



## Solution Overview

### Customer Challenge

The velocity of business innovation has accelerated, creating new business imperatives for multi-national corporations to compete in tomorrow's market.

As the market transition to Cloud-based services accelerates, so does the need for data center automation. In order for today's IT management systems to provide services such as IaaS (Infrastructure-as-a-Service), automated provisioning and ongoing monitoring and management of network, compute, and storage elements are required. Cloud orchestration capabilities also must ensure compliance with an organization's or industry's policies, as well as ensuring that customer service level agreements are met.

To effectively meet the new opportunities and challenges necessary to compete and win in tomorrow's market, companies must increase worker productivity, operational efficiency, and corporate agility. However it is impossible for IT to meet this demand within the constraints of existing systems. Multi-national corporations are looking for data center solutions designed with an architecture to power the next-generation Internet, providing:

- Service innovation velocity, flexibility, and agility
- Support for heterogeneous environments
- Protection of prior IT investments while planning for tomorrow's needs
- Superior performance to support massive traffic flows in either direction.
- Attain continuous, reliable performance and access to a diverse set of applications and data
- Comprehensive security solution providing data integrity, identity management, operational compliance, and policy enforcement
- High data center service intelligence at the core to dynamically relocate loads without skipping a beat.
- End-to-end intelligence to support multimedia services whether flowing north-to-south or east-to-west or between any point of the compass

Key to winning in tomorrow's market is having an information management system foundation that enables speed, flexibility, and breakthrough worker productivity, all while leveraging previous investments in IT infrastructure. Winning requires a solution that leverages "what you have" while paving the way for the future.

**Cisco and BMC** have worked together for over two years to create the industry's most robust, flexible, and scalable Private Cloud solution, enabling a "step wise" approach to taking the customer on their journey to deliver accelerated "IT as a Service" for large enterprises.

See [Press Release](#):

***Dec. 6, 2010 - Cisco and BMC Software today announced a strategic alliance to develop and market new solutions for large-scale multi-tenant cloud computing infrastructures.. Under the alliance, the two companies are aligning product development roadmaps and technology architectures to offer worldwide customers a complete suite of solutions that simplify and automate the delivery of cloud services. As part of***

***the alliance, Cisco and BMC announced the availability of a new cloud solution, the Integrated Cloud Delivery Platform, which is designed to meet the requirements of service providers and large-scale private cloud computing environments. This new joint solution helps cloud providers easily deploy end-to-end cloud services running on a cloud computing infrastructure that spans data center networks, computing systems, storage and applications.***

Many IT managers view cloud computing as the next logical step in controlling their data center resources, as well as a primary means to lower total cost of ownership. Cloud computing is an emergent operational model which leverages virtualization and abstraction to provide more compelling economic benefits for computing of all forms and greater agility and speed for users. More than just an industry buzzword, cloud computing promises to revolutionize the way data center resources are deployed, configured, and managed for years to come.

## Our Solution

To address these challenges, **Cisco and BMC** have partnered to deliver a holistic infrastructure solution for multinational corporations to deliver a wide range of IT services to their internal customers with breakthrough speed and efficiency.

On their journey to the cloud, organizations are realizing they need a new set of technical capabilities to support these new business requirements, including flexible, multi-zone network containers, service blueprints, and service governors. The Joint Cloud Orchestration solution, BMC's Cloud Lifecycle Management software is used to orchestrate Cisco's Cloud Infrastructure. Cisco has validated this solution on its Cloud infrastructure to deliver new functionality to meet the needs of large enterprises or Service Providers.

The Cisco® Virtualized Multi-Service Data Center (VMDC) architecture provides a set of specifications and guidelines for creating and deploying a scalable, secure, and resilient infrastructure to address the needs of Cloud Computing. In VMDC, Cisco uses the latest routing and switching technologies and advancements in cloud security and automation, as well as leading edge offerings from Cloud ecosystem partners, to develop a trusted approach to cloud computing, enabling service providers to build secure public clouds and enterprises and other organizations to build secure private clouds with the following benefits:

- Reduced time to deployment—Provides a fully tested and validated architecture that enables technology adoption and rapid deployment.
- Reduce risk—Enables enterprises and service providers to deploy new architectures and technologies with confidence.
- Increased flexibility—Enables rapid, on-demand workload deployment in a multi-tenant environment using a comprehensive automation framework with portal-based resource provisioning and management capabilities.
- Improved operational efficiency—Integrates automation with a multi-tenant resource pool (compute, network, and storage), improves asset use, reduces operational overhead, and mitigates operational configuration errors.

Essentially breaking down the limitations of the traditional siloed environment, this end-to-end architecture helps service providers or large enterprises transform their data centers to be more efficient while supporting the migration to an IaaS model for their customers. This foundational cloud architecture, with its inherent ability to scale on demand, means that Cisco's VMDC solution provides the perfect platform for service providers to deliver higher value services and applications to their customers with improved economic benefits.

## Customer Benefits

The Cisco Virtual Multi Service Data Center solution provides service providers or large enterprises with a single common infrastructure that lets you cut costs, optimize resource use, and deliver a secure virtual experience across your entire service portfolio.

This solution lets organizations meet the growing demand for services that are more collaborative, more personal, and more visual. Cisco's VMDC platform delivers a holistic, end-to-end approach for delivering managed services to customers, including:

- Increased IT staff productivity, increased business agility, and improved workflow through just-in-time provisioning and mobility support.

- Increased server efficiency and storage utilization through shared pools of data resources.
- Reduced cost of deploying IaaS and other services while bringing IaaS to market more quickly.
- Increased compliance as Quality of Service (QoS), encryption, and secure partitioning technologies work in conjunction across the components of the VMDC solution.

## Why Cisco and BMC?

Deploying new services in the cloud model requires an infrastructure that can provide the always-on reliability and enterprise-grade security that businesses require. In conjunction with our ecosystem of partners, Cisco offers a truly end-to-end, standards-based solution designed to help customers, obtain a more reliable, more secure, and better performing infrastructure for all their cloud computing needs.

Cisco is in a unique position to assist its customers as they design their Cloud solution strategy and “IT as a Service” offerings that compliment your particular service portfolio. Without this broad view, the approach to service delivery tends to focus on a few narrow areas, leading to an environment that perpetuates silos and localized improvements, while sacrificing the greater gains obtained from a fully-optimized VMDC.

Compared to our competitors’ limited and proprietary solutions, Cisco and BMC offer:

- A standards-based approach—Cisco has worked diligently with standards bodies to define Ethernet enhancements that enable I/O consolidation and make it as efficient and easy to manage as possible.
- An ecosystem of development partners—Primary solution components of the Cisco VMDC platform were developed in conjunction with industry-leading data center companies, such as **BMC**, NetApp, VCE, and Intel. In addition, partner ecosystem components enable end-to-end and centralized network administration and security throughout the entire VMDC platform.
- Significantly less IT infrastructure and more energy efficient—The simple design radically reduces the number of components requiring power and cooling compared to traditional data center environments.

## Conclusion

BMC’s Cloud Lifecycle Management together with Cisco’s Virtual Multi Service Data Center (VMDC) platform solution provide the customer with an integrated solution that enables a path for evolving your existing data center infrastructure to a more cost-effective and efficient cloud computing model with the on-demand scalability demanded by your customers’ applications.

With a complete, end-to-end solution that unites network, compute, and virtualization resources, while providing improved management and robust security, our joint solution simplifies setup, improves business metrics, and enables just-in-time resource provisioning.