The Compelling Case for Workload Orchestration

The challenge in choreographing and managing end-to-end enterprise value streams is that they inevitably span several systems—from the mainframe to the cloud—even though workload management or job scheduling tends to be specific to each system. This is best addressed by adopting workload orchestration. For example, a typical enterprise value stream might span:

- A proprietary mainframe application, subject to the mainframe job scheduler
- An SAP ERP instance on a UNIX* server, with its own workflow management
- A script run to provision a new container instance on a virtual server
- Placement of a certificate of completion in a cloud file share for the customer
- Microsoft Dynamics on a Windows* server, with tasks driven by Task Scheduler

Each of these actions may be driven by competent OS- or software package-specific workload automation. However, without workload orchestration of the entire value stream, each silo is independent of each other, so the end-to-end value stream is only loosely coupled. This introduces space for errors and miscues, typically treated through exception reports and rework. Enterprises can avoid these challenges by applying end-to-end workload orchestration so that the value chain becomes a single synchronous whole with active monitoring, error management, alerting and restart.

Raising the Bar With Workload Orchestration

To run in an optimal and timely way, workload orchestration—withstanding the support of workload automation—must check three boxes.

1. Workload orchestration must be sophisticated enough to address both ends of the spectrum. It must have the capabilities to deal with task-level scheduling where none exists. It also needs the breadth to delegate to system-level job scheduling or package-level workflow management, where those exist.
2. At a technical level, workload orchestration must be able to conditionally select a branch in the enterprise value stream—regardless of the different systems and IT stacks involved—and make it visible and manipulatable for the enterprise.
3. At a functional level, workload orchestration must provide an executive view of the work of the enterprise. Most workflows are nonlinear. They are branching and dynamic, reflecting the business rules of the organization, requiring conditionality. Workload orchestration first choreographs these processes as templates, using appropriate visualization and, more importantly, manages and monitors individual instances in high volumes day-to-day. By knitting together the disparate technologies, the familiar template design experience and the automated oversight, organizations can achieve sustainable workload orchestration.

Workload Orchestration and Automation Together

Workload orchestration must take full advantage of the proven, reliable workload automation in place, whether it is part of the toolset for a given technology stack or it is built into specific packaged applications or cloud services. Moreover, it must be capable of supplying that level of job scheduling and workload automation for the parts of the enterprise value streams that are not already automated.

Workload orchestration, at its best, should present the status of each critical process that spans significant periods of time, technology stacks and conditional branching, alerting the workload when obstacles arise.