

<b>Mule-Soft 4.X from Scratch and in-depth</b>
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<b>Topics</b>
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<b><u>ESB Introduction</u></b>
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Problems of Point to Point Integration

What is an ESB?

How an ESB helps in solving problems with P2P Integration

Idea behind an ESB . How it works ?

What is Orchestration?

What is Mule?

What is Anypoint Platform for Mule?

### **Mule Basics**

What is a mule Flow?

What is Event Processor?

How does a Mule Event looks like?

What is a Transformer, Endpoint ?

Introduction to Anypoint Studio

Describe the structure of new Mule 4 projects and deployable archives

Debugging a mule flow

Structure of a MuleEvent in detail

Track event data as it moves in and out of a Mule application

Introduction to DataWeave 2 as Mule Expression Language

**Lab : Implementing a Basic flow and debugging it**

### **Using Java Module**

Understanding modules in Mule.

Call static and non static Java methods using the new Java module

**Lab : Using Java Module**

## **Deploying applications Standalone Mule Server and using Runtime Manager**

Starting Stand alone mule Server.

Understanding various configurations in Standalone Server

Deploying applications manually to standalone server

Registering a standalone server in Anypoint Runtime Manager

Deploying Application to standalone server using Runtime Manager

## **Understanding Http Listener and Http Request Configuration in detail and Consuming SOAP webservice.**

Consuming a Restful Webservice

Passing arguments to Restful Webservice

LAB : Consuming Restful Webservice

LAB : Consuming SOAP Webservices Using Webservice Consumer

### **File Endpoint**

Configuring file connector

Trigger a flow when a new file is added to a directory

Writing a file to file system

Lab : Reading and writing files

### **Database Endpoint and externalization of properties**

Configuring Database Connector

Configure the Database Select operation

Externalizing configuration to yaml file.

Add Secure properties to Mule4 applications

Migrating between environments

Lab : Conf of database end point and Externalization

### **WaterMarking and Object Stores**

Trigger a flow when a new record is added to a database and use automatic Watermarking

What are Object Stores?

Schedule a flow and use manual watermarking using Object Stores

Lab : Using Database Select Operation, Watermarking and Object Stores

### **Introduction to Domains**

Understanding about Mule Domains.

Sharing Global configurations across multiple projects using domains.

Create Mule 4 domains using Maven coordinates and use them to inherit all dependencies

Lab : Creating and using Mule domains

### Routing

Scatter-Gather router

Choice

Lab : Implementing Scatter-Gather router

### **JMS Endpoint**

Configuring Jms Connector

Sending JMS Message to a queue using Publish endpoint of JMS Module

Receiving JMS Message from a queue using JMS Listener endpoint of JMS Module

Using Jms Selectors

Using Publish Consume to send Jms message and receive JMS reply

Setting Jms Headers

Lab : : Using JMS Module

### **Transformers**

Introduction to Data Weave data transformation Language

Writing DataWeave expressions

Adding Sample data to view

Previewing transformations in studio

Externalizing Data weave expressions into DWL file

Writing Expressions for XML ,JSON and JAVA

Writing Expressions for transforming XML to Json and vice-versa

Using Message Variables in DWL

**LAB : Transformations for JSON, XML and JAVA**

Transforming complex data structures using DWL

Working with collections in DWL using map operator

Using \$ while iteration.

Using Various DataWeave Operators

Custom DataTypes in DWL

Formatting in DWL

Conditional Logic Operators in DWL

Using OrderBy, filter .etc..

**LAB : Transforming Complex DataStructures**

**LAB : Using DataWeave in combination with data base component, Webservice consumer and Http Endpoint**

### Handling Errors

What happens when exception happens in a flow?

How to handle System Exceptions?

Difference between Mule 4 OnErrorContinue and OnErrorPropaget Scopes

Handling Errors at application level

Handle specific types of errors

Handle errors at the flow level

Map an error to a custom error type

Set a reconnection strategy for a connector

Use Validations to throw Mule 4 errors instead of Java exceptions

Lab : **Handling errors**

### **MUNIT**

Functional testing of Mule flows using MUNIT

Generating MUNIT flows from existing flows

Writing various asserts

Setup and Tear down

Lab : **Writing a sample test case using MUNIT**

### **API-LED connectivity**

Understand the power of API

Modern API structure : Different layers

Experience Layer

Process Layer

System Layer



### **Designing APIs**

Use API designer to define an API with RAML

Use the mocking service to test an API

Add request and response details

Add an API to Anypoint Exchange

Share an API

**Lab : Designing a RAML using API designer on Any point platform**

### **MANAGING APIS**

Deploy an application to CloudHub

Create and deploy an API proxy

Restrict API access with policies and SLAs

Request and grant access to a managed API

Add client ID enforcement to an API specification

**Lab : Deploying a proxy and managing policies using API Manager.**



■ Enter as Trainees....

*Exit as Professionals*

