

A large, thick red chevron pointing to the right, serving as a background for the text.

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# API Design Best Practices Summary

Red Hat JBoss Fuse (Camel)

Red Hat JBoss Data Virtualization, and

Red Hat JBoss Mobile Application Platform (FeedHenry)

## What is an API?

What are APIs (Application Programming Interfaces)? What is new about them? Aren't they just a newer version of SOA, which has been around for a long time? The concept of an API is not new; Linux, Windows, C, and Java all had APIs since their inception that were typically compiled into the user's application code and are executed in the user's computer.

API Category	Example	Timeline
Operating System	API for MS Windows	1985
Programming Languages	Java API	1995
Application Services	API for SAP (BAPI)	1990s
Infrastructure Services	Amazon Web Services API	2002
Web Services	Twitter API	2006

What is new is the rise and dramatic proliferation of lightweight public APIs, and the rapid expansion of these into enterprise applications. Today, enterprises are able to quickly build and maintain complex applications that orchestrate across public and private APIs to provide business users with the unified capabilities that they demand. Enterprise customers, suppliers, and partners are also demanding access to enterprise APIs to leverage within their own applications. So as an architect, it is important to understand and be able to resolve the unique challenges inherent both in building composite applications and in deploying APIs for public consumption.

## Why a paper just about APIs?

While it is true, that there are many similarities when designing applications to use lightweight APIs and using more traditional approaches,

there are some unique differences. Accenture and Red Hat have worked together to build a demonstration application along with a detailed whitepaper intended to help developers and application architects understand some of these differences and to help them to take advantage of the benefits of these technologies.

The white paper and demo application leverage Red Hat tools and technologies to demonstrate:

- What makes lightweight APIs different from more traditional approaches such as SOAP (Simple Object Access Protocol)
- Simple solutions to some of the common design and development challenges when implementing APIs
- How to use JBoss Developer Studio to simplify what used to be complex development activities

## Concepts and Technologies

Key concepts covered in the white paper include Middleware connectivity and ESB integration, Web Services integration, message transformation, lightweight APIs for mobile applications, data integration and others. All of these are demonstrated using a suite of highly integrated Red Hat products, including:

- **Red Hat JBoss Fuse**
- **Red Hat JBoss Data Virtualization**
- **Red Hat JBoss Developer Studio**
- **Red Hat JBoss EAP**

View the full white paper for details of how all this works together seamlessly to build and develop modern API-enabled applications.

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