Course Outline

CICS/TS Webservices

Course Summary

Description

Interacting with the WEB is no longer an option. IBM has implemented a number of facilities in its CICS product to facilitate the integration of traditional CICS applications to the Internet. CICS applications can now talk to web browsers just as well as they can talk to web servers; with the introduction of web services and SOAP, they can also talk to UNIX and .NET platforms. All in all, CICS/TS is now an important player in implementing Service Oriented Architecture in your organization.

This course will concentrate on the tools available in the current version of CICS/TS. We will discuss HTTP support, CICS transactions acting as clients in a CICS/WEB scenarios, XML, SOAP and Web Services.

Audience

This course is designed for Programmers, designers, system architects and system administrators interested in this subject. Please note that there are 5 exercises which will require a little programming; all exercises will be using COBOL program skeletons.

Topics

- Introduction
- HTTP support
- CICS Channels and Containers
- WEBSERVICE, SOAP and XML
- CICS as a WEBSERVICE provider
- CICS as a WEBSERVICE requester
- Message processing
- Security

Prerequisites

Some knowledge the CICS API

Duration

Four Days

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I. Introduction

This section will provide a quick review of the web facilities available in CICS; it will discuss CICS/WEB API, CICS DOCUMENT API and TCP/IP API that have been available for a while now. It will also provide an overview of the various ways one can connect to a CICS system .

II. HTTP support

HTTP opens new doors to CICS applications. We will discuss the HTTP RFC date format and the CICS commands that will help you get to these new formats, chunked and pipelined messages, virtual hosts, CICS URIMAP and TCPIPSERVICE definitions, compliancy rules, behaviour of the CICS Web Monitor transaction. The exercise will be about formatting dates so they can display in HTTP RFC format.

III. CICS Channels and Containers

Web services can be implemented using either COMMAREA or CONTAINERS but using CONTAINERS to pass information between processes is by far the better approach. This chapter describe the CICS/API commands related to implementing CONTAINERS in your CICS programs. We will discuss the GET, PUT and MOVE commands as well as providing information on how to browse through the list of CONTAINER names available within the CHANNEL. It will review existing CICS/API commands that can be used to pass CHANNEL to other programs, namely XCTL, LINK, START and RETURN. The hands-on exercise will consist on converting 2 programs which are using COMMAREA to CONTAINERS. This technology is required when writing webservice requester applications.

IV. WEBSERVICE, SOAP and XML:

This chapter provides a brief overview of these facilities. Since they rely heavily on XML, we will also discuss the tools that are available to programmers for dealing with XML messages.

V. CICS as a WEBSERVICE provider

In this section, the attendant will build the necessary objects that will make CICS a provider of webservices. We will discuss the webservice assistant DFHLS2WS in detail, review the parameter to the utility, the rules that the application program must follow in order to have a successful implementation. In this chapter, we will also introduce the concept of PIPELINE. The exercise will be about building a pipeline and preparing a server program which will be used as webservice provider.

VI. CICS as a WEBSERVICE requester

In this section, the attendant will build the necessary objects that will make CICS a requester of webservices. We will discuss the webservice assistant DFHWS2LS in detail, review the parameter to the utility, the rules that the application program must follow in order to have a successful implementation. A review of the CICS commands available to the programmer to invoke a webservice will also be provided. The exercise will be about building a pipeline and preparing a requestor program which will invoke the webservice provider application prepared in the previous exercise.

VII. Message processing

In this section, we discuss some of the elements involved in processing web services. More specifically, we will review the methodology to use when dealing with arrays and variable arrays in a web service message, processing MTOM/XOP and WSDL 2.0 facilities supported by CICS/TS

VIII. Security

A brief overview of the security available in CICS/TS will be provided; we will discuss the changes to SSL support, certificate revocation lists, behaviour changes of the EXEC CICS VERIFY PASSWORD command and the introduction of the support for TLS.