Web Services

DEV 252 - Course outline

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CONFIDENTIALITY LEVEL:

Public

STIBO SYSTEMS
MASTER DATA MANAGEMENT

Target Group

This course is targeted towards application developers who will be responsible for integrating business applications with STEP using Web Services.

Pre-Requisites for Participation

Participants for the course will be expected to have:

- Stibo Systems Academy courses (or equivalent knowledge acquired by other means)
    - MDM 101 - MDM Solution Fundamentals

- Good practical experience using a STEP system and the STEP Workbench UI

- Students must have Administrator rights on their PC for the course

- Students should have Postman (current or recent version) already installed on their PC for the course

- Practical experience with basic principles within Web Services.

- Practical experience in one or more programming languages (Java, .NET, PHP etc.) which support SOAP/REST

- Technical understanding of SOAP and REST Web Services technologies; as well as common industry standards, protocols and technologies, such as XML, JSON and HTTP.

Course Duration

The course duration is 3 days.

Training Delivery Method

☒ In person classroom
☒ Virtual classroom
☐ Self-paced online

The course activities will be a combination of lectures, case studies in teams, problem solving exercises and presentations by the trainees.

Course Purpose

In this course, you will gain the information and expertise needed to design and develop or adapt business software systems to interact and exchange data with STEP using the STEP Web Services APIs.

NOTE: the term Web Services covers the STEP SOAP, GraphQL and REST APIs. REST API refers to STEP REST API v2. As of STEP 9.2 REST API v1 is deprecated.

Course Objectives

Upon completion of this course, participants will be able to:

1. Display detailed knowledge of capabilities and limitations of the Web Services APIs.

2. Demonstrate use of information sources, tools and techniques for preparing development tools to invoke Web Service APIs.

3. Demonstrate that the requirements of a specific business use case can be met with a STEP Web Services.

4. Specify a solution indicating Web Services touchpoints, pseudo-logic, inputs and outputs.

5. Complete solution development by identifying and implementing service calls in accordance with the solution design.

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Learning Objectives

The objectives below describe precisely what is taught during the training: (please note that the learning objectives can belong to more than one course objective).

> **Course Objective 1 - Display detailed knowledge of capabilities and limitations of the Web Services APIs.**

Learning objectives:

- Illustrate how to uniquely identify STEP objects in each API.

- Comprehend the responsibility of Context and Workspace for API requests.

- Give examples of what each API can't do.

- Articulate common features of Web Service APIs.

> **Course Objective 2 - Demonstrate use of information sources, tools and techniques for preparing development tools to invoke Web Service APIs.**

Learning objectives:

- Demonstrate how to utilize STEP documentation in order to invoke SOAP API.

- Demonstrate how to utilize STEP documentation in order to invoke GraphQL API.

- Demonstrate how to utilize STEP documentation in order to invoke REST API.

> **Course Objective 3 - Demonstrate that the requirements of a specific business use case can be met with a Web Service API.**

Learning objectives:

- Explain suitable applications of SOAP API.

- Explain suitable applications of GraphQL API.

- Explain suitable applications of REST API.

- Collaborate to optimize suggested solution.

> **Course Objective 4 - Identify best practices applicable to the APIs.**

Learning objectives:

- Explain performance guidelines for each API.

- Choose solution implementation in accordance with best practices.

- Identify general best practices in Web Service APIs.

> **Course Objective 5 - Complete solution development by identifying and implementing service calls in accordance with the solution design.**

Learning objectives:

- Use SOAP API effectively to query data.

- Use GraphQL API effectively to query data.

- Use REST API effectively to query data.

- Manipulate data objects through SOAP API.

- Manipulate data objects through REST API.

- Manipulate data objects through GraphQL API.

- Identify cause of error from status code and message.

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About Stibo Systems

Stibo Systems is a leading enabler of trustworthy data through AI-powered master data management. Built on a robust and flexible platform, our SaaS solutions empower enterprises around the globe to deliver superior customer and product experiences. Our trusted data foundation enhances operational efficiency, drives growth and transformation, supports sustainability initiatives and bolsters AI success. Headquartered in Aarhus, Denmark, Stibo Systems is a privately held subsidiary of Stibo Software Group, which guarantees the long-term perspective of the business through foundational ownership. More at **www.stibosystems.com**.