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Illuminating IT Landscapes: A Comparative Analysis of Discovery in ServiceNow and BMC Helix

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***Abstract:** This research paper presents a comprehensive comparison of the Discovery applications offered by ServiceNow and BMC Helix. The study examines key features, discovery mechanisms, data collection capabilities, integration with CMDB, automation features, and analytics tools of both solutions. By evaluating their strengths and weaknesses in discovering and mapping IT assets and relationships, this paper aims to provide insights for organizations seeking to enhance their visibility into complex IT environments and improve overall IT service management.*

I. INTRODUCTION

In today's rapidly evolving IT landscapes, effective Discovery is crucial for maintaining an accurate view of IT assets, their relationships, and dependencies. ServiceNow and BMC Helix, two leading ITSM platforms, offer sophisticated Discovery applications designed to help organizations automatically identify and map their IT infrastructure components, applications, and services.

This paper aims to provide a detailed comparison of the Discovery capabilities offered by ServiceNow and BMC Helix. We will explore how each platform addresses key aspects of discovery, from infrastructure and application mapping to cloud discovery and integration with other ITSM processes.

II. BACKGROUND

A. *ServiceNow Discovery*

ServiceNow's Discovery application is a core component of its IT Operations Management (ITOM) suite, built on the Now Platform. It offers a comprehensive set of tools for discovering and mapping IT assets across on-premises, cloud, and hybrid environments.

B. *BMC Helix Discovery*

BMC Helix Discovery, formerly known as BMC Atrium Discovery and Dependency Mapping (ADDM), provides an AI-enhanced approach to IT discovery. It leverages cognitive automation and machine learning to enhance the discovery process and maintain an up-to-date view of the IT environment.

III. COMPARISON

A. *Discovery Mechanisms*

1) *ServiceNow*

a) Agentless discovery using various protocols (SSH, WMI, SNMP, etc.)
b) Agent-based discovery for detailed information gathering
c) API-based discovery for cloud and virtual environments
d) Scheduled and on-demand discovery options

2) *BMC Helix*

a) Agentless, API-less discovery approach
b) Passive network traffic analysis for application mapping
c) AI-driven discovery pattern recognition
d) Continuous and real-time discovery capabilities

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B. Scope of Discovery

1) ServiceNow

a) Infrastructure discovery (servers, network devices, storage)
b) Application and service mapping
c) Cloud resource discovery (AWS, Azure, Google Cloud)
d) Container and microservices discovery

2) BMC Helix

a) Comprehensive infrastructure and application discovery
b) Deep application dependency mapping
c) Multi-cloud and hybrid environment discovery
d) IoT and edge computing device discovery

C. Data Collection and Normalization

1) ServiceNow

a) Extensive library of discovery patterns
b) Automated CI classification and categorization
c) Data normalization and reconciliation
d) Custom data collection through scripting

2) BMC Helix

a) AI-enhanced data collection and interpretation
b) Automated data enrichment from multiple sources
c) Advanced pattern matching for accurate CI identification
d) Machine learning for improved data quality over time

D. CMDB Integration and Population

1) ServiceNow

a) Direct CMDB population with discovered CIs
b) Automated relationship mapping
c) CI reconciliation and de-duplication
d) Historical tracking of CI changes

2) BMC Helix

a) AI-driven CMDB population and maintenance
b) Dynamic relationship modeling
c) Probabilistic matching for CI reconciliation
d) Automated CMDB health and accuracy monitoring

E. Application and Service Mapping

1) ServiceNow

a) Top-down and bottom-up service mapping approaches
b) Machine learning for identifying application components
c) Integration with Service Mapping module
d) Visualization of application dependencies

2) BMC Helix

a) AI-powered application component discovery
b) Automatic business application modeling
c) Real-time service impact analysis
d) Advanced visualization of complex application landscapes

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F. Cloud Discovery and Management

1) ServiceNow

a) Native integrations with major cloud providers
b) Discovery of cloud resources and relationships
c) Cloud service mapping to on-premises components
d) Cost allocation and optimization insights

2) BMC Helix

a) Multi-cloud discovery and inventory management
b) AI-assisted cloud resource optimization recommendations
c) Hybrid service dependency mapping
d) Cloud compliance and security posture assessment

G. Analytics and Reporting

1) ServiceNow

a) Pre-built discovery dashboards and reports
b) Custom report creation with graphical interface
c) Discovery coverage and success rate analytics
d) CI lifecycle and change tracking reports

2) BMC Helix

a) AI-driven discovery insights and recommendations
b) Predictive analytics for infrastructure changes
c) Real-time discovery KPI tracking and alerts
d) Advanced visualizations of IT landscape evolution

IV. AUTOMATION AND ORCHESTRATION

A. ServiceNow

1) Automated discovery scheduling and execution
2) Integration with Flow Designer for custom automations
3) Automated CMDB updates based on discoveries
4) Trigger-based actions for newly discovered assets

B. BMC Helix

1) AI-powered discovery process optimization
2) Cognitive automation for complex discovery scenarios
3) Self-adjusting discovery based on environment changes
4) Automated remediation of discovery issues

V. SCALABILITY AND PERFORMANCE

A. ServiceNow

1) Distributed architecture for large-scale deployments
2) Load balancing for discovery processes
3) Incremental discovery for performance optimization
4) Discovery data compression and efficient storage

B. BMC Helix

a) Microservices-based architecture for flexibility and scalability
b) Elastic scaling for dynamic IT environments
c) Efficient handling of large-scale, distributed infrastructures
d) Optimized discovery for minimal impact on target systems

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VI. STRENGTHS AND LIMITATIONS

A. ServiceNow

1) Strengths

a) Comprehensive integration with ITOM and ITSM processes
b) Strong customization and extensibility options
c) Robust service mapping capabilities

2) Limitations

a) Can be complex to set up and fine-tune for optimal performance
b) May require significant resources for large-scale deployments

B. BMC Helix

1) Strengths

a) Advanced AI and cognitive automation features
b) Strong application dependency mapping capabilities
c) Agentless approach minimizes operational overhead

2) Limitations

a) May require investment in broader BMC ecosystem for full benefit
b) Learning curve for leveraging advanced AI-driven features

VII. CONCLUSION

Both ServiceNow and BMC Helix offer robust Discovery solutions with advanced features to support comprehensive IT asset and service visibility. ServiceNow's strength lies in its strong integration across ITOM and ITSM processes, powerful customization capabilities, and comprehensive service mapping features, making it suitable for organizations with complex IT environments and mature ITSM practices. BMC Helix excels in its AI-driven approach, focusing on cognitive automation, application dependency mapping, and minimal operational overhead, appealing to organizations prioritizing advanced, low-impact discovery strategies.

The choice between these platforms will depend on factors such as existing IT infrastructure, specific discovery requirements, the complexity of the IT environment, and long-term IT strategy. Organizations should carefully evaluate their needs, conduct proof-of-concept trials, and consider the total cost of ownership when deciding between ServiceNow and BMC Helix for Discovery.

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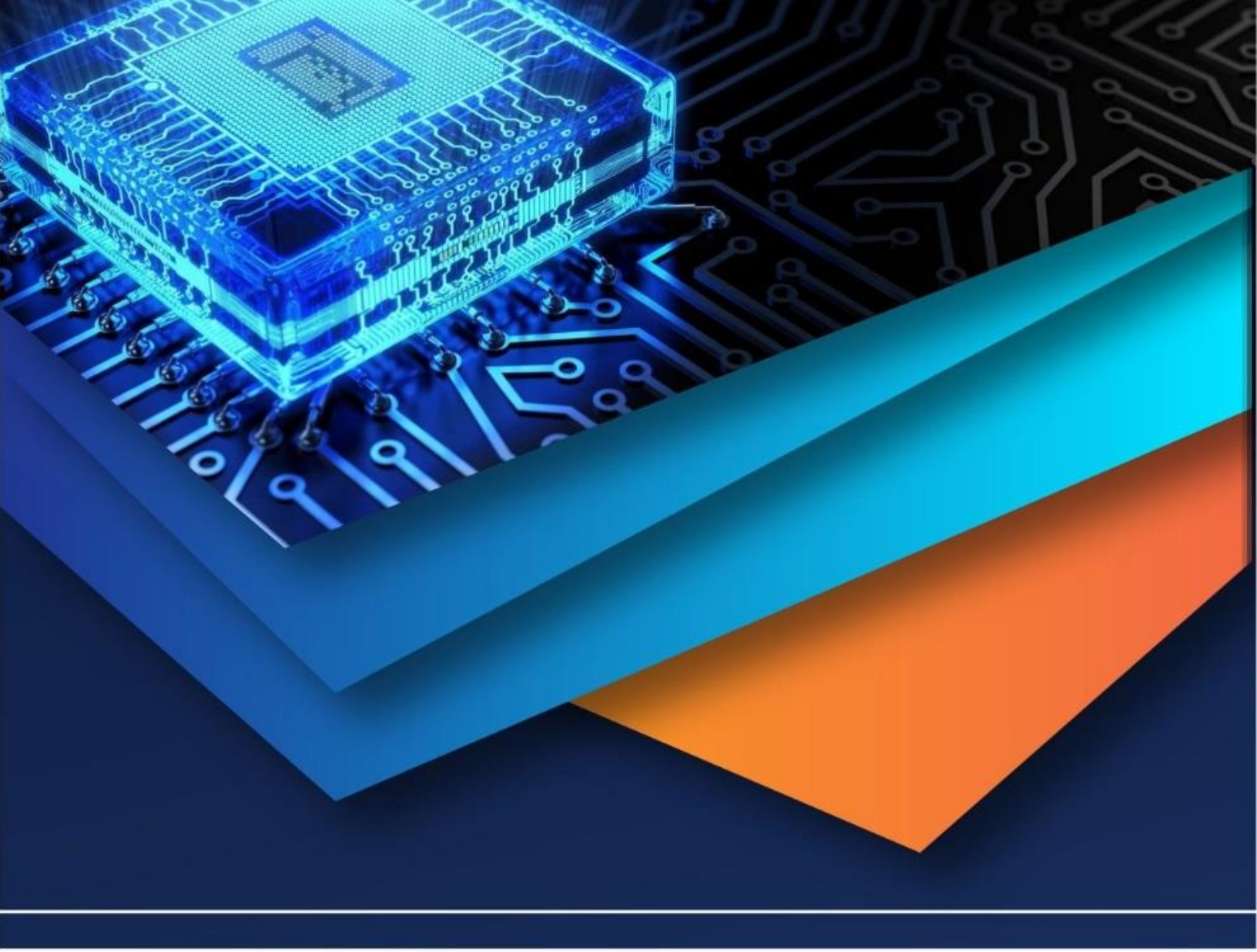

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