BMC Software Inc.

Technical Disclosure Publication Document

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Two-Pass Correlation of In-Flight Unit of Work

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Overview

This document describes our solution for capture and processing of incomplete units-of-work in the gathering of journal report data in the Energizer for IMS Connect product.

Background

Currently we have a mechanism in the BMC Energizer for IMS Connect product that reads BMC's proprietary journal datasets to create report information about transaction units-of-work in the IBM® IMS™ Connect product, a function of IMS. (A journal is a set of datasets created to log events and data about activity in the IMS Connect address space). In order to create these reports in real time, as soon as the current journal is closed, it is archived and then it is possible to create a report about activity that occurred during the life of that journal. The report requires complete unit-of-work information to be accurate. Because some units-of-work are still in-flight at the time of the closing of the current journal, that data cannot be compiled and is lost.

A unit-of-work in the IMS Connect framework is defined as a journaled event record beginning with event 60 (Prepare to Read Socket), followed by various activity events such as begin Exit Read, Send to OTMA, Receive from OTMA, etc., and finally ending with event 72 (Trigger event completion). These events are tied together with a unique timestamp key that identifies each event with a specific unit-of-work. It is common for an event 60 record to be written on one journal, then that journal becomes full and closed before the event 72 can be written, which will then be written on the next journal. This creates the incomplete unit-of-work situation in report gathering.

The solution consists of reading the journal and creating an intermediate file of incomplete units-of-work that can be reloaded in the execution of the next journal

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processing time. This provides real time complete report information about transaction activity in the IMS Connect environment.
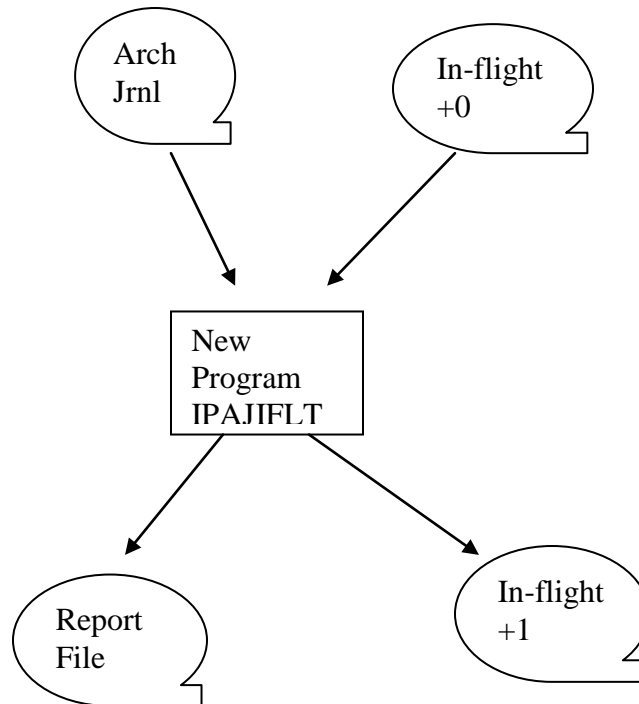

Solution

The Energizer for IMS Connect product creates journaled event transaction activity. When a journal has filled up completely, that journal is closed and cataloged. The BMC in-flight processing program is submitted and reads the previously created in-flight file and the recently closed journal file.

During the first reading pass, a list of all journal record sequence numbers necessary for complete units-of-work (UOWs) is created. On second pass, the records representing complete units-of-work to the new report file are written. Also, on this pass, the records belonging to incomplete units-of-work to the in-flight +1 file are written.

This process can continue infinitely as new journals are created. When an incomplete UOW from the in-flight file is completed, its records are written to the complete units-of-work report file, thus removing them from the in-flight file.

Drawings

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