Be a Digital Business Hero with Intelligent Capacity Management

Keep innovation, differentiation, and customer satisfaction flowing with a right-sized, cost-optimized mainframe environment
The Digital Business Challenge for Mainframe Teams: Demand Rises, Complexity Increases, Risk Grows

The mainframe is under intense pressure. Digital transformation, accelerating market competition, and relentless innovation mean greater demands at faster speeds. Data volumes now double every two years, driving transaction throughput to unprecedented levels. By 2021, a projected 4.5 billion global internet users and 27 billion connected devices will be generating enormous amounts of data and transactions.¹ As businesses put that data to work for analytics, they’ll also depend on the mainframe for real-time insights that an analytics engine like Splunk just can’t deliver. And don’t forget about rising volatility, malware threats, and regulatory compliance burdens that increase risk by the day.

Mainframe teams have to work harder, faster, and smarter to keep up—and there’s no margin for error. Customers today demand differentiated, high-quality service or they’ll take their business elsewhere. You’ve got to ensure optimal performance and availability for existing services while maintaining the agility and scalability to keep pace with innovation and shifting market dynamics.

IBM’s new Tailored Fit Pricing model throws another variable into the picture. Instead of focusing on capacity peaks during narrow windows of time under the four-hour rolling average (4HRA) model, mainframe teams must now consider the demand of every job they run, all the time, to avoid wasted capacity and overspending. With costs and demand both rising—and budgets often lagging behind—cost control is becoming both more important and more challenging than ever.

That all adds up to quite a to-do list for the mainframe team:

- **Prevent slowdowns and outages** due to workloads lacking resources—no matter how quickly demand shifts
- **Make informed decisions** about workload migration and resource allocation to optimize price and performance
- **Plan accurately** to meet future needs and ensure that new services will run at peak performance

And it all becomes more and more complicated as the environment grows more complex. It’s no wonder **cognitive technology** has emerged as a critical requirement for sustainable mainframe operations. In fact, according to Gartner, data centers have just a few years left to master AI and machine learning or they’ll no longer be operationally or economically viable.²

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²Gartner Research Vice President Milind Govekar: “By 2020, 30 percent of data centers that fail to apply AI and machine learning effectively in support of enterprise business will cease to be operationally and economically viable.”
A Terrible Time for Brain Drain

It’s never been more important to keep your mainframe team at the top of its game—but many organizations are losing their most experienced members at the worst possible time. Seasoned professionals are retiring in large numbers, taking valuable system knowledge with them. Often, this includes idiosyncratic methods developed over years of practice—skills that would be hard to pass on even if they had the time. And the new generation wants to work differently, using modern tools and methods developed for the digital era. As your pool of seasoned experts shrinks, capacity planning inevitably takes a back seat to maintenance, leading to non-optimized choices just as both availability and cost control are becoming more critical.

The changing face of the mainframe team

The 2019 BMC Mainframe Survey highlights the demographic shift now underway:

- **29%** of respondents have less than 5 years of experience on mainframes.
- **15%** are between ages 18–29—up from 12% in 2018.
- **40%** are over 50 and drawing nearer to retirement.
The implications of this change go beyond the loss of organizational expertise needed to prevent bottlenecks. Mainframe teams also may find they have difficulty keeping their newest team members engaged, motivated, and productive. Younger workers enter the organization eager to make an impact and build their careers toward technologies they think will matter in the future—and they're frustrated when they're stuck doing manual tasks that keep them from being efficient and strategic.

**Providing a smarter way to work**

In this light, mainframe modernization has to be a top priority. By making processes like capacity planning more automated and intelligent, you can make them easier to manage for a less experienced workforce, and better able to adapt to the increasing complexity of your mainframe environment. With capacity more closely aligned to demand, you can ensure reliable availability and performance for critical services without spending more than you should.
What If Your Mainframe Could Manage Itself?

The truth is, mainframe professionals of any generation can be less than enthusiastic about mainframe capacity planning. Managing mainframe costs and capacity is often complicated and labor-intensive. To continue being the only platform that can scale to the demands of digital business and manage massive transaction volumes securely, at speed, the mainframe’s management has to become as modern as the business it supports. This means making it more automated and intelligent, more connected and available, easier to manage, and less expensive to run.

Knowledge for today—visibility for tomorrow

By using cognitive technologies to enable a self-managing mainframe, you can replace outdated tools and processes with:

+ A system that keeps your environment running at its best with applied intelligence from thousands of slowdowns and outage conditions
+ The ability to predict and prevent business disruptions and cost overruns before they happen
+ Visibility deep into the future so you see not only impending problems, but also what’s on the horizon 90 days out or more

This foresight offers tremendous benefits for the mainframe team and the business as a whole. The more advance notice and understanding you get into capacity needs, the easier it becomes to manage availability so you can keep business services and customer experience from being impacted.

More informed planning helps you optimize cost and avoid overprovisioning. Meanwhile, new mainframe team members get the modern experience they want, and the ability to drive value for the business from day one.
Enabling a Self-Managing Mainframe with Automated Intelligence

BMC Automated Mainframe Intelligence (BMC AMI) solutions enable holistic mainframe modernization. AI, machine learning, and embedded analytics, fueled by decades of expertise and innovation, make it possible to automatically and intelligently optimize capacity and reduce risk. Even less experienced teams can address capacity issues before they happen, increase staff productivity, and deliver a right-sized, cost-optimized mainframe environment.

A smarter way to prevent slowdowns and outages

BMC AMI Capacity Management provides both forward projections and banding to make it easy to understand what “normal” looks like—and recognize when system behavior needs a closer look in time to prevent problems and avoid potential bottlenecks. This is especially valuable in more complex and dynamic environments, where even a seasoned mainframe professional might have difficulty identifying anomalies and out-of-band behavior.

Accurate, informed planning

Mainframe teams can easily predict and analyze future workload trends, gaining valuable data to negotiate more effectively with suppliers to optimize costs and right-size the environment. By avoiding overprovisioning without risking shortfalls, organizations can prevent both waste and downtime.

A better way of working for a new workforce

Intuitive dashboards and interfaces provide a modern way to visualize and deliver information—a far cry from the green screens, tables, and blocks of data associated with the mainframes of the past. Out-of-the-box workflows help less experienced staff compensate for the knowledge lost to retiring staff, while the ability to capture capacity planning actions moving forward provides a continually growing base of new, timely, and relevant knowledge.
Out-of-the-Box Domain Expertise in Guided Workflows

Pre-recorded workflows capture hundreds of years of aggregated data from lab research and real-world customer engagements, and put it to work in an easy-to-use tool to support common mainframe management use cases. Examples include:

- Problem diagnosis
- Performance tuning
- General system health

New employees can get up to speed quickly without the need for time-consuming knowledge transfer from more seasoned team members. The new generation is empowered to start making an immediate impact—making the business more successful while making their own role more satisfying and appealing.
A Simple Way to Record Customized Workflows

BMC AMI Capacity Management makes it simple to record, create, change, and share customized, business and industry-specific workflows. Organizations can capture the expertise of experienced staff members in the course of their work, and contribute this knowledge back to the community to prevent brain drain.

A shared knowledge base allows for more collaborative working, as team members can all access the same best practices, follow consistent methods, and understand each other’s processes without the blind spots introduced by idiosyncratic approaches.
Powerful Dashboards & Data Visualization

By analyzing and making sense of vast amounts of system data, BMC AMI Capacity Management dashboards and data visualization tools help teams focus their attention productively to make a real difference on performance, availability, and cost. An intuitive system health dashboard provides a holistic at-a-glance understanding of the environment and helps teams understand where next to turn their attention for performance investigation and capacity management.

Additional customized dashboards can be built quickly and easily to view, share, and collaborate around key mainframe capacity, utilization, and performance data, however best suits the team’s structure and work processes. An analytics-powered alert system ensures timely notification of potential issues. Replacing outdated terminals and data displays with deep, intuitive visibility and insight, BMC AMI Capacity Management empowers mainframe teams to meet even the most demanding requirements, consistently and efficiently.
Conclusion

The more demands your business places on your mainframe, the harder it becomes to maintain speed, efficiency, performance, and cost control. With BMC AMI Capacity Management, you can help your business operate at the peak of agility, innovation, and quality while optimizing costs—both today and into the future.

To learn more about BMC AMI Capacity Management, visit bmc.com/bmc-ami-capacity
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.

Run and Reinvent

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