How Financial Services Firms Can Maintain Governance and Compliance at DevOps Speed with Workflow Orchestration

Financial services firms will be able to put workflow orchestration to use when exploring and implementing DevOps, Cloud, and customer-facing apps.

Introduction

In this era of digital transformation, every company is learning how to deal with rapid change. This is especially true for financial services companies, as they are driven to adopt new technologies to remain competitive without losing sight of data governance, security, and compliance with industry regulations.

In the past, financial companies relied on mainframes for most of their processing. Now they’re dealing with myriad third-party providers (TPPs), potentially multiple cloud service providers, and in-house Dev and Ops teams. DevOps presents a unique challenge, given the various integrations involved and the ever-growing desire to deliver applications faster.

Maintaining control in diverse environments using traditional job scheduling tools is a challenge. While there are many platform-specific products available, financial services firms need a centralized, holistic view of the entire operation to ensure proper governance and security, as well as to prove compliance. This requires a workflow orchestration solution that acts as a central point of control. The tool should help the firm automate the execution of complex workflows at scale, many of them running in parallel to dramatically reduce execution time and ensure service-level agreements (SLAs) are met.
Financial Services Challenges

When it comes to technology, financial services companies often face challenges in two common areas: governance and DevOps.

With respect to governance, the challenge is maintaining control when processes span many different systems, including cloud-based platforms and services. Traditional mainframe-based applications haven’t gone away either, which means financial companies need a tool that can orchestrate critical workflows from existing applications along with new ones.

It’s a challenge that’s only likely to increase in scope as financial companies seek to adopt Open Banking. With its focus on APIs that open a bank’s data to TPPs and developers, Open Banking potentially introduces even more complexity into data security and governance. While it was initially launched as a European effort, regulators in other markets are in the process of developing their own frameworks and guidelines.¹

With so many systems involved and volumes of data constantly growing, it can be challenging for firms to meet their SLAs in areas such as daily transaction processing reporting. It takes workflow orchestration to effectively deal with the issue and shrink job execution windows.

DevOps presents additional challenges.
In a DevOps environment, developers routinely deploy microservices and build integrations with various tools and services to help them push out code faster. All these integrations, plus the very speed of code releases, present risk factors the company must deal with. First and foremost, ensuring all the usual security checks are in place before any new code is released to production.

Required: Workflow Orchestration Technology

Dealing with these various challenges requires a workflow orchestration solution that can integrate with numerous technologies while providing centralized control over all processes.

The solution requires APIs that enable integration with everything from TPPs to robotic process automation (RPA) applications and microservices used by Dev and Ops teams. Such integrations need to be simple and seamless. When integrated effectively, the orchestration tool itself essentially becomes another part of the DevOps toolchain and can enforce controls without slowing developers down.

The tool should recognize dependencies across financial transactions so it can minimize the effect of failed jobs and restart them when necessary. It must be able to deal with traditional mainframe applications and processes as well as newer FinTech offerings, including cloud-based services.

Workflow Orchestration Use Cases Abound

Nightly Batch Processing

Consider a nightly batch process job, for example, which is often only semi-automated. Let’s say a given batch job contains a series of SQL Server jobs made up of 40 to 50 SQL agents, many involving scripts written long ago with which current employees aren’t familiar. The jobs run sequentially and a breakdown at any step stops the entire process until IT can determine where the point of failure is and correct the error. It’s not hard to envision delays in the batch run causing SLAs to be missed, meaning whoever relies on the resulting data is left with incomplete or erroneous information.

With a workflow orchestration tool, companies can consolidate some of the discrete executions into automated jobs that can run in parallel, dramatically reducing the execution window. Additionally, should a problem arise, the platform will send a text to a designated IT staffer with information on where the issue lies. The staffer can then diagnose and repair the problem remotely, reducing the need for on-site overnight staff.

DevOps Integration

Instituting governance and control over environments leveraging DevOps toolchain technologies are critical use cases for workflow orchestration products. DevOps pros routinely build in integrations with all sorts of applications and services, which puts the company at risk of governance infractions and losing control over their finished applications. By integrating proper controls into the DevOps process, a workflow orchestration solution can ensure governance is in place and reduce risk without slowing down time to market for new applications.

Cloud Integration and Support

The same applies to cloud platforms and services. Providing governance over data in the cloud is a must for financial firms. A workflow orchestration tool that integrates with cloud providers addresses the issue, bringing cloud services under their control just like on-premises applications and data.
End User-facing Apps

Workflow orchestration can also help ensure customer-facing applications perform as expected. That’s an issue that will become increasingly important as customers adopt Open Banking applications, as PWC predicts 64 percent of adults will by 2022.²

Such applications include a dynamic mobile front end communicating with a back end that requires transaction processing, like sending money from the user’s account to another financial institution to pay a bill.

The process involves multiple automated steps that must be executed in a specific order for the transfer to complete.

A workflow orchestration solution can automate the various processes involved and provide governance, verifying that the transaction completed successfully— or not.

Turning Data into Insight

All the data that financial institutions maintain on customers is extremely valuable when analyzed for insights to help customers manage money more effectively, influence future purchase decisions and more. A workflow orchestration solution can aid in that effort by ingesting data from platforms like Hadoop, Spark, EMR, Snowflake, and RedShift and automating the processing and analysis of it to glean business intelligence.

Mergers and Acquisitions

A workflow automation product can also help financial institutions deal with mergers and acquisitions. Rather than replace all the existing job schedulers the acquired company may have, the platform enables the acquiring firm to instead bring them under a single, consolidated view.

Global Financial Services Firm Banks on Control-M

A global lead for the organization revealed that by taking a Jobs-as-Code approach, developers can build automated Control-M routines into the software development lifecycle just like any other code components. That enables them to continuously test the code, ensuring it runs properly and complies with company standards around issues including security.

It’s also highly scalable. The organization is expecting twice as many jobs in Control-M in 2020, just as it did in 2017 and 2018. “It’s exponentially growing,” the global lead said.

Like many companies, the organization is moving toward a hybrid cloud setup. It requires the ability to schedule jobs to Amazon, Azure, on-prem, and their private clouds without regard for what the operating system is.

Most importantly, Control-M allows the global lead to demonstrate to his organization’s cyber control and audit teams that they are in control of the environment and all the code that the Dev and Ops teams produce.

² “The future of banking is open,” PWC
Keep Up with Change — with Control-M

Control-M can help you deliver on your business modernization initiatives with increased speed without sacrificing governance, control, and security. It gives you the freedom to embrace DevOps and cloud services at scale, and ultimately further your financial services firm’s corporate goals.

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