# MAXIMIZE YOUR STRATEGIC FLEXIBILITY WITH AN OPEN, HYBRID CLOUD

Executive Overview

There are many paths to the cloud for the enterprise. The one you choose can affect much more than your enterprise IT architecture. It will determine your organization's competitiveness, flexibility and IT economics for the next decade and beyond.

Done right, a cloud can deliver strategic advantages by redirecting resources from merely keeping the lights on to innovating. But you must be sure that the cloud you build is the right cloud for your enterprise—one that does not lock you into a single vendor's solution or create additional silos of cloud management complexity. If you build an open cloud, keeping a hybrid solution in mind, you can take advantage of the full strategic business value and promise of cloud computing.

Red Hat® Cloud solutions deliver open standards, choice of infrastructure, interoperability and portability using the same open approach that revolutionized standard operating systems. There are a wide range of attributes that define wholly closed to truly open cloud solutions:

- **Open source**. Gives adopters the ability to control their particular implementation without restricting them to the technology and business roadmap of a specific vendor. It puts IT departments in control of their own destiny. It helps users collaborate with other communities and companies to help drive innovation that matters to them.

- **A viable, independent community**. Open source isn't just about the code, its license, and how it can be used and extended. The community behind the code and how that community is governed, is as important as the code itself.

- **Based on open standards, or protocols and formats moving toward standardization, that are independent of their implementation**. Approaches to interoperability that aren't under the control of individual vendors and that aren't tied to specific platforms or implementations offer important flexibility even if they're not yet standards.

- **Gives you the freedom to use intellectual property**. Recent history has repeatedly shown that there are few guarantees when someone else owns IP on which you depend. Using another party's intellectual property as part of a "de facto standard" might be tacitly tolerated today, but there is no guarantee that you can continue to use it in the future if there's a change of ownership or financial situation.

- **Deployable on the infrastructure of your choice**. Hybrid cloud management should provide an additional layer of abstraction above virtualization, physical servers, storage, networking, and public cloud providers. This implies—indeed requires—that cloud management not be tied to a specific virtualization and other foundational technology.

Ultimately, all this technology and all these business relationships are about delivering one thing: open, hybrid clouds. Because they're the only approach to cloud computing that:

• Enables portability of applications and data across clouds

• Fully leverages existing IT investments and avoids creating new silos

• Spans physical servers, multiple virtualization platforms, and the broadest choice of public clouds

• Provides portability of applications and lifecycle management of those applications across heterogeneous infrastructures

• Allows an evolution to the cloud that delivers incremental IT value each step along the way

• Keeps organizations firmly in control of their own technology strategy

• **Pluggable and extensible with an open API**. This lets users add features, providers, and technologies from a variety of vendors or other sources. Critically, the API itself cannot be under the control of a specific vendor or tied to a specific implementation, but must be under the auspices of a third-party organization that allows for contributions and extensions in an open and transparent manner.

• **Enables portability to other clouds**. Implicit in a cloud approach that provides support for heterogeneous infrastructure is that investments made in developing for an open cloud must be portable to other such clouds. Portability takes a variety of forms, including programming languages and frameworks, data, and the applications themselves.

The ability to move and manage applications (and their associated data) across a heterogeneous infrastructure is central to the concept of a hybrid cloud in which the underlying infrastructure can differ markedly between on-premise platforms and public clouds or even between different public cloud providers.

In a hybrid cloud environment, Red Hat leverages the interoperability provided by technologies such as the Apache Deltacloud Project but goes beyond by offering consistent runtime environments across private and public clouds. With access to products such as Red Hat Enterprise Linux® and JBoss Enterprise Middleware on public clouds, the exact same certified Red Hat software can run across multiple platforms. For example, developers can write and test software in a public cloud environment and then deploy the application on-premise. A common runtime means common development and the production runtime environments; there's no need to re-certify an application as it moves between different stages of its lifecycle.

Red Hat's Certified Cloud Provider (CCP) program provides access to a broad ecosystem of enterprise-quality proven Cloud Providers, enabling customers to select from a wide spectrum of business terms, service levels, and global locations. These providers offer enterprise support—backed by Red Hat—along with a Red Hat Update Infrastructure at the provider for timely access to the latest updates.

Building hybrid clouds that span heterogeneous on- and off-premise resources requires an open approach. This is the approach taken by Red Hat across its entire cloud portfolio. But providing consistency for applications across hybrid environments requires even more. It takes consistent environments on which applications can run. It takes business relationships and technology to make the experience of running applications in a hybrid environment consistent (such as the Certified Cloud Provider program).

Learn how to build a better cloud with Red Hat open hybrid cloud solutions.
**http://www.redhat.com/solutions/cloud-computing/**