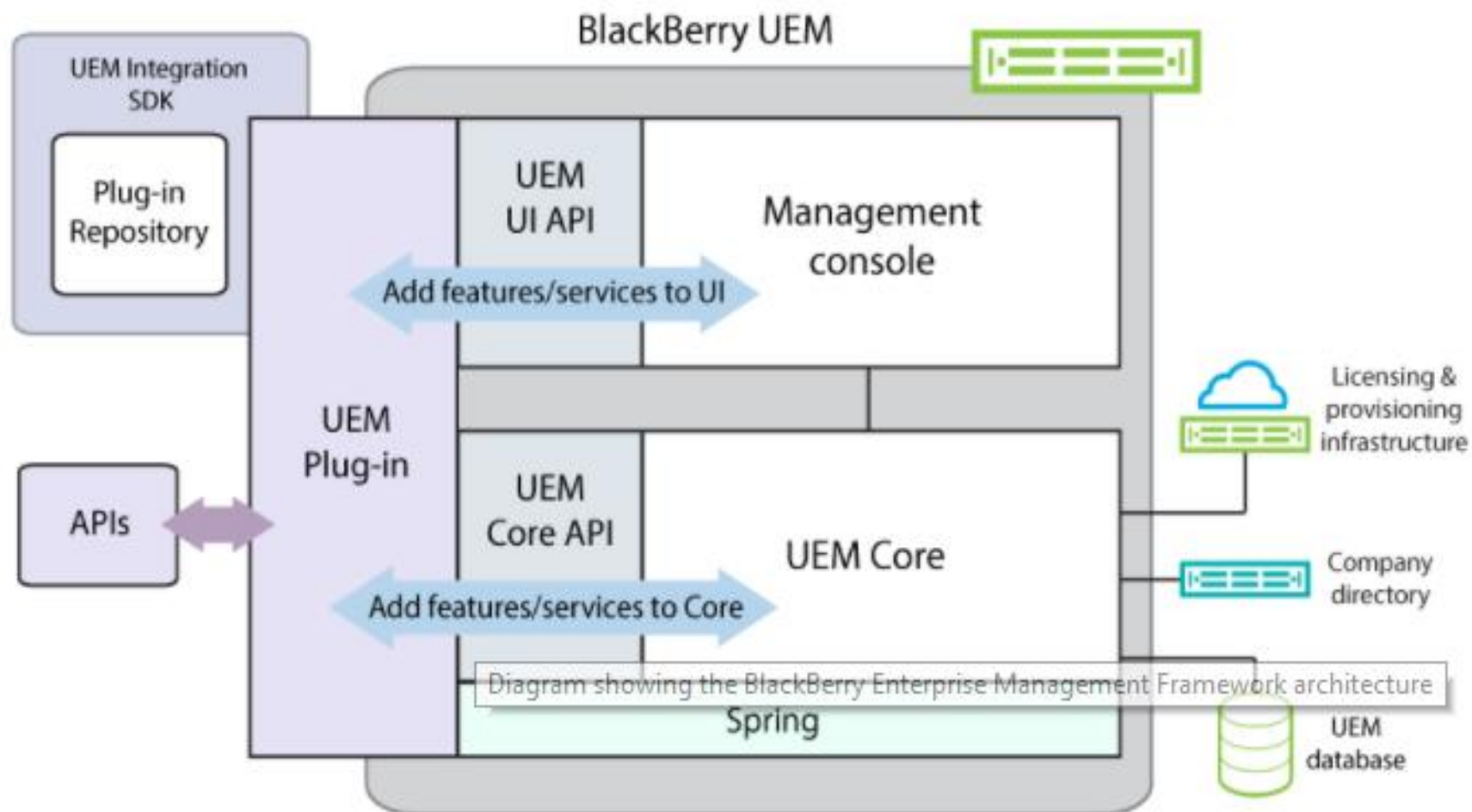


BLACKBERRY SDK

What is the BlackBerry UEM
Integration SDK?

Using the UEM Integration SDK (which includes the UEM Integration plug-in for Eclipse) and the UEM Integration APIs, you can create and deploy BlackBerry UEM plug-ins that allow for the tight integration of new features or services with an existing BlackBerry UEM installation.

Architecture: BlackBerry UEM plug-ins



The diagram above includes only the BlackBerry UEM components that are directly related to the BlackBerry UEM Integration SDK

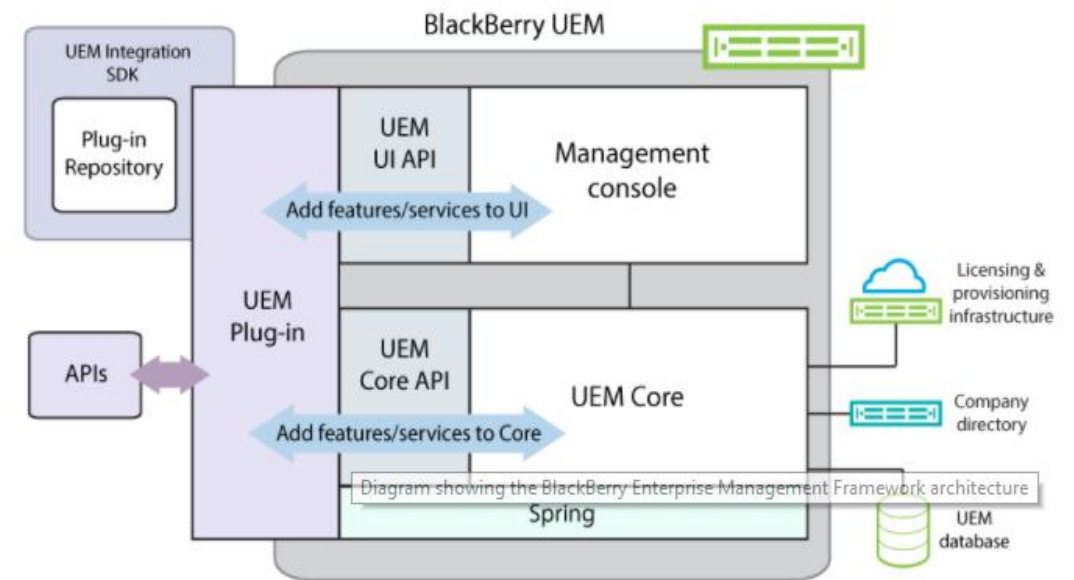
Management console

The management console is a web-based console that administrators use to configure an organization's BlackBerry UEM domain and perform daily tasks, including managing users, devices, policies, profiles, and apps.

- The management console consists of two parts:

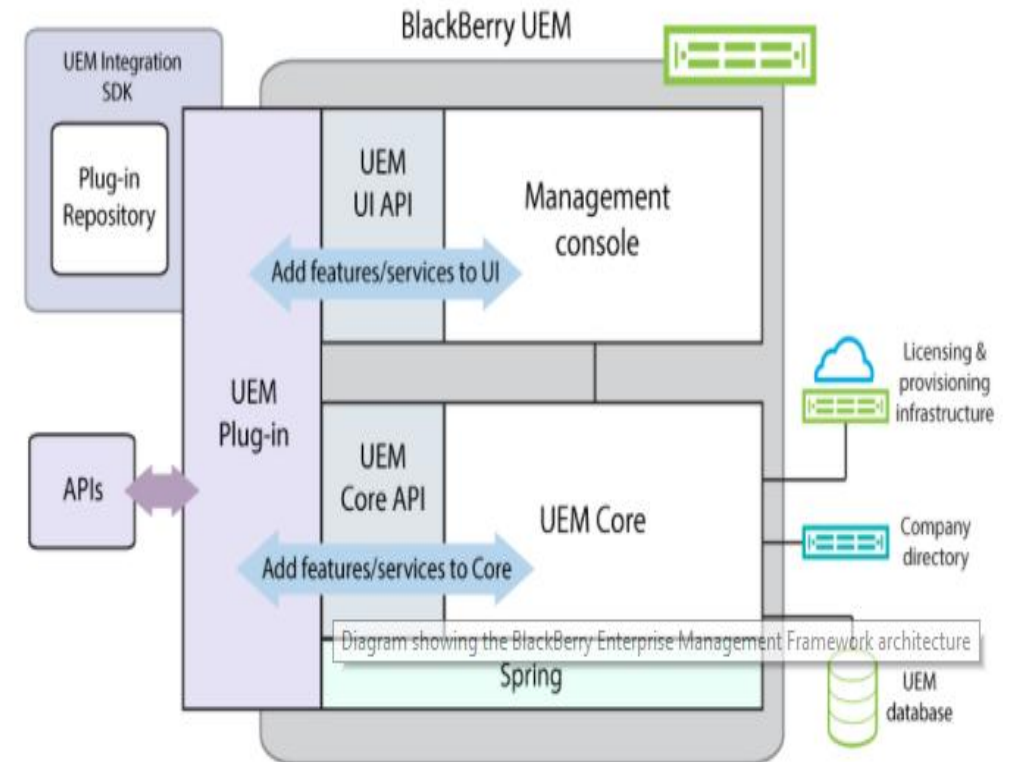
- UI client: A client application that is based on the Google Web Toolkit. Code is written in Java and translated to JavaScript . The UI client runs the JavaScript code in the browser to create and manipulate the appearance of the management console.

- UI server: A web server that hosts the necessary static resources and provides data support. The UI server runs in a Java VM and is compatible with Java.



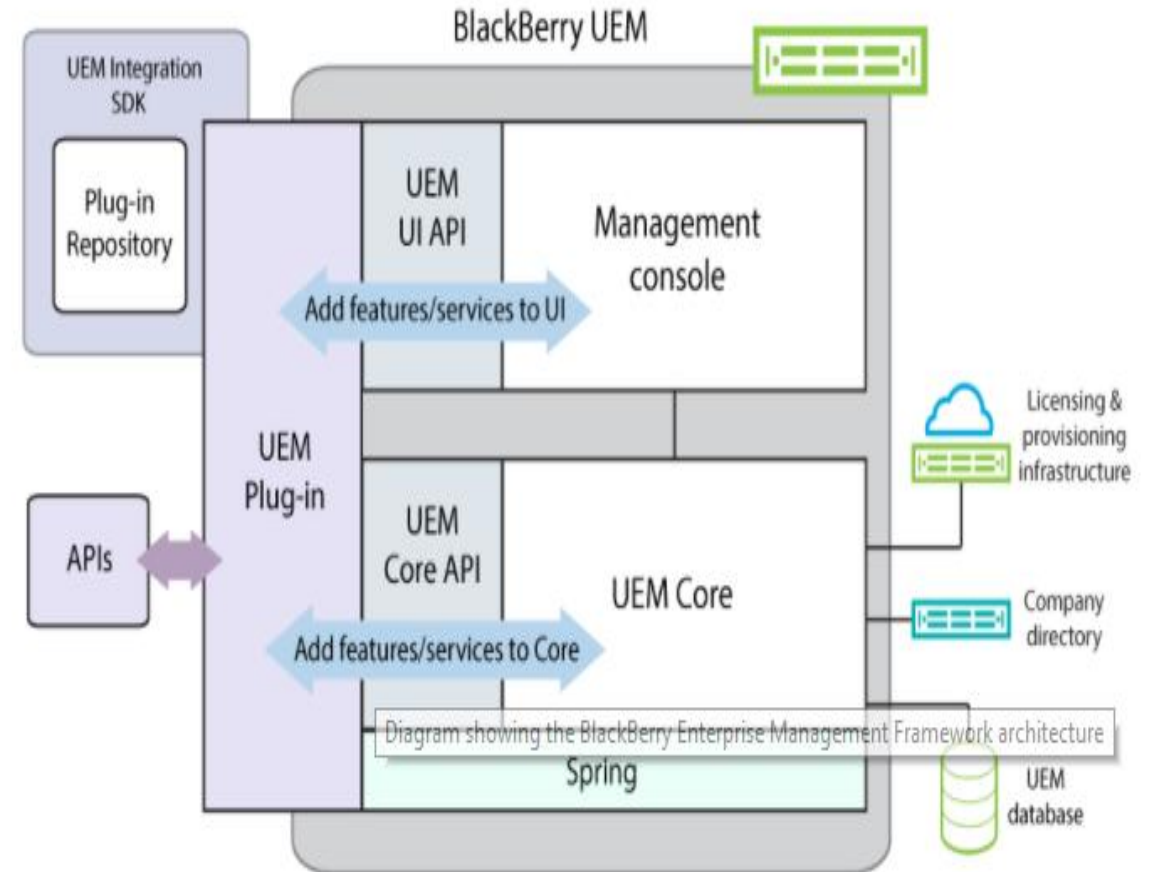
BlackBerry UEM Core

- The BlackBerry UEM Core is the central component of the BlackBerry UEM architecture. It consists of several subcomponents that are responsible for:
 - Logging, monitoring, reporting, and management functions
 - Authentication and authorization services for the BlackBerry UEM Core local directory and company directories
 - Scheduling and sending commands, IT policies, and profiles to devices
- The BlackBerry UEM Core is written in Java and is installed with the primary BlackBerry UEM components.



BlackBerry UEM plug-in

A BlackBerry UEM plug-in is a code delivery mechanism that adds new services or functionality to BlackBerry UEM. Developers create BlackBerry UEM plug-ins using the BlackBerry UEM Integration SDK (which includes the UEM Integration plug-in for Eclipse). The BlackBerry UEM Integration SDK provides a development environment and templates that can be used to integrate code with the management console and BlackBerry UEM Core. Developers manage BlackBerry UEM plug-in code in its own repository and build the code using the UEM Integration APIs. When BlackBerry UEM plug-ins are deployed to BlackBerry UEM, any new UI elements developed in the plug-in are added to the management console, and supporting functionality required by the BlackBerry UEM components is added to the BlackBerry UEM Core.

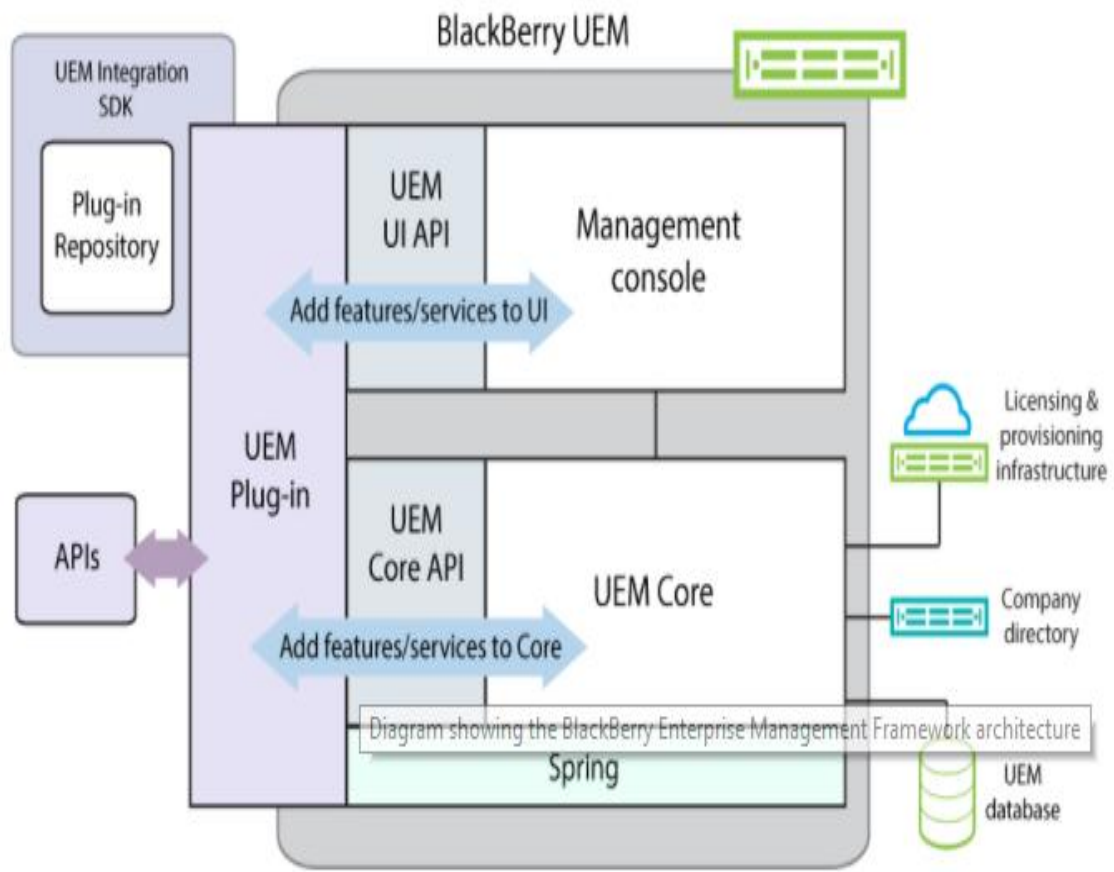


UEM Integrati
on APIs

•**The UEM Integration APIs are:**The BlackBerry UEM UI APIs: provide the capability to add new screens, menu items, configuration settings, status fields, and other UI elements to the management console to support plug-in features or services. There are APIs for the UI client and the UI server, with many components shared by both.

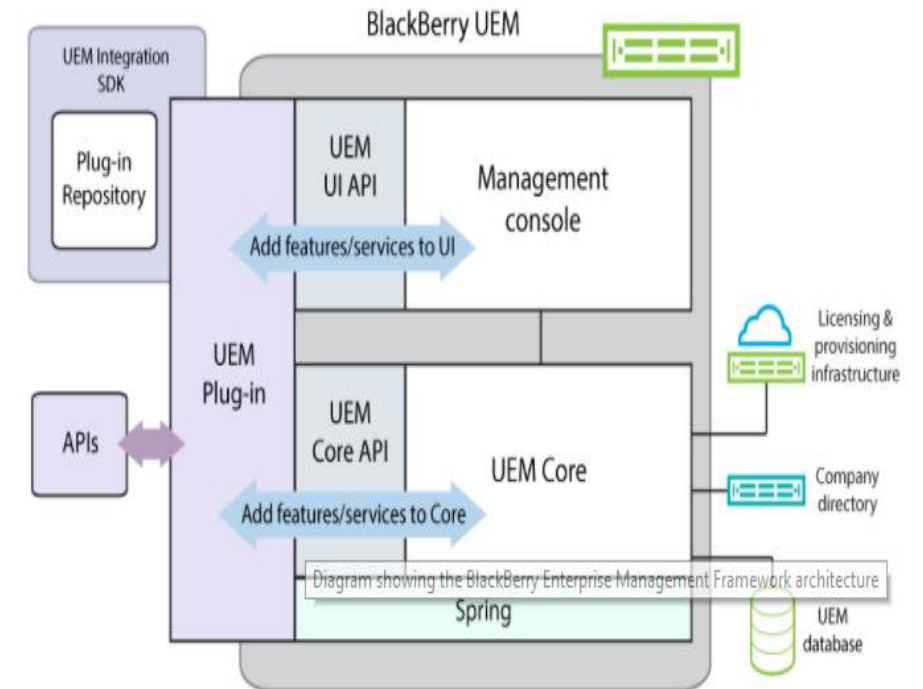
•**The BlackBerry UEM Core API:** provides the capability to integrate plug-in logic using various APIs for user management, group management, profile management, and so on.

The relationship between the UI and the BlackBerry UEM Core can be thought of as a client-middleware-server relationship, where the UI client runs and presents the management console in a browser, the UI server is the middleware for the management console, and the BlackBerry UEM Core is the main server component that allows BlackBerry UEM to carry out management activities that are initiated in the management console.



Spring

Spring is a Java application framework that is used to integrate a BlackBerry UEM plug-in with the BlackBerry UEM Core. When a plug-in is ready to deploy, a developer generates a plug-in package and adds the files to the BlackBerry UEM file structure. The ApplicationContext interface is used to load and execute the plug-in code with the BlackBerry UEM Core.



Sample BlackBerry

UEM plug-in

The BlackBerry UEM Integration SDK package includes a functional UEM plug-in sample that demonstrates several key use cases.

The sample is found in the Samples folder in the SDK package.

To import the sample projects into Eclipse, extract the Samples folder to a directory on your development computer.

Explore the sample plug-in to gain a better understanding of how to build your code and how a plug-in interacts with the UEM platform to add new functionality to the code base and to display new UI elements in the management console.

A brief introduction to some of the key packages:

Package	Description
Project: core.server	
<code>com.blackberry.snapin.sample.core.server.configuration > ConfigurationController.java</code>	Demonstrates how to get configuration data for a plug-in from the UEMdatabase and how to set configuration data in the database.
<code>com.blackberry.snapin.sample.core.server.eventing > SampleEventListener.java</code>	Demonstrates how a plug-in can subscribe to and handle synchronous or asynchronous events from the UEMplatform.

Package	Description
Project: core.server	
com.blackberry.snapin.sample.core.server.rest.controller > SampleProfileController.java	Demonstrates how a plug-in can create and add a new profile definition.
com.blackberry.snapin.sample.core.server.rest.controller > SampleUserController.java	Demonstrates how a plug-in can perform different actions for user accounts (for example, retrieve, create, delete, and so on).

Project: ui.client	
com.blackberry.snapin.sample.ui.client > ClientSnapin.java	<p>The main entry point that is invoked when the UI client initializes a plug-in.</p> <p>The UEM platform registers providers for the plug-in's UI elements and displays the UI elements that have been defined (for example, a new icon for the plug-in on the user details screen, a new menu item on the policies and profiles screen, a new settings screen, and so on).</p>
com.blackberry.snapin.sample.ui.client.sampleIFrame	Demonstrates how to add external content into the UEM management console using a frame model.
com.blackberry.snapin.sample.ui.client.settings	Demonstrates how to add plug-in UI elements to the settings screens.

Project: ui.client

<code>com.blackberry.snapin.sample.ui.client.userdetails</code>	Demonstrates how to add plug-in UI elements to the user details screens.
<code>com.blackberry.snapin.sample.ui.client.users</code>	Demonstrates how to add plug-in UI elements to the users screens.
<code>com.blackberry.snapin.sample.ui.client.usersandservices</code>	Demonstrates how to add plug-in UI elements to the users and services screens.

Project: ui.server

<code>com.blackberry.snapin.sample.ui.server > SnapinConnection.java</code>	Demonstrates how the UI server handles calls from the UI client to retrieve data from the UEM Core and provides the data to the UI client.
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THANKYOU!