



Customer Case Study: CERN Completes Over One Million Process Instances Using ActiveVOS

Executive Summary

CERN, the European Organization for Nuclear Research, is the world's largest particle physics laboratory. Located in Switzerland, CERN is most famous for being the place where British scientist Tim Berners-Lee invented the World Wide Web. The intent of the "Web," as it came to be known, was to create a platform for information sharing between scientists working in different universities and institutes all over the world. Once CERN had created this platform and the various scientists began collaborating across the Web, the next evolutionary step was the automation of their business processes.

Back in 1989, CERN understood how critical business process automation was to the success of their mission. With employees and contractors coming in and out of the organization frequently as new projects started and existing projects completed, CERN needed to make business processes in the area of human resources, logistics, and procurement easier and more efficient so the workers could spend more time solving problems and less time on administrative tasks.

With so many moving parts, CERN faced daunting integration and automation challenges. CERN is now using the leading visual orchestration system, ActiveVOS™, to integrate and manage multiple mission-critical applications as part of its services-oriented architecture (SOA) implementation. The benefits so far? A scalable platform for future growth, automated business processes and faster delivery of internal business applications.

Needed: Scalability, systems integration, business process automation

CERN's response to its need for a scalable platform was its EDH application, providing their employees and contractors with a one-stop shop portal for all of their administration needs, integrating over 50 business processes ranging from vacation requests, purchase orders, employee on-boarding, rights management, to safety procedures. CERN's early business process automation initiatives consisted of custom development written internally using C. As time passed, more one-off proprietary solutions were built which led to increased maintenance costs and less flexibility. In 1998, CERN began leveraging Oracle's work flow engine to reduce the amount of custom code and begin leveraging business process modeling. This served its purpose for a number of years but by 2006 the existing Oracle tool was at end of life and although it met the needs from 1999 to 2006, it did not meet the needs going forward, particularly with the emerging desire to provide better integration between systems.

In 2006, the business applications team embarked on an effort to replace the workflow engine, and simultaneously adopt a more service-oriented approach. The team had over 50 business processes that needed to be updated with the intent of automating as much as possible and focusing on adding value, not administrative overhead. At the same time they wanted to provide as much self service capabilities as possible so the users could quickly handle their administrative tasks without being highly dependent on other people and processes.

At this time, CERN did an evaluation of business process management (BPM) tools, embarking on a thorough vendor evaluation process that included eight initial vendors. Eventually the list was narrowed to three vendors that matched its requirements. At that point, CERN brought in each vendor tool to perform a proof of concept (POC) and eventually selected Active Endpoints' visual orchestration system, ActiveVOS, as the tool that most closely matching their needs. ActiveVOS is an all-in-one, 100% standards-based visual orchestration system where project teams and individual developers working in a web services environment can automate and manage business processes. One of the key differentiators that set ActiveVOS apart from the other vendors' POCs was its ability to identify faults in the business processes and then allow a mechanism for recovering from them. In addition, because ActiveVOS leverages open standards including BPEL, BPMN, BPEL4People and WS-Human Task in a single product, CERN continues to deliver applications flexibly and quickly.

Results: The leading visual orchestration system, ActiveVOS, completes over one million process instances

Automating all of the essential business processes such as arranging travel, ordering materials and authorizing access to controlled areas, for over 11,000 users from all over the world was a complex challenge. Using ActiveVOS's capabilities including process versioning, retry policies, error and exception handling, integrated debugging and support for open standards, the business applications team successfully achieved its goal of creating an integrated, self-service portal containing automated processes for handling numerous administrative tasks to empower their employees and contractors to focus on their vital research. ActiveVOS has also automated internal administrative processes, such as annual performance reviews and safety alarm activation. CERN has now completed over 1,200,000 process instances, adding on average, approximately 12,000 new BPEL process instances every day.

Looking ahead: CERN is poised to deliver solutions faster and easier than before using ActiveVOS

With the successful implementation of these business process automation and integration projects, the business applications team's big challenge now is keeping up with user requests. The business has seen the value of this initiative and understands how quickly IT can react to changes in the business. The good news is that the team can have working prototypes up in days or weeks now as opposed to months and can deliver solutions much quicker than ever before. The business applications team is now the single point of call for all business processes and keeping up with demand is an uphill battle. In this day and age of financial turmoil, this is a good problem to have. Companies investing in increasing efficiencies and lowering costs by using standards-based visual orchestration systems like ActiveVOS are the ones that will withstand the current financial pressures and will be that much further ahead in the future.