

Case Study: Armedia Caliente Helps US Law Enforcement and Intelligence Agency Fight Terrorism

Armedia Caliente (“Caliente”) was used to migrate millions of unstructured and structured pieces of content (including mainframe database records) into a new EMC Documentum (“Documentum”) based Case Management system. This system was developed to support a large US Government Law Enforcement and Intelligence Agency (“Agency”) to electronically manage investigative cases, and ultimately aid the cause in fighting terrorism. The Agency’s vision was to replace its existing primarily paper-based and mainframe structured data case tracking and reporting system with a modern electronic content based system designed for information sharing—one that supports electronic records, workflow, evidence tracking, comprehensive search and rich reporting amongst other features. The key objective for this new system was to support the Agency’s current functional priorities, including the number one priority of preventing terrorist attacks.



The Challenges

The Agency’s new content repository had many more, and differently structured, objects than the mainframe based legacy application. This created some content migration challenges as mapping structured data from the old system to content objects in the new system was a non-trivial task. For example, one row in the legacy application might become content attributes in many different objects in the new content repository. Similarly, child objects might require metadata from parent objects, and associated documents needed to be stored in electronic folders (cases) created earlier in the data migration process.

Additionally, performance was a critical issue as there were millions of existing legacy records and the new electronic Case Management system cannot be shut down but for limited periods during designated weekends.

The Solution

After recognizing their current solution did not integrate with Documentum, the Systems Integrator turned to Armedia to support this migration activity through the use of Caliente: a content migration tool designed specifically for the migration of content on a large scale to and from various electronic formats and ECM technology platforms like Microsoft SharePoint, Alfresco and Documentum. In this case, the specific task was to migrate unstructured and structured content to the Documentum platform from an IBM mainframe based file system.

The approach taken was to initially unload legacy metadata from the mainframe platform to normalized Oracle database tables, and correspondingly move associated legacy electronic files from the mainframe to temporary file storage. Caliente was then used to load the metadata from the Oracle tables, and the content files from the temporary file system storage, into the Documentum repository. Caliente loads data in a pipeline process such that a single query from the source database can result in creating several Documentum objects. A row of records from the source Oracle table could be loaded into several Documentum objects in a single pass, *with only one SQL query*. This helped to efficiently map the simpler legacy data model to the richer new object model. Also, subsequent stages in this pipeline process could refer to data from earlier stages. This allowed the Documentum internal object IDs from a parent object to be carried down to child objects, which, in turn, supported efficiently loading several Documentum objects from a single SQL query.

To aid performance and migration of millions of legacy content objects in a short time period, multiple instances of Caliente were run in parallel.

The Result

In late fall of 2009, Caliente was used to successfully migrate its administrative case files from the mainframe to the Documentum repository. Caliente created 8 million new Documentum objects in 3.5 days. These 8 million objects spanned approximately 40 custom Documentum object types—including a mix of sysobject and non-sysobject object types.

About Armedia

Armedia is an agnostic technology firm, focusing on Enterprise Content Management (ECM) solutions. Armedia has industry-acclaimed expertise, services and products in business process, document, case and record management, as well as collaboration, content publishing and content migration. Armedia's mission is to provide world-class solutions to its clients to aid them in achieving tangible returns on their technology investments. Armedia is veteran owned, 8(a)/SDB certified, GSA Schedule IT70 holder, and has offices in Atlanta, GA and Vienna, VA.

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