This demonstration illustrates the value of an Enterprise Services Bus (ESB) solution. Such a solution can reduce administrative costs through service orientation.

Most businesses are focused on making their IT systems more responsive to changing business demands. Regulatory compliance and rapidly changing market dynamics put greater upward pressure on IT costs.

Traditional application interfaces are expensive to build and maintain. The more tightly integrated the interface, the more difficult the application is to change. The more interfaces that exist within a set of programs, the more complex the application becomes. Interface logic may, in many cases, exceed business logic.

An Enterprise Service Bus (ESB) acts as an intermediary (proxy) between applications. The result is that interactions are decoupled. This enables the IT staff to be more responsive and flexible to the changing business demands through the virtualization of:

-Location and identity
-Interaction protocol
-Interface.

A typical request for more parts takes a lot of manual steps. The requisition is created, and then it is submitted for evaluation and checked against the catalog for accuracy. If valid, the cost is calculated and the completed request is submitted for approval. If there are sufficient funds and business justification, the requisition is approved and the order is placed. In this example, there are at least 5 steps and three departments (requisitions, catalog, and accounting) involved in the process.

Consider the same process using a solution built on an architecture designed for SOA integration.

The ESB provides a systematic way to integrate services across multiple applications. New and legacy applications on different server environments can be integrated by the ESB server and, in some cases, the assistance of adapters is used to augment the ESB which enable it to connect to various non-standard data formats. For example, adapters might facilitate interaction with SAP, JDBC, and PeopleSoft information.

In our example, a user opens a requisition application to create a request for some items When the user clicks on the Lookup Button in Line Item 1, the requisition application makes a web service call to the parts catalog to retrieve the parts list. The web service call from the requisition application to the parts catalog application passes through the ESB, which can route the message to different service providers.

A category dialog appears, and the user chooses Computer Peripherals and Supplies. A list of items appears, and the user chooses part number 17, a color laser printer.

The user returns to the requisition form, selects the second line item, looks up Computer Peripherals and Supplies, and chooses item 10, a box of 10 reams of multi-purpose paper.

Back on the requisition form, the user inputs a quantity of 1 for the laser printer and a quantity of 2 for the box of paper, and then presses the Refresh Screen button. At this point, the requisition application makes a web service call to the parts catalog to fill in the rest of the values on the form, including the name of the items order, a short description of the items, etc…. Satisfied that the requisition is correct, the user presses the Submit Requisition button.

The requisition application sends the requisition through a web service to the budget application for approval. Once again, the web service call from the requisition application to the budget approval application passes through the ESB.

After the requisition items are entered and the costs calculated, the requisition application checks with the accounting application, which determines if there are sufficient funds in the budget to cover the requisition.

This simple requisition example shows the potential value of implementing an ESB-based solution.

Complex application interfaces are one of the biggest inhibitors to IT flexibility. An ESB-based solution can help you:

- Eliminate errors introduced by re-keying information
- Enable IT to be more responsive and flexible to changing business demands
- Reuse existing assets and applications
- Easily add, remove, and change applications as required.