

# Why Discovery Is Critical to Multi-Cloud Success

Best Practices for Maximizing Your Investment in a Multi-Cloud Environment



# Table of Contents

- 01 Executive Summary
- 02 The Cloud Adoption Curve
- 03 How Discovery Addresses Challenges In Your Multi-Cloud Strategy
- 05 Multi-Cloud Visibility With BMC Helix Discovery
- 08 Conclusion

# Executive Summary

Although cloud computing represents perhaps the biggest change to IT in recent history, it's not as simple as it sounds. Despite a seemingly constant call to "move to the cloud," businesses must navigate a wide variety of service offerings and deployment models to determine what's best for their requirements.

Organizations adopting cloud can use multi-cloud environments—multiple public cloud services, often along with on-premises physical, virtual, and private cloud infrastructure—in different ways. This adds elasticity and scalability to your infrastructure, but also makes it more difficult to gain a clear, holistic view across your IT ecosystem.

This white paper explains how multi-cloud discovery addresses this challenge by providing insight into your assets and their relationships across every environment.

By providing unprecedented visibility into this complex landscape, multi-cloud discovery enables you to optimize costs, reduce risk, and maximize your investment in a multicloud environment.



# The Cloud Adoption Curve

The overwhelming majority of organizations are shifting to a cloud strategy to support both their core operations and digital transformation. The question now is not if to move to the cloud, but what, when, and how.

This shift is reflected in recent research on cloud maturity. In a survey of over 1,000 IT professionals conducted by BMC in September 2017, 9 out of 10 cloud users see cloud solutions as important in delivering agility, scale, and operating flexibility.

According to Gartner, by 2021, more than half of global enterprises already using cloud today will adopt an all-in cloud strategy.<sup>1</sup>



<sup>1</sup> Gartner, Cloud Computing Enters Its Second Decade, <http://www.gartner.com/smarterwithgartner/cloud-computing-enters-its-second-decade/>, January 2017.

# How Discovery Addresses Challenges In Your Multi-Cloud Strategy

This new, cloud-centric world requires agile and innovative ways to support your cloud deployment. Whether you're running a hybrid cloud, multi-cloud, or both, a diverse environment depends on sophisticated discovery to optimize its performance and maximize its potential.

## The Importance of Multi-Cloud Discovery

While discovery may not be the first IT initiative that comes to mind during your transition to a hybrid or multi-cloud environment, it plays a critical role in managing all the moving pieces of your growing infrastructure. In fact, understanding the assets one owns and their dependencies has never been more relevant in a landscape that includes multiple vendors, different splits in responsibility, accelerated innovation delivery, and greater emphasis on automation.

A well-executed discovery initiative enables you to:

- Provide accurate asset information to assist decision making (e.g., change approval or release planning) and help resolve incidents and problems faster

- Define and maintain the components of business services, their role and ownership, how they relate to one another, and how they evolve over time
- Provide means and processes to guarantee data quality

These capabilities are ideal in any IT environment, but become crucial with the move to cloud. As more and more production components get deployed in various cloud services, establishing streamlined discovery built on the objectives listed above helps you optimize costs and reduce the risks related to performance, availability, security, and compliance.

Streamlined configuration management helps you optimize costs and reduce the risks related to performance, availability, security, and compliance... To meet the changing requirements of virtual, mobile, and cloud platforms, service dependency mapping tools will require expanded functionality for breadth and depth of discovery, such as storage devices, mainframes, and hybrid cloud resources.<sup>2</sup> (Gartner)

2 Gartner Hype Cycle for ITSM 2017, <https://www.gartner.com/doc/3765066/hype-cycle-itsm->, July 2017.

## 5 Key Requirements for Multi-Cloud Discovery

For discovery to positively impact your multi-cloud deployment, it must be able to execute these five things with unparalleled precision:

### 1. Know what's out there

- Understand what compute resources and software you have deployed in multi-cloud environments
- Identify redundancies and suboptimal architecture deployments in cloud environments
- Enable asset management and cost transparency processes by providing the inventory and relationships to cloud services

### 2. Transform your IT strategy

- Model the current state to better assess which applications and services are good candidates to move as part of a cloud strategy

### 3. Secure your infrastructure

- Identify unused or obsolete servers still utilizing compute resources in the cloud
- Identify version sprawl amongst the software and OSs deployed on VMs in the cloud
- Identify internet-exposed cloud resources and what upstream applications may be at risk

### 4. Manage your multi-cloud deployment

- Relate cloud services to incidents, problems, and changes to adhere to service management good practices
- Provide the dependencies of cloud services in support of change impact analysis
- Understand how internal infrastructure depends on cloud services and vice versa in hybrid application deployments

### 5. Monitor your multi-cloud environment

- Provide application models, which include all cloud and internal infrastructure from hybrid cloud deployments, to understand dependencies and impact when events occur
- Support activities to ensure monitoring of the entire environment by identifying resources which may not yet be monitored

All of these capabilities enable you to manage, monitor, and measure your multi-cloud environment with the same accuracy, breadth, and security as a traditional internal data center. Whether you're a "cloud beginner" or on your way to an all-in cloud strategy, these capabilities form the foundation to empower digital transformation.

# Multi-Cloud Visibility With BMC Helix Discovery

## Automate Asset Discovery and Application Dependency Mapping

BMC Helix Discovery, a multi-cloud discovery and dependency mapping solution, delivers these key capabilities and more. It creates a dynamic, holistic

view of data center and multi-cloud assets and the relationships between them. As a result, IT gains critical visibility into how infrastructure enables digital business—and how it can continue to provide and drive value.

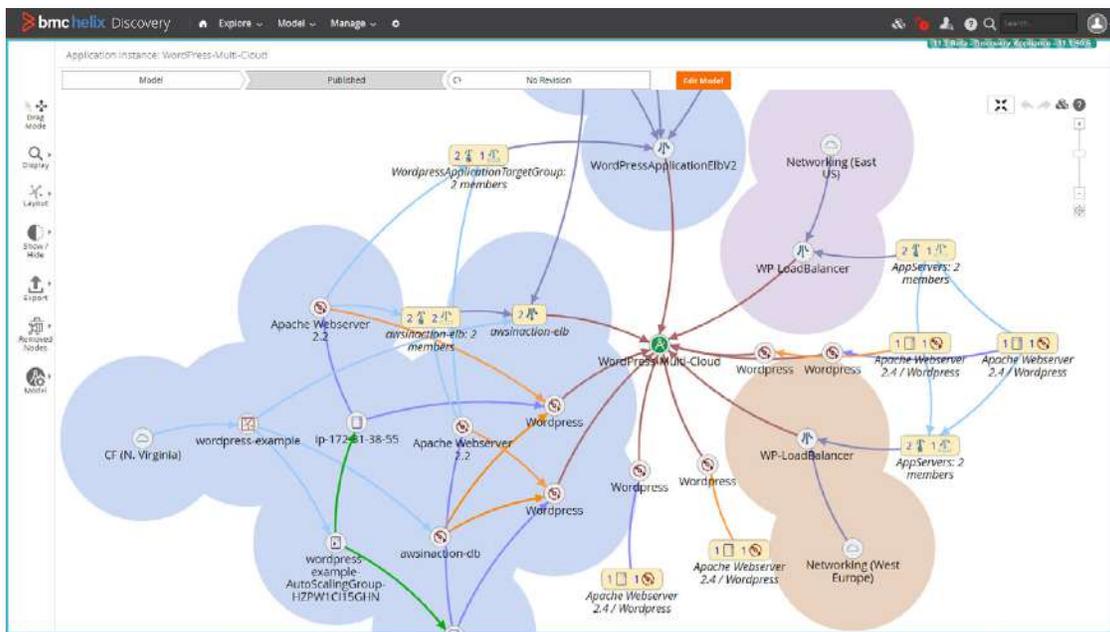


Figure 1: Closed Loop Change and Configuration Management overview

BMC Helix Discovery scales across the largest and most complex multi-cloud environments, including AWS and Azure, to deliver unparalleled insight into your diverse infrastructure. Unlike less sophisticated solutions, it serves as a single source of information via agentless and API discovery, so you get truly multi-environment application dependency mapping.

It also discovers more asset types than any other discovery and dependency mapping tool on the market—with over 4,000 asset types and counting, and new vendors and resources added every month.

With BMC Helix Discovery, you can eliminate cloud asset sprawl, understand how vulnerabilities affect applications and infrastructure, and gain the deepest insight into your environment and assets. That means you spend less time worrying about what you have, and more time transforming your business.

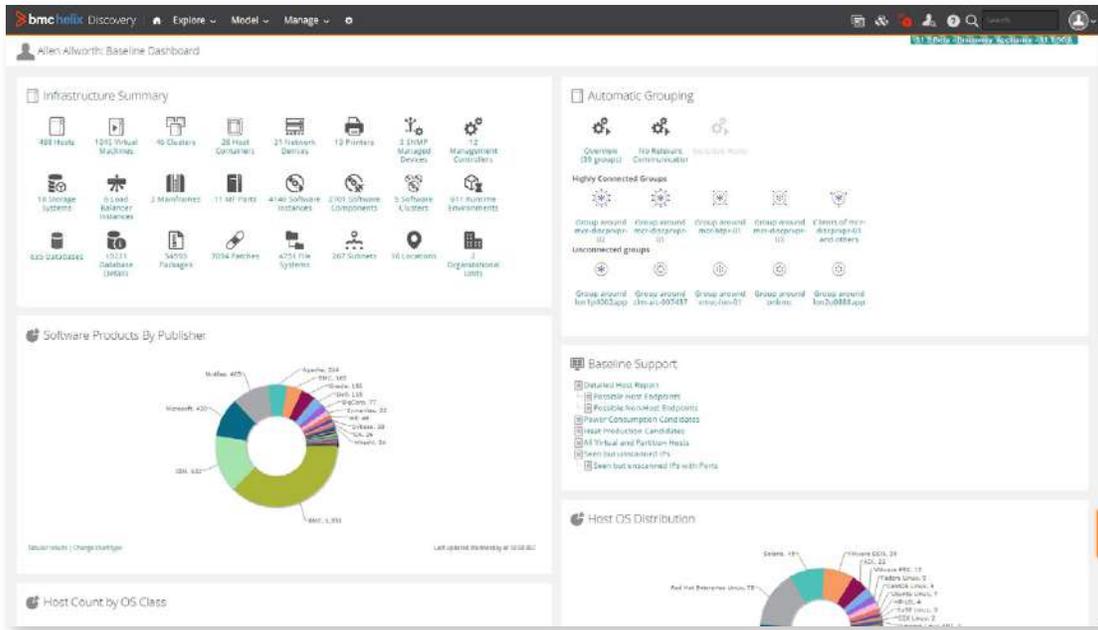


Figure 2: Closed Loop Change and Configuration Management overview

## Key Features for Multi-Cloud Discovery

### 1. Single pane of glass for internal data center, public cloud, and private cloud

- Cloud and internal data center agnostic model
- Can model hybrid applications that span multiple clouds and data centers
- Ability to overlay cloud context against traditional assets

### 2. Updates at the speed of the cloud

- Over 4,000 asset types currently discoverable—the highest number in the industry
- Monthly knowledge updates to add new cloud vendors and cloud resources

- Framework to allow you to extend patterns as cloud vendors release new services
- Event-driven updates react to changes as they occur
- Open platform for enabling systems and processes
- Secure integration to CyberArk

### 3. Start-anywhere application modeling

- Map from any starting point (top-down, bottom-up, middle-out)
- Have awareness of cluster technologies and how they shape applications
- Represent shared software infrastructure in the most complex models

BMC Atrium CMDB works with BMC Helix Discovery as a central reference point for IT infrastructure and services, including cloud services and their relationships. As a best-in-class configuration management database, it creates a complete, accurate, and up-to-date view of the people,

technologies, and services that make up your business and IT environments, including your clouds.

Organizations that use BMC Helix Discovery report up to a 470% ROI over five years with an average eight-month payback period.<sup>3</sup>



Figure 3: Closed Loop Change and Configuration Management overview

3 IDC, The Business Value of BMC Discovery Software, <http://media.cms.bmc.com/documents/BMC-Discovery-Updated-May-2017.pdf>, July 2016.

# Conclusion

For most organizations, a multi-cloud environment already is or will soon be the reality. Cloud is not a one-size-fits-all approach, and as its offerings and capabilities expand, so will the ways in which businesses use it to their advantage.

BMC Helix Discovery mitigates the complexity of a multi-cloud environment with a clear view into your assets and its relationships, no matter where its hosted. From public to private to hybrid and everything in between, BMC Helix Discovery delivers the visibility and control you need to make the most of your multi-cloud environment.



## For more information

To learn more about BMC Helix Discovery, visit [bmc.com/it-solutions/discovery-dependency-mapping](https://bmc.com/it-solutions/discovery-dependency-mapping).

### About BMC

BMC delivers software, services, and expertise to help more than 10,000 customers, including 92% of the Forbes Global 100, meet escalating digital demands and maximize IT innovation. From mainframe to mobile to multi-cloud and beyond, our solutions empower enterprises of every size and industry to run and reinvent their businesses with efficiency, security, and momentum for the future.

### BMC – Run and Reinvent

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