package per application. The CRX will contain the JSPs (templates & components), JavaScript, HTML and CSS used to render the web application.

Components

Components allow authors to edit and configure content on a page. They give authors the flexibility to add or edit content on a page such as text or digital assets. Components can also include simple logic to be performed on input entered by the author or how content should be displayed to the end user.

Templates

Before a content page can be created in AEM, a template must be defined. Templates provide the layout and structure of each content page. They enforce the site's look and feel and cannot be modified by the author. Authors create pages based on the templates; they are allowed to add components to areas defined by the paragraph system.

Content Pages

A content page is a logical representation of a web page. There is no actual file associated to a content page but instead it is a collection of metadata about what will be an html page. Content pages are created based on a template with components added to the page. Once created, authors can add or edit content on the page. By including component containers within a template or page, gives authors the flexibility to add as many components needed to achieve the desired effect on the content.

Design

The Design node is used to store static content that you will reference in your application that deals with look and feel. A new design is created within the Tool section of the AEM web console. Once a design is created you can upload ccs and static images that will be used within the design.

OSGi

Adobe AEM utilizes OSGi as a repository for all java based libraries. Within the OSGi bundles the application specific logic can contain servlets, business objects and data access objects. The artifacts are built together and deployed as a single bundle per application. AEM allows for servlets to be registered as OSGi services to ease access by components in the CRX.

Bundles

A bundle is a standalone java library that is deployed inside the OSGi container. The bundles can be developed within AEM's editor environment or outside of AEM and deployed into the OSGi container via the Apache Felix console. The OSGi container allows you to dynamically manage the bundles without the need to restart your application. Bundles are a single module of code that can be started/stopped by the OSGi container.

Servlets

Within AEM you can define your own servlets using annotations. These servlets are then deployed inside an OSGi bundle and can be accessed directly from AEM components by path or resource type. These servlets can be used to render HTML on a page or return JSON for the front end to consume.

Services

Within AEM you can define your own OSGi services using annotations. These services are then deployed inside an OSGi bundle and can be accessed directly using the OSGi API. These services can be started and stopped without affecting the entire application.