

Online
Programme



e-Programme on
**ROLE OF MICRO SERVICES
IN DEVELOPING
SCALABLE APPLICATIONS**

Coordinator: **Dr. V. Radha**

SEPTEMBER 10 – 13, 2024 (Online Mode)



Institute for Development and Research in Banking Technology
(Established by Reserve Bank of India)

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e-Programme on Role of Micro Services in Developing Scalable Applications September 10 – 13, 2024

Introduction

Majority of the business applications being in use were developed in the monolithic era (tightly coupled modules), using client-server architecture. This was an excellent choice when desktops ruled IT. But with the rise of mobile devices and the cloud, back-end data must always be available for a wide range of devices. At this point, the monolithic architecture is a major bottleneck, as whenever a change is made, the entire application has to be updated, opening up the possibility of new bugs. Most importantly, with everything tied to a single codebase, one can't scale a specific function or service independently; one has to scale up the entire application, leading to higher costs.

With microservices, application code is broken into independent decoupled services that run as separate entities in different servers. Output from one service is used as an input to another in an orchestration of independent, communicating services.

Unlike the monolithic architecture wherein a failure in the code in a module affects more than one service or function, there is minimal impact of a failure using microservices. Even when several systems are brought down for maintenance, users won't notice it.

Scalability is the key aspect of microservices. Because each service is a separate entity, one can scale up a single function or service without having to scale the entire application. Business-critical services can be deployed on multiple servers in load balancing mode for increased availability and performance.

Objective

The program aims to draw attention to the problems faced because of monolithic architectures and high lights the advantages of shifting to micro-services based architectures particularly in the context of scalability.

Contents

- Introduction to Containers and Docker
- Introduction to Service Oriented Architecture and Micro Services
- Monolithic Architectures and their pros and Cons
- Micro Services Architectures and their pros and cons
- Deployment Models

Mode of Teaching

Online teaching plus learning inputs through reading material, videos, webinars, assignments, quizzes, online interactions and clarifications. The e-Programme will have four live webinars and self-study course material will be made available during the course.

Who Can Participate?

IT officers and executives who are directly or indirectly involved in application development.

End Use:

Participants would definitely appreciate the concepts of micro services and the benefits they bring in.

Programme Coordinator:

Dr. V. Radha, Associate Professor, IDRBT; e-mail: vradha@idrbt.ac.in

Fees:

For Indian Participants

- RRBs & Coop Banks: Rs. 17,700/- (Rs. 15,000/- + 18% GST)
- All Other Banks & Financial Institutions: Rs. 23,600/- (Rs. 20,000/- + 18% GST)

Discount

For every 12 nominations from a bank, the Institute will offer a fee discount for two participants, i.e., we will be charging for 10 participants and 12 participants can be trained.

Bank Account Details for Remittance of Fees

The fees for this e-programme can be remitted to the following accounts:

Account Name	:	IDRBT
Bank & Branch	:	Axis Bank Limited, Humayun Nagar, Mehdiapatnam, Hyderabad
Account No.	:	426010100018823
MICR Code	:	500211012
IFSC Code	:	UTIB0000426

Nominations

Banks may nominate any number of participants to these e-Programmes, which may be accepted on a first-cum-first-served basis. While nominating, please provide the details of the participants (Name, Designation, Bank, Mobile No/Phone No, email address, fees billing address, GST No. of the Bank).

Apart from nominations by banks, staff members of banks can self-nominate themselves for these e-Programmes by providing their employee credentials and paying the programme fee latest by **SEPTEMBER 09, 2024**.

How to Register

The nominations for these e-Programmes, and queries if any, may please be sent to eprogram@idrbt.ac.in. Please visit <https://www.idrbt.ac.in/e-programmes> for more details about these programmes.

e-Programmes in September 2024

S. No.	Name of the e-Programme	Date	e-Programme Coordinator	Last Date for Nomination
1	Software Testing and Automation	03 – 06	Dr. Abhishek Thakur	Sep 02, 2024
2	Role of Micro Services in Developing Scalable Applications	10 – 13	Dr. V. Radha	Sep 09, 2024
3	Digital Signatures for Financial Applications	24 – 27	Dr. N. P. Dhavale	Sep 23, 2024
4	Cyber Security Guidelines	24 – 27	Dr. Dipanjan Roy	Sep 23, 2024
5	Threats to Digital Payment Landscape	24 – 27	Dr. Susmita Mandal	Sep 23, 2024
