CRACK THE (TRANSACTION) CODE TO GET MORE VALUE FROM SAP® SM36 AND SM37

SAP's native job scheduling and monitoring tools, Transaction Codes (t-codes) SM36 and SM37, are fundamental components of many SAP systems. Control-M allows enterprises to get new value from these longtime system staples without requiring resource-intensive redevelopment. This blog explains how.

Individual enterprises may have developed thousands of SM36 and SM37 t-codes to countless servers and SAP instances to help manage the day-to-day tasks that keep SAP systems running. SM36 and SM37 codes clearly have an important place in SAP systems. Sometimes, users tell us that the problem is that the place for SM36 and SM37 is too clearly defined. SM36 and SM37 are system-specific, which means they can only be used to schedule and monitor jobs for the system on which they reside. That works fine for siloed jobs that execute completely within a single server or SAP instance. If the larger workflow needs to break out of that silo, for example to accept a data stream from a cloud-based system or to update a database on another server, then additional SM36 and SM37 codes need to be developed for those systems.

Unless…

…organizations enhance their SM36 and SM37 t-codes through ControlM (self-hosted or SaaS). The Control-M suite orchestrates workflow execution across the entire enterprise IT environment. It is not system-specific and is widely used to execute highly complex, multi-element workloads across hybrid cloud environments. For SAP users, Control-M provides a complete view of all SAP jobs—and their dependent jobs—across the enterprise. Here's a deeper look at how Control-M is used with SM36 and 37 to help overcome some of their limitations.

SM36 and SM37 keep systems running

SM36 and SM37 are great tools for scheduling and monitoring the thousands of jobs that run within SAP environments every day. These jobs can include making file transfers, updating databases, running reports, pushing updates to business users, and much more. SM36, SM37, and other t-codes are typically developed in SAP's Advanced Business Application Programming (ABAP), so responsibility for creating and maintaining them goes to SAP experts, either in-house or at a service provider. As noted, SM36 and SM37 are system-specific. When a file transfer or other job type needs to run on different instances of SAP, or in different versions of SAP, separate t-codes need to be developed for each. If data is handed off from one system to another, or if another workflow similarly crosses different systems, then SM36 and SM37 jobs need to be developed to handle those situations. Such arrangements are standard operating procedure for many enterprises. The process works, although it is a bit resource-intensive and not very transparent.

There are a couple of situations where the skilled resource requirements associated with using SM36 and SM37 have historically caused some problems. One is when there is a job failure or unexplained delay. The other is when the job workflow needs to interact with systems outside of the one where it resides. Let's look at each of these situations briefly.

SM36 and SM37 job performance problems or outright failures can be difficult to diagnose and debug in complex ecosystems because IT administrators need to look at the logs for *all of the associated t-codes* in *each* of the systems that the job touches. Many delays and failures result from one component of a workflow not being ready on time. For example, if a file transfer runs late, the job to run a report that needs data from the file can't start. Such problems can be solved (prevented) with automated orchestration, but without it, they will need to be manually debugged.

Patch and upgrade installations are other risky periods for job failures. For organizations that use SM36 and SM37, every annual, monthly, and quarterly update or special patch requires manually stopping all inbound and outbound jobs for the upgrade, then restarting them once the update is complete. That's time-consuming and puts business-critical processes at risk.

As systems become more complex, the chance of workflow failures increases because workflows need to be orchestrated across different systems. How well enterprises can orchestrate workflows depends on how much visibility they have into them. If you can't see the status of a data stream or other dependent job until after the handoff occurs (or after it fails to occur as scheduled), then you don't have the visibility you need to prevent failures.

How Control-M can help

Control-M adds the orchestration component to SM36 and SM37 job scheduling and monitoring. It addresses the leading problems associated with those tools by providing visibility across the breadth of the IT environment (helping to foresee and prevent dependency-related job failures) and drill-down depth into the jobs themselves, which enables prevention or fast remediation.

Control-M provides visibility into jobs across the entire SAP ecosystem, regardless of location. If you want to see or change the status of a workflow you go to one place—the Control-M user interface—instead of having to check multiple systems for the status of each step in the workflow. Control-M displays the overall status and gives you the option to drill down and see any dependent job. Users can see the status of an entire workflow with the same or less effort than it takes to do an SM37 check on a single component. That makes managing the SAP environment a lot less resource-

intensive.

Here's an example. System administrators typically investigate SM36 or SM37 job failures by running an ST22 dump analysis. Without Control-M, the logs and short dumps need to be manually intercepted. That procedure takes time and may need to be repeated across multiple SAP instances. Admins don't need to pull and review logs if they use Control-M because it can automatically monitor logs with no manual intervention required. And, because of Control-M's ability to automatically monitor all dependencies, a potential problem with one job can be quickly identified and addressed before it affects others. That way, Control-M increases uptime without requiring an increase in administrator support time.

The Italy-based energy infrastructure operator Snam S.p.A. reported it reduced workflow errors by 40 percent after introducing Control-M to its SAP environment, which included SAP ERP Central Component (ECC) and SAP S/4HANA. Freeing up its specialized SAP staff also helped the company improve its business services time to market by 20 percent. You can learn more about the program here.

These are just a few of the ways that orchestrating SM36 and SM37 codes through Control-M reduces complexity and saves time in day-to-day operations. Control-M also provides some other advantages during migrations to SAP S/4HANA or other versions, as this white paper explains.

Control-M is a great complement to SM36 and SM37 because it breaks down silos and works across the entire SAP environment, no matter how complex, and breaks the enterprise's dependence on a few skilled SAP specialists to manually create and monitor all workflow jobs. Its self-service capabilities enable citizen development in a safe way, where IT retains control over workflows, but business users can handle their own requests. Above all, Control-M creates visibility over all SM36 and SM37 jobs and the entire SAP ecosystem.