



Cloud API Tip

In this tip, learn about the evolving world of cloud computing APIs.

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Cloud computing APIs: Looking for consistent approaches

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The world of cloud computing APIs has been constantly evolving since this highly-scalable architecture first gained attention less than five years ago. It is an area with great expectations but little commanding consensus of architecture - so far. Meanwhile, use of services is a common trend, as is use of REST interfaces.

Early cloud architecture leaders included Amazon, Google and Salesforce, with Microsoft, RackSpace and others more recently joining the contest. The later arrivals, it seems, are making design changes that in some ways codify basic approaches to cloud API building.

In some cases, present day applications can be ported over to cloud platforms with little code change. But to truly exploit the new computing paradigm, revisions are required to capitalize on special APIs associated with individual cloud architectures. That is worrisome for individuals concerned with lock-in.

Some common threads -- some repeatedly used abstractions, if you will -- keep emerging. Web services techniques were central to Amazon's early cloud computing efforts, and the Web services approach continues to drive much cloud activity. While major cloud architectures have doubled back to support conventional relational data interfaces, the cloud computing train really got going with non-relational RESTful interfaces, and these continue to mark a major difference between cloud architecture and other architectures. Each major cloud architecture supports what can be described as RESTful Web services.

Standards efforts have sought to address the lack of consistency in cloud APIs. The Simple Cloud API effort shows how some level of consistent abstraction might be applied across various clouds. This effort, originated by Zend, IBM, Microsoft, Rackspace and others, breaks its basic API taxonomy down into File Storage, Document Storage and Simple Queues. The Simple Cloud API is meant to work with multiple cloud services. Where, for example, one cloud service might use a different method than another would for listing out

contents of a directory, the Simple Cloud API would use one method to handle both services.

Depending on your point of view, there are either too few or there are too many cloud APIs. For no strong reason, people associate cloud computing with open source standards. But the different major cloud approaches are not compatible with one another, so possible 'lock-in' on the cloud is still a concern. This is one of the many niggling implementation issues that make cloud development something of a frontier territory.

About the Author: *Jack Vaughan oversees editorial planning and coverage for SearchSOA.com. Prior to joining TechTarget in 2004, he was editor-at-large at Application Development Trends and ADTmag.com. He has written about computer hardware and software for such publications as Software Magazine, Digital Design and EDN News Edition. He has a bachelors degree in Journalism and a masters degree in Science Communication from Boston University.*

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