

Performance analysis of ECS Middleware Application

August 7, 2013

Objective: Measure throughput, reliability and ease of deployment

Report Summary

ECS conducted a performance analysis on the IMS Enterprise Message Hub software. It was observed that a standard windows server can process 249 transactions/second. This included a number of related tasks: receive proprietary messages from queue/file, identify, parse, persist, transform to standard format, transmit and reconcile with response.

Server Specifications

OS: Windows 2008 R2 Standard

Memory: 32 GB, CPU: Intel Xeon E5-2540 @ 2.10 GHz

Processors: 2 with 8 cores per processor

Server Preparation

Deployment: IMS application, database, application server and messaging service

Default Schema: Message libraries, reference data, reporting tools

Configuration: Establish communication with Swift and back office application via MQ Series

Integration: Prepare libraries for parsing, mapping and validation of messages and responses

Quality Assurance: Regression test, Stress test and Disaster test

Total duration: 3 days

Performance Report

Inbound Message Type: CSV

Outbound Message Type: MT103

Message Volume: 1,000,000

Start Time: 10:12:15 EST

End Time: 11:19:10 EST

Total Duration: 1 hour 7 minutes

Transactions/second: 249

Resource Usage

Memory usage: 20 GB (12 GB free)

CPU usage: 20-70%

Reliability

The endurance of the application was tested by subjecting it to disaster while processing millions of transactions. On restarting the application, the processing continued without losing accountability to messages. No messages were found to be lost and no duplicate messages detected.

Durability

IMS Enterprise Message Hub can run indeterminately and process millions of transactions without interruption. There is no need for restarting server or services.