



# Enterprise Common Services

## System Design Specification

For

# Infosytech Solutions Inc.

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## Enterprise Common Services

Product Details



The Enterprise Common Services or ECS is a set of utility services created by any enterprise for their internal usage. These utility services form the backbone and will provide a set of APIs to the applications which will be written for any enterprise solution. The major advantage of using an ECS in your enterprise solution is to have a common standard implemented with respect to change of human resource in any organization.

The project majorly deals with the design, development and integration of Enterprise Common Services with a frontend portal and a backend Database. The system is designed such that these services will then be reused across various other applications as a common Service.

**ECS comprises of the following components namely:**

**Batching & De-Batching:** Batching Services is a very common component in application integration within an enterprise. Although there are a lot of commonalities among different batching services, traditionally, individual projects usually develop their own batching services. This practice has resulted in much inefficiency within an enterprise, such as using different technology and products to implement the same common functionality.

### ► Store Transaction

Whenever there is a requirement for batching of transactions, client will send those individual transactions as JMS messages to a queue. Those messages will be picked up and stored in a batching database by the “Store Transaction” Process.

#### ► Split Batch

There might be some scenarios in which the Clients may need to split a large message into individual messages.

### ► Create Batch

Whenever the Client wants to create a batch it sends a Create Batch request JMS message to a queue.

#### ► Confirm Batch

After receipt and processing of the batches, the client will publishes a confirmation message (SUCCESS/FAILURE) to the Batching & De-Batching service as a JMS message to a queue.

**Logging and Exception Handling:** Logging service provides a centralized mechanism to record the various events during transaction processing based on ISB standards. This service will be agnostic of the data store and provide the capability to configure the service dynamically. The logging service can be configured to use any database. It can also be setup to only log messages that are above a particular log level.

Exception handling service provides a uniform mechanism to detect, capture, route and handle exceptions, across all exchanges within the ISB. This service will provide a consistent structure to capture exceptions, generic as well as specific to the exchange.

## ► Logging Services

Information logging can range from logging a simple text message to a complex business transaction. The logged information could be used for audit trail purpose, or for exception handling purpose. Logging is always initiated by an application. When an application needs to log trace information or audit trail information, it can invoke the logging services. Once the logging services receive the log information, it logs the information into persistent storage. With the log in the persistent storage, an authorized user can view the log using a visualization tool provided by the logging services. The user can also either define when the related log information should be purged, or actively purge certain log information.

## ► Exception Handling Services

The exception handling services provide a general-purpose common utility for notifying users and providing facilities for tracking the manual resolution of errors that occur within an application. To use the exception handling services, exception capturing must be designed into all applications to ensure that all exceptions that occur are logged and appropriate actions are taken. It is especially critical for automated processes that any failure that prevents the successful completion of a process is caught and a well-defined recovery action taken. In particular, we want to ensure that errors do not occur “silently” without administrators being aware that problems are occurring within a system.

**Sequencer Services:** Services provided by Sequencer allows the clients to Start processing message, Update Status and Query messages in three different Sequencing modes – Full, Partial and Group. To use these services, one should have a solid understanding of Sequencing Rules and Status transitions of each of these sequencing modes.

## ► Start Processing Service

Use this service to start processing a message of a version within the Project/Client/Group.

This service accepts the request from the client via JMS Request, persist the message on applying the rules of the sequencing mode the message belong to and replies the status at that instance back to the client. The reply from server can have multiple messages and client should consider all of them to decide how to process the message further.

## ► Query Messages Service

Use this service to query messages stored in the sequencer database. The request can be for a wildcard search on “Message Content” field or any of the text fields by using % sign, as the way it is used in the Sql statements.

This service accepts the request from the client via JMS Request, queries the database for the matching messages and replies the result back to the client. The reply from server can have multiple messages and/or multiple error messages.

## ► Update Status Service

Use this service to update the status of a message version within the Project/Client/Group.

This service accepts the request from the client via JMS Request, updates the message status on applying the rules of the sequencing mode the message belong to and replies the result back to the client. The reply from server can have multiple messages and client should consider all of them to decide how to process the message further.

Once the message is successfully updated, a sequence notification is sent if there exists a next waiting message to be processed. The destination queue name of the sequence notification will be the value in “Notify Subject” of the corresponding message.

### Key Business Benefits

▶ **Transaction Logging**

It will store the transaction logging and we can easily trace.

▶ **Message Traceability**

We can track the all messages

▶ **Exception Handling**

Very east to handling the exceptions and time will save while development phase

▶ **Reprocessing**

Reprocessing is handled by itself and no need to check every time .

▶ **Easy to integration**

We can integrate any development platform with this product

▶ **Secure**

Secure web based application with near real time data view to your customers which helps you meet the customer demands more effectively