

Case Study

» Client Background

Stericycle provides business and consulting services to more than 471,000 customers worldwide. Focusing on helping customers promote safety, improve regulatory compliance and manage risk. Based in Lake Forest, IL, operate in the US, United Kingdom, Ireland, Canada, Mexico, Argentina, Brazil, Chile, Portugal, and Romania.

SteriCycle services include medical waste disposal and sharps disposal management, product recalls and retrievals, OSHA compliance training, pharmaceutical recalls and medical device returns, hazardous waste disposal, healthcare integrated waste stream management, pharmaceutical waste disposal, medical safety product sales, and high volume notification services.

» ESB INTRODUCTION

The term Enterprise Service Bus is widely used in the context of implementing an infrastructure for enabling Service-Oriented Architecture (SOA). However, real-world experience with the deployment of SOA solutions has demonstrated that an ESB is only one of many components required to build a comprehensive Service-Oriented Infrastructure (SOI).

Royal Cyber Inc. implemented ESB toolkit 2.0 in recent client's (**Stericycle**) project.

» Features of ESB

- 1) An Enterprise Service Bus (ESB) is an architectural pattern and a key enabler in implementing the infrastructure for a service-oriented architecture (SOA)
- 2) ESB is only one of many components required to build a comprehensive service-oriented infrastructure (SOI)
- 3) The increasing adoption of SOA and the creation of Web services have revealed ever growing need to provide a managed layer between services and their consumers
- 4) An ESB provides support for interaction between heterogeneous services and interfaces that might be mismatched, or that might change over time
- 5) An ESB addresses integration problems in a way that maximizes the re-use of services and maintains flexibility

» Achieved Project's Milestones

The following areas are covered within the scope of this project:

1. Install and document the installation of ESB Toolkit 2.0 on the development, QA and Production Server.
2. Setup standard ESB Toolkit 2.0 exception handling process. Create a build and deploy script
3. Unit testing on the development environment
4. Integration testing, Partner testing, and Load Testing in the QA environment
5. Promotion of code to Production Server

» Solution Provided

Royal Cyber Inc. are now one step further in technology race and using BizTalk Server 2009 which providing sound Middle ware and Service Oriented Architecture (SOA) through which, within or between organizations integration and interaction become much easier as compare to past era.

Royal Cyber Inc. recently implemented BizTalk ESB toolkit features in SteriCycle Project successfully. Detail overview of ESB and its implementation are given below to understand ESB in client's project (SteriCycle).

In Client project, covered setup standard ESB Toolkit 2.0 exception handling process and Create a build and deploy script. Further, covered areas are:

1. **ESB Exception Fundamentals**
 - BizTalk ESB Toolkit Exception Handling
 - ESB Exception Management
 - Unified Exception Management
2. **Capturing Exceptions**
 - Routing Messaging Exceptions
 - Routing Orchestration Exceptions
 - Capturing Orchestration Exceptions
 - Extending the Exception Capture Capabilities
3. **Extracting and Normalizing Exceptions**
 - BizTalk Failed Messaging Normalization
 - Modifying Orchestration Failure Routing
 - The Fault Message Reporting Schema
 - Using the ESB Exception Handling API
 - Capturing Exceptions Using the API
4. **Reporting ESB Exceptions**
 - The ESB Exception Reporting Process
 - Implementing the ESB Fault Processor Pipeline
5. **Using the ESB Management Portal**
 - Features of the ESB Management Portal Sample
 - Repairing and Resubmitting Failed Messages
 - Configuring Exception Alerts
 - Automating Exception Processing