

V1.0

Training Program on

Redhat 3Scale API Management



**4P Advisory Services**

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## **Redhat 3Scale Training Program**

### **What is 3Scale?**

Red Hat 3scale is an API management platform that enables organizations to manage their APIs (Application Programming Interfaces) across their entire lifecycle. It provides a set of tools and features for developers to create, publish, secure, monitor, and scale APIs. The platform supports a range of API protocols, including REST, SOAP, and GraphQL, and is compatible with a variety of programming languages and frameworks.

Red Hat 3scale offers a flexible deployment model, allowing users to choose between a cloud-hosted solution, an on-premises deployment, or a hybrid model. It also provides a wide range of integration options with other Red Hat products, such as OpenShift, Ansible, and Fuse, as well as third-party tools and services.

The platform provides various security features to protect APIs from unauthorized access and attacks, such as authentication, authorization, rate limiting, and encryption. Additionally, it offers analytics and reporting tools to track API usage, performance, and other metrics, enabling organizations to optimize their API strategies and make data-driven decisions.

Overall, Red Hat 3scale simplifies the process of managing APIs, making it easier for organizations to develop and deliver digital products and services that meet the needs of their customers.

### **Advantages of Redhat 3scale as API Management:**

- **Comprehensive API management:** Red Hat 3scale provides a comprehensive set of tools and features for managing APIs throughout their lifecycle, including design, development, testing, deployment, and maintenance.
- **Scalability and flexibility:** Red Hat 3scale is designed to be highly scalable, supporting thousands of APIs and millions of transactions per day. It also provides flexible deployment options, including on-premise, cloud, and hybrid environments.
- **Security and compliance:** Red Hat 3scale provides advanced security features, including role-based access control, OAuth2 authentication, and rate limiting to protect against API abuse and security threats. It also supports compliance with regulatory requirements, such as GDPR and PCI-DSS.
- **Developer experience:** Red Hat 3scale provides a developer portal that enables developers to discover, test, and consume APIs easily. It also supports a variety of programming languages, frameworks, and protocols to make it easy for developers to integrate with your APIs.
- **Analytics and reporting:** Red Hat 3scale provides powerful analytics and reporting capabilities, enabling you to monitor API performance, usage, and adoption. This data can be used to optimize your API strategy and improve the overall user experience.
- **Monetization:** Red Hat 3scale enables organizations to monetize their APIs by providing support for billing and pricing plans. This enables organizations to generate revenue from their APIs and turn them into profitable businesses.

Overall, Red Hat 3scale API Management is a powerful solution for organizations that need to manage their APIs effectively, securely, and efficiently. It provides a comprehensive set of features and tools that can help organizations to increase developer productivity, improve API performance, and drive business growth.

**Audience:**

The Redhat 3Scale training program is a course designed for:

- API developers: Developers who are responsible for designing, developing, testing, and deploying APIs.
- API architects: Architects who are responsible for designing API architectures, defining API standards and best practices, and providing guidance to API development teams.
- API operations teams: Operations teams who are responsible for deploying, configuring, and monitoring APIs in production environments.
- Technical project managers: Project managers who are responsible for managing API development projects and coordinating with cross-functional teams.
- IT managers: Managers who are responsible for overseeing API management initiatives and ensuring that they align with business goals.
- Solution architects: Architects responsible for designing and implementing solutions involving APIs.

**Learning Objectives:**

- Understanding API management: Participants will gain a comprehensive understanding of API management, including the key concepts, principles, and best practices involved.
- Learning about Red Hat 3scale: Participants will learn about Red Hat 3scale API Management and its features, including API design, development, testing, deployment, and maintenance.
- API development: Participants will learn about API development, including designing and implementing APIs, defining API standards and best practices, and using open-source tools and frameworks.
- API deployment: Participants will learn about API deployment, including deploying APIs in various environments, such as on-premise, cloud, and hybrid environments.
- Monitoring and analytics: Participants will learn about monitoring and analytics for APIs, including using metrics and logs to monitor API performance, usage, and adoption.
- Integration with other systems: Participants will learn about integrating APIs with other systems, including using API gateways, service meshes, and messaging systems..

Overall, the objectives of the Red Hat 3scale API Management Administration training program are to provide participants with a comprehensive understanding of API management and the tools and techniques required to manage APIs effectively. The course is designed to equip participants with the knowledge and skills required to design, develop, deploy, and maintain APIs securely and efficiently, and to monitor and analyze their performance and usage

**Candidate Prerequisites:**

To attend the Red Hat 3scale API Management Administration course, it is recommended that, the candidates have some experience with application development, web services, and Linux system administration. Specifically, candidates should have:

- Knowledge of RESTful web services and API concepts
- Familiarity with common API protocols, such as HTTP, REST, and JSON
- Basic understanding of Linux operating system commands and concepts
- Experience with application development using a common programming language, such as Python or Java
- Familiarity with containerization and container orchestration tools, such as Docker and Kubernetes
- Additionally, candidates should have access to a computer with a modern web browser and a stable internet connection.

It will be beneficial for candidates to have experience with Red Hat OpenShift or Red Hat Fuse.

**Training Infrastructure Prerequisites:**

To practice the contents of the Red Hat 3scale API Management Administration course, participants will need access to the following software and cloud services:

- Red Hat 3scale API Management: Participants will need access to a Red Hat 3scale API Management account. This can be set up as part of the course, or participants can use an existing account if available.
- API development tools: Participants should have a basic understanding of at least one common programming language, such as Python or Java. They should also have access to a development environment for building and testing APIs, such as an integrated development environment (IDE) or code editor.
- Red Hat OpenShift: Participants may need access to a Red Hat OpenShift cluster to deploy and manage their APIs. A cloud-based version of OpenShift, such as Red Hat OpenShift Online, can be used for this purpose.
- Cloud-based services: Participants may use cloud-based services, such as Amazon Web Services (AWS) or Microsoft Azure, for deploying and testing APIs. Participants will need to have appropriate access to these services, such as an AWS account.

During the course, the instructor will provide guidance on setting up and using these tools and services as needed. Hands-on labs and exercises will be provided to allow participants to practice using Red Hat 3scale API Management and related technologies.

**Additional cost related Information on the above tools:**

Some of the tools and cloud services required to practice the contents of the Red Hat 3scale API Management Administration course are free, while others may require a paid subscription or license.

**Red Hat 3scale API Management:** Red Hat 3scale API Management offers a free trial account that can be used to practice the contents of the course. However, to use 3scale in a production environment, a paid subscription is required.

**API development tools:** Many development environments and code editors, such as Eclipse or Visual Studio Code, are open-source and free to use. However, some may require a paid license or subscription, depending on the specific tool being used.

**Red Hat OpenShift:** Red Hat OpenShift offers a free version of its platform, called OpenShift Origin, that can be used for development and testing purposes. However, for production use, a paid subscription is required.

**Cloud-based services:** Cloud-based services such as AWS and Microsoft Azure offer free tiers with limited usage allowances, which can be used for practicing the contents of the course. However, to use these services beyond the free tier, a paid subscription is required.

Overall, while some of the tools and cloud services required for the course may require payment, many are available in free or trial versions that can be used for learning and practicing purposes. The specific costs and availability of these tools may vary based on factors such as location and usage requirements.

**Training Outline:*****Day 1:***

- Introduction to API management
- Overview of Red Hat 3scale API Management
- Configuring your account and portal
- Creating and publishing APIs
- Managing API authentication and authorization
- API rate limiting and policies

***Day 2:***

- API metrics and analytics
- Managing developer accounts and access
- Monetizing APIs with billing and pricing plans
- Integrating with other services and tools
- Configuring API gateway and backend integrations
- Implementing advanced API policies

***Day 3:***

- API lifecycle management
- Setting up API versioning and deprecation
- API documentation and testing
- Deploying and scaling the API management platform
- High availability and disaster recovery
- Security best practices for API management

The course includes hands-on labs and exercises that allow participants to practice and apply the concepts and skills covered in the course. By the end of the course, participants should be able to configure, deploy, and manage APIs using Red Hat 3scale API Management.