ORCHESTRATE AND AUTOMATE TO MAKE DATAOPS SUCCESSFUL

DataOps orchestration is the automated coordination of data workflows across sources, systems, and destinations to eliminate delays and deliver reliable data at scale. Without orchestration, DataOps initiatives stall under integration complexity—leaving organizations working from incomplete information. Automating orchestration reduces that complexity, accelerates decision-making, and turns DataOps from a process aspiration into an operational reality.

Why do DataOps initiatives struggle without orchestration?

DataOps is intended to smooth the path to becoming a data-driven enterprise, but significant roadblocks remain. According to an IDC InfoBrief sponsored by BMC, DataOps professionals reported that on average only 58 percent of the data they need to support analytics and decision-making is available. How much better would decision-making be—and how much business value would be created—if the other 42 percent could be factored in as intended?

Why can't organizations get the data they already have where they need it, when they need it? In most cases, the answer comes down to complexity. (A previous blog by my colleague Basil Faruqui introduced why DataOps is important; this one follows up by focusing on what is needed to make it work.)

Organizations now rely on more data sources than ever, along with the technology infrastructure to acquire, process, analyze, communicate, and store that data. The complexity of creating, managing, and quality-assuring a single workload increases exponentially as more data sources, data consumers, and destinations—cloud, on-premises, mobile devices, and other endpoints—are

added.

The IDC InfoBrief identified integration complexity as the leading obstacle to operationalizing and scaling DataOps and data pipeline orchestration. Other obstacles include a lack of internal skills and time to solve data orchestration challenges, and difficulty using available tooling. For complex workloads, this means organizations can't fully automate the planning, scheduling, execution, and monitoring of data flows—gaps form, delays follow, and decisions get made on incomplete or stale data.

How does orchestration solve DataOps complexity?

Orchestration—and more specifically, automating orchestration—is essential to reducing complexity and enabling scalability in ways that scripting and manual workarounds cannot. Visibility into processes, self-healing capabilities, and user-friendly tooling make even complex environments manageable.

As IDC notes in its InfoBrief: "Using a consistent orchestration platform across applications, analytics, and data pipelines speeds end-to-end business process execution and improves time to completion."

What capabilities does effective DataOps orchestration require?

The most important functionality needed to achieve data pipeline orchestration includes:

- Built-in connectors and integration support for a wide range of data sources and environments
- An as-code approach so workflow automation can be embedded directly into deployment pipelines
- Complete workflow visibility across a highly diverse technology stack
- Native problem identification and remediation to catch and resolve failures before they cascade downstream

Tooling specific to a single product, development environment, or hyperscale platform may provide some of this functionality—but typically can't cover every system a workflow will touch. That's a primary reason so many DataOps professionals report that tooling complexity hinders their progress.

How does Control-M enable DataOps orchestration at scale?

Control-M simplifies DataOps orchestration by working across and automating all elements of the data pipeline—including extract, transform, load (ETL), file transfer, and downstream workflows. Control-M supports data pipeline orchestration specifically because:

- Control-M eliminates the need to use multiple file transfer systems and schedulers
- Control-M automatically manages dependencies across sources and systems, providing quality checks and notifications that prevent delays from escalating into job failures downstream

Control-M users describe the practical impact directly. A professional at a healthcare company explained: "Control-M has also helped to make it easier to create, integrate, and automate data pipelines across on-premises and cloud technologies. It's due to the ability to orchestrate between workflows that are running in the cloud and workflows that are running on-prem. It gives us the

ability to have end-to-end workflows, no matter where they're running."

Railinc described the dependency management challenge Control-M solves: "The order in which we bring in data and integrate it is key. If we had to orchestrate the interdependencies without a tool like Control-M, we would have to do a lot of custom work, a lot of managing. Control-M makes sure that the applications have all the data they need." See the full Railinc case study here.

The IDC InfoBrief found that organizations excelling at DataOps orchestration outperform those that don't across multiple dimensions—including compliance, decision-making speed, time-to-innovation, and cost savings.

Can you orchestrate similar results at your organization? Learn more about Control-M for Data Pipeline Orchestration here.

Frequently asked questions

What is DataOps orchestration?

DataOps orchestration is the automated coordination and management of data workflows across multiple sources, systems, and destinations. It ensures data moves reliably through the pipeline—from ingestion through processing to delivery—without manual intervention, reducing delays and improving data quality at scale.

How is DataOps orchestration different from basic job scheduling?

Job scheduling triggers individual tasks at set times. DataOps orchestration manages the full end-to-end workflow—coordinating dependencies between tasks, handling failures, monitoring quality, and adapting across the entire data pipeline. Orchestration is continuous and conditional; scheduling is point-in-time.

Why is integration complexity the top obstacle to scaling DataOps?

Modern data environments span dozens of sources, cloud and on-premises systems, and diverse endpoints. Managing dependencies, schedules, and quality checks manually across that landscape doesn't scale. Integration complexity compounds with each new source added, making automation the only viable path to operationalizing DataOps.

What is the business impact of improving DataOps orchestration?

According to IDC research sponsored by BMC, organizations that excel at DataOps orchestration see measurable advantages over those that don't—including improvements in compliance, decision-making speed, time-to-innovation, and cost reduction.

What should organizations look for in a DataOps orchestration platform?

Key capabilities include broad connector support across diverse data sources, an as-code workflow automation approach for CI/CD integration, end-to-end pipeline visibility, and native self-healing for error recovery. A single platform covering all systems in the workflow—rather than siloed tools—is critical to reducing the tooling complexity that most DataOps teams cite as a top obstacle.

The views and opinions expressed in this post are those of the author and do not necessarily reflect the official position of BMC.