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Introduction

The Autonomous Digital Enterprise (ADE) is a vision of the future state of business that can be achieved when companies act with agility, customer centricity, and actionable insights enabled by five key technology tenets, each empowered by artificial intelligence (AI).

The Automation Everywhere tenet embraces the idea of technology as a complementary business function that works with humans, not in place of them, to enhance and improve their performance, efficiency, and innovation. With the ongoing and escalating consumerization of IT, and the unprecedented events of 2020, the business-critical need to automate operational and end-user functions with limited human intervention has skyrocketed, and so has the comfort level of those using it.
According to a recent Capgemini survey, 54 percent of consumers surveyed now use AI daily versus just 21 percent in 2018. However, the challenges of automating complex, multi-tier, hybrid application stacks, constantly-changing industry regulations, and increased security threats still remain.

As a result, enterprise automation in customer interactions and operations has become less of a service delivery model and more of a competitive differentiator—and survival mechanism. Radical, pervasive, tech-savvy automation across all aspects of business will be required by an Autonomous Digital Enterprise in order to:

- Streamline and run at scale the automated connections between partners and internal groups
- Run the expanding IT infrastructure necessary for the scale of business automation demanded by an ADE and its internal and external customers
- Expand tools and data capture to more processes and people inside and outside an ADE

1 Stephane Girard et. al., The Art of Customer-Centric Artificial Intelligence, Capgemini Research Institute, July 2020.
Enabling Technologies

Automation Everywhere is rooted in AI and machine learning (ML) that can enable data-driven business decisions, enhance quality, reduce unnecessary manual labor, and optimize human and IT resources. In fact, in a recent survey of IT leaders, nearly 70 percent of respondents see automation as beneficial to the human IT workforce, agreeing it will create better jobs for IT pros.²

The disruptive technologies that will drive enterprise automation efforts already exist today and must be leveraged strategically and comprehensively for optimal results. Robotic process automation (RPA), business process management (BPM), process discovery, and low-code platforms create, discover, and automate business processes.

Workflow automation leverages AI to optimize machine-to-machine and data management processes. Full-stack monitoring and AI for IT operations (AIOps) provide AI-powered observability, analytics, and visualization across applications and infrastructure. Delivery and runbook automation provide remediation, configuration management, and deployment capabilities. And expanded integrations and context-aware actions extend service management from the IT domain across the business.

In this e-book, we will look at seven use cases that exemplify how Automation Everywhere can improve current processes and position your organization for continuity and growth, as well as introduce the BMC solutions that can help drive your success. Note that while data center automation is a critical component of any business, Automation Everywhere extends the principles and capabilities of automation beyond the server room and across the enterprise.
Use Cases

Cloud Automation

The cloud operating model is intensely interesting to today’s business leaders. Whether it’s to optimize the costs of running data centers or to enable faster development and delivery of future-focused applications, the embrace of cloud—and especially multi-cloud—is only growing. In fact, 76 percent of North American and European enterprise infrastructure decision makers are considering migrating existing applications to the cloud as part of their cloud strategy. But this increasing demand for business innovation may not take into account the complexity of cloud migrations.

Businesses strive to deliver applications that operate seamlessly in cloud environments, and the use of multiple tools and open-source products combined with legacy workflows and file transfers creates automation and problem-identification challenges. This leads to poor control of workflow executions, governance, and regulatory compliance, a high rate of service interruptions, and a slow conversion of innovation into revenue. When migrations fail due to performance or security issues, repatriation—moving applications back on-premises—is often seen as the best option, despite its limitations and impact on competitiveness.

By devising strategies for integrating, automating, and orchestrating complex application and file transfer workflows across on-premises and multi-cloud infrastructures, businesses can ease the management burden and accelerate application delivery and cloud adoption. A unified view of application workflows with pre-emptive diagnostics can lead to improved service delivery and consistent, reliable business value. And implementing DevOps practices in the development and delivery of new services and applications for designing and coding workflow definitions enhances efficiency and enables innovation.
File Transfer Automation

Modern business operations depend on having the right data delivered in the right system/service at the right time. Typically, services and tools lack integration and coordination with data processing activities, and use separate products for simple data translation and delivery. This creates potential bottlenecks, inconsistencies in data presentations, and the possibility of service level agreement (SLA) breaches with high remediation costs.

With an external managed file transfer (MFT) platform that operates as a shared service supporting multiple lines of business (LOBs) and partners, coordinated, streamlined, and automated processes are highly visible and are recognized as mission-critical, supporting key business services. Enhanced business governance and security, improved SLA compliance, and reduced management burdens lead to lower operational costs and revenue boosts, enabling a focus on innovation initiatives that might otherwise have stalled.
Mainframe Automation

The mainframe plays a critical role in the IT strategy and infrastructure of many large/enterprise organizations, acting as a reliable, efficient, and securable data store and engine for complex processing. The pace and complexity of today’s business climate calls for the integration, automation, and orchestration of mainframe workflows with those from other environments, including on-premises, private, and public clouds. Without that alignment, data remains incomplete and inaccurate, hindering decision-making, DevOps capabilities, modernization and digital transformation projects, and more. The slower delivery of applications and curtailing of innovation compromises competitiveness and profitability. Managing automation in a dynamic environment while onboarding a new generation of mainframe professionals requires more effective and intuitive tools to meet these challenges.

For consistency, reliability, reduced risk, and scalability, the automation and orchestration of all IT environments, as well as the end-to-end workflows interfacing with application programming interfaces (APIs), is critical. To speed application development and innovation, deliver robust visibility, enhance and improve productivity, prevent performance issues, and increase mainframe system availability, organizations must ensure standardized communication between Dev and Ops, streamline the automation process with codeless, rules-based automation, and promote automated application workflows through a dedicated collaboration portal.
Intelligent Service Desk

Companies face many challenges in the escalating demand for intelligent, people-centric, and innovative experiences that are delivered with exceptional service quality and result in improved operational efficiency. Service desk processes and communication channels have historically been disjointed, manual, inaccurate, and slow, leading to poor productivity and a negative end-user experience.

Disruptive cognitive technologies are changing how enterprises provide services. With automation, AI, and ML capabilities, agent efficiency and knowledge improve drastically. End-user experience also benefits from context-aware, intuitive, intelligent interfaces and predictive service management. Comprehensive out-of-the-box ITIL® v4 support will help deliver fast and accurate services and enhance enterprise collaboration.
Multi-Cloud Visibility

As data centers transform to multi-cloud environments focused on agile release methods, new ways to deliver cloud-native applications are being used to scale the business. These private and public cloud environments often have limited or inconsistent communication methods and need to co-exist with legacy infrastructure and software. As a result, companies that don’t have good visibility into how cloud-native applications are implemented struggle in their digital transformation.

By automating the discovery of infrastructure and application services and dependencies across private and public cloud platforms, organizations can create efficiencies, reclaim unused resources, and optimize storage. Security issues can be remediated based on service impact and business exposure, and outage incidents and durations can be reduced with better insight into the impact of changes.
Proactive Service Resolution

Most IT processes and technologies respond to and resolve events in a technology silo, without correlating and contextualizing related information from service and operations management. This fragmented approach to event resolution makes it impossible for infrastructure and operations (I&O) teams to understand the role of I&O in the context of a business service. As a result, most IT organizations struggle to resolve events without realizing the impact on the business, ultimately wasting valuable time and resources on event resolution. Without the ability to introduce automation to remediate common events, I&O teams are working harder and inefficiently. Administrative tasks are highly manual, time-consuming, disruptive, and error-prone, but automation of those tasks is often complicated and demands specific skill sets.

Proactive detection of potential service interruption with contextual routing and correlated data will enable automated response to and remediation of common events and incidents, and faster restoration of service, driving operational efficiencies and reducing costs.
Enterprise Capacity Management

As organizations adopt disruptive technologies and cloud services that help them deliver fast, reliable digital services, planning and managing IT capacity and costs becomes more complex. IT resources are now both capital and operational expenses, putting more pressure on IT organizations to optimize existing and planned resources. Collecting and reporting IT capacity data is still largely manual and in spreadsheets, with no consolidated, centralized view. Without the proper insight into resource usage and cost, it is easy to waste resources, overspend, and experience application failures due to infrastructure constraints.

A centralized platform for enterprise-wide capacity management with automated capacity data collection, analysis, and reporting will improve performance availability and service quality and help optimize IT costs.
BMC Solutions

BMC offers a range of solutions designed to help organizations benefit from automation across the enterprise by addressing the use cases described above.

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BMC AMI

BMC Automated Mainframe Intelligence (BMC AMI) solutions draw on decades of expertise and innovation and leverage AI, ML, and predictive analytics to achieve a self-managing mainframe. An end-to-end, easy-to-implement solution, BMC AMI includes BMC AMI Security, BMC AMI Ops, BMC AMI Cost, BMC AMI Data for Db2® and IMS®, and other component products that work together to deliver mainframe automation built for the Autonomous Digital Enterprise.

- Multivariate analysis applied simultaneously across multiple data sources to track anomalies
- Predictive analytics driven by pattern analysis algorithms that detect anomalies and analyze their impact
- Root-cause analysis enabled by rapid problem determination based on machine learning
- Prescribed remediation based on prevailing conditions and events
- Intelligent automation to keep the environment running securely and at peak efficiency
- Built-in domain expertise so you can track the right KPIs without relying on in-house technical skills that might be scarce

To learn more, please visit bmc.com/ami
BMC Helix Capacity Optimization

BMC Helix Capacity Optimization, hosted in your cloud of choice, helps you optimize, plan, and manage changes in business demand and capacity requirements so you can gain insights into and align the technology resources that fuel your business and innovation.

- Use business KPIs to determine resource needs for future changes in business demand
- Make the best use of cloud, containers, and on-premises resources
- Plan for migrating workloads to the cloud with right-sizing recommendations
- Schedule resources needed for running new business services and applications

To learn more, please visit bmc.com/helixcapacity
BMC Helix Chatbot

BMC Helix Chatbot is tailored to the familiar platforms and devices employees are already using to enable fast, accurate, native experiences to users across their channel of choice—Slack, SMS, Microsoft Teams, Skype for Business, and Progressive Web. Available with BMC Helix Digital Workplace and BMC Helix Business Workflows, additional features include:

- Cognitive search across unstructured and structured data and multiple knowledge bases
- LOB support through multiple, specialized chatbots tailored to the needs of the organization (HR, Facilities, etc.)
- Call-and-execute custom processes and workflows and automated training of BMC Helix Chatbot with the BMC Helix Digital Workplace catalog
- End-user surveys and smart reporting to measure and improve performance and increase accuracy

To learn more, please visit bmc.com/chatbot
BMC Helix CMDB

The BMC Helix Configuration Management Database (CMDB) enriches ecosystem workflow with a business-aware, single source of reference for your assets and services.

- Combine and federate data from multiple sources
- Automatically populate and update your CMDB with BMC Helix Discovery
- Provide the best quality data to your business via KPI-driven user experiences
- Graphically visualize your data to more easily understand relationships and dependencies
- Understand the impact of outages and reduce mean-time-to-repair (MTTR) with proactive service resolution

To learn more, please visit [bmc.com/cmdb](http://bmc.com/cmdb)
BMC Helix Digital Workplace

BMC Helix Digital Workplace delivers modern self-service for the digital workplace through intuitive, omni-channel, conversational experiences. It has a device-agnostic and responsive design that works across a range of devices, from desktop to mobile, for a consumer-like shopping experience. The solution can also help businesses:

- Eliminate catalog sprawl by presenting services from multiple business units (IT, HR, and Facilities) in a single catalog
- Support customer-friendly user experiences with a highly configurable, modular, drag-and-drop design
- Decrease level-one ticket costs by deflecting routine help desk calls with workflow automation
- Easily integrate with leading industry services and platforms like Microsoft Office 365, Microsoft Azure, Atlassian JIRA, Amazon Web Services (AWS), and more

To learn more, please visit bm.com/digitalworkplace
BMC Helix Discovery

BMC Helix Discovery is a cloud-native discovery and dependency mapping solution for visibility and dynamic modeling of hardware, software, and service dependencies across multi-cloud environments.

- See assets and dependencies in a single pane of glass, whether on-premises or in the public or private cloud
- Empower security operations to perform essential prevention and detection
- Start mapping from any piece of information—software, hardware, or services
- Reduce service outages with predictable change and configuration management

To learn more, please visit [bmc.com/discovery](http://bmc.com/discovery)
BMC Helix ITSM

Enable proactive service resolution and monitor, service, and remediate events as they occur with BMC Helix ITSM, a predictive, industry-leading service management solution that includes a persona-based user experience optimized for an array of devices and cognitive automation capabilities to transform the agent experience. Additional features include:

- BMC Helix Multi-Cloud Service Management for a secure, seamless service experience across multi-cloud environments
- Powerful, stunning reports and visualizations allowing data-driven insights
- Container deployment to run in any type of public cloud
- BMC Helix Integration Platform for industry-leading integration platform as a service (iPaaS) to increase usability, adaptability, and scalability
- Optimized for ITIL® 4

To learn more, please visit [bmc.com/it-solutions/bmc-helix-itsm.html](http://bmc.com/it-solutions/bmc-helix-itsm.html)
BMC Helix Monitor

BMC Helix Monitor is a software-as-a-service (SaaS) solution that combines broad monitoring and event management capabilities with a containerized microservices architecture. Improve performance across complex environments while supporting the agility and speed required by digital businesses, and also get:

- Single pane of glass visibility across on-premises, multi-cloud, and container environments
- SaaS deployment in your choice of cloud to deliver reduced infrastructure costs and fast time to value
- Containerized microservices architecture for elastic scalability and enterprise-grade high availability and performance
- High-performance IT operations management (ITOM) data lake for large scale operational data analytics supported by a Cassandra and Elasticsearch backend
- Combined IT service management (ITSM) and ITOM use cases to automate incident creation, efficiently route tickets, and speed MTTR

To learn more, please visit bmc.com/monitor
Control-M simplifies application workflow orchestration. It makes it easy to define, schedule, manage, and monitor workflows, ensuring visibility and reliability, and improving SLAs.

- Streamline the orchestration of business applications—delivering better apps faster—by embedding workflow orchestration into your continuous integration/continuous delivery (CI/CD) pipeline
- Extend Dev and Ops collaboration with a Jobs-as-Code approach
- Simplify workflows across hybrid and multi-cloud environments with native AWS and Azure integrations
- Deliver data-driven outcomes faster, managing big data workflows in a scalable way
- Take control of your file transfer operations with intelligent file movement and enhanced visibility

To learn more, please visit [bmc.com/control-m](http://bmc.com/control-m)

Control-M’s Managed File Transfer

Control-M’s Managed File Transfer allows IT teams to reduce risk and deliver business services faster by automating internal and external file transfers in a single view with related application workflows in hybrid environments.

- Easily move files with support for S3, FTP, SFTP, FTPS, HTTP/S, and AS2
- Schedule and manage your file transfers securely and confidently with FIPS compliance and policy-driven processing rules
- Reduce file transfer point product risks with a 360-degree view, advanced dashboards, and analytics

To learn more, please visit [bmc.com/mft](http://bmc.com/mft)
Control-M's Workload Archiving

Control-M's Workload Archiving delivers historical output and logs for better problem analysis and audit compliance. Quickly searching and analyzing archived data enables you to detect and address challenges resulting in improved quality and on-time delivery of business services.

- Simplify audits, increase compliance, and reduce troubleshooting times
- Reduce MTTR by gaining immediate access to historical job output and log information
- Retain historical output and logs to meet audit and governance requirements with site-specific retention rules
- Simplify problem analysis with access to historical output logs
- Quickly locate the required troubleshooting and audit information with flexible search capabilities

Control-M's Workload Change Manager

Control-M's Workload Change Manager simplifies DevOps collaboration and accelerates time-to-production for application workflows. It supports a collaborative process that allows developers to quickly build or modify workflows, and operations to easily check development changes and make promotion decisions. Automation features enforce workflows—including those built via a shift-left approach—to adhere to predefined enterprise site standards and promote workflows across stages while adapting them for the target environment.

- Get better insight and control over creating application workflows and improved service delivery
- Increase business agility with a scalable solution that accelerates change requests by up to 80 percent
- Improve application quality with automated enforcement of site standards
- Create drag-and-drop workflows that eliminate the need for manual scripting

To learn more, please visit

bmc.com/it-solutions/control-m-capabilities.html
Conclusion

In the era of business disruption, sophisticated software, increased customer demand, and accelerated development times, automation has evolved from a piecemeal effort scattered across the organization to a must-have technology deployed strategically across the enterprise.

Automation Everywhere is just one of the five tenets of the Autonomous Digital Enterprise, a forward-looking vision of the future state of business. As companies adapt, evolve, and embrace the power of technology to enhance and relieve the efforts of humans, they will not only survive but thrive.

To learn more about how your business can evolve to an Autonomous Digital Enterprise, please visit bmc.com/ADE.