APIGEE Course Curriculum:

1. Introduction on API Management

Learning Objectives – You will be introduced to Digital Disruption in general and Need for API Management, industry trends and also various tools in the market. In this session you will be learning about fundamentals of Restful APIs and its application. In order to become a successful web API developer, you will be learning basics of HTTP protocols and its application in real time business apps.

Topics:

The following are the topics which will be covered in this session:

1. History–Digital disruption Need for API Management
2. Introduction on API Management
3. Fundamentals of Restful API design. What is the difference between SOAP and Restful APIs?
4. Apigee Edge Overview Anatomy of a Proxy
5. How to enroll and get access to apigee platform. How to manage API developer accounts.
6. Q & A

2. Apigee overview & Mediation Policies

Learning Objectives – In this session, trainees will be knowing about apigee architecture and various components. Detailed walk through on apigee cloud modules. The trainees will be enrolled to apigee platform for building API's. You will be creating a first proxy pass-through and later on in the session you will learn about apigee mediation policies.

Topics:

The following are the topics for today's session:

Basic Terms & Terminology API Proxy Patterns with Edge Mediation Policies

1. Lab Session 1 – Building a sample API proxy in apigee
2. Lab Session 2 – Attaching XML2JSON policy
3. Lab Session 3 – Attaching Assign Message & Extract Variables
4. Lab Session 4 – Attaching KVM Policies
5. Lab : XSLT Mediation
6. Lab: Conditions and Route Rules
7. Lab: Shared Flows
8. Lab: Analytics
9. Lab : Logging
10. Lab: Java and Python integration

11. Lab : OpenAPI Implementation

3.Developer Apps, Products & Security

1. Create API Products, developers and apps
2. Protecting your API: Implementing Security and Authentication in Edge

Learning Objectives –
Learn how to leverage Apigee's security policies to protect your APIs from traffic spikes,
denial of service attacks, content-level attacks and more.

Topics –

Create API Products, developers and apps
What is an API product
Create API Products, developers and apps

 Topics – Protecting your API

Security Management Policies

- Lab Session – 6: Applying JSON Threat Protection
- Lab Session – 7: Applying RegEx Protection
- Lab Session – 8: Applying Access Control Policy
- Lab Session – 9: Applying API Key & Quota Limits and Basic Auth
- Lab Session – 10: Applying OAuth2.0 GrantType(client credentials and password)x
- Lab : OAuth 2.0 Misc

4. All about API Traffic Management

Learning Objectives – In this session, participants will be learning about proxy pattern which
proxies an existing SOAP backend service and expose a RESTful API interface that clients
can make calls. Also, you will learn about how to manage API traffic using traffic
management policies. Also, you learn about building high performance API proxies using
apigee supported caching policies. As an apigee api developer you will learn how to secure
an API end point.

Topics –

Building SOAP to REST Proxy Pattern Traffic Management Policies

- Lab Session – 11: Converting SOAP to REST
- Lab Session – 12: Attaching Spike Arrest policy
- Lab Session – 13: Different Cache Policies(Lookup, Response,Invaildate,Populate Cache)
- Lab Session – 14: Attaching Custom Cache Policy
- Lab : Reset Quota

5. Apigee Extensions

Learning Objectives – In this session, participants will be learning about data masking support in apigee for hiding sensitive data. You will also be learning about on how to invoke back end services using service callouts. How to use java script policies and apply the script for parsing the response.
Topics –

All bout apigee Extension Policies

- Lab Session 15: Invoke Back end via Service Callout
- Lab Session 16: Parse Response using JavaScript
- Lab: Node Js Integration

6. Fault Handling

Learning Objectives – API developer will learn about how to handle errors on apigee edge. Many error conditions can arise while API proxies are servicing requests from apps. For example, API proxies might encounter network issues when communicating with backend services, apps might present expired credentials, request messages might be incorrectly formatted, and so on. You will also be learning on how to handle system and application errors using fault rules and send custom messages to the API consumers.

Topics –

How errors occur Custom errors
What API proxies do when errors occur Check for FaultRules

Lab Session 17: Handling System errors and Application Errors , Fault Rules, Raise Fault

Advanced Apigee Topics

7. Publishing API docs & Developer Portal

Learning Objectives – In this session, you will be learning about what is developer portal? Developer portal usage in the industry and how does external and internal developers get access to API keys.

Topics –
Swagger Specifications for APIs

Lab Session 18: API Specifications using Swagger Specs

Swagger docs' generation for APIs Developer Portal

How does developer portal integrate with apigee edge?

8. API Proxy Packaging & Deployment process

Learning Objectives – As an API developer, you will have to integrate the API life-cycle with CI/CD processes, this session will help you understand in getting hands-on apigee tools for enabling you with CI/CD processes and externalize parameters for API proxy using build and deploy tools like maven

Topics –

API Packaging & Deployment

Lab Session 19: API Packaging & Deployment