

# INFOSOFT IT SOLUTIONS

**Training | Projects | Placements**

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## **HEROKU PLATFORM TRAINING**

### **1. Introduction to Heroku**

- Overview of Cloud Platforms
- What is Heroku?
- Key Features and Benefits
- Supported Languages and Frameworks

### **2. Getting Started with Heroku**

- Creating a Heroku Account
- Installing the Heroku CLI
- Setting Up Your Development Environment

### **3. Deploying Applications**

- Preparing Your App for Deployment
- Deploying with Git
- Understanding Procfile and Dynos
- Continuous Deployment with GitHub

### **4. Application Configuration**

- Managing Environment Variables
- Configuring Buildpacks
- Using Heroku Config Vars
- Local Development with Heroku Local

### **5. Add-ons and Extensions**

- What are Heroku Add-ons?
- Popular Add-ons (e.g., Heroku Postgres, Redis, SendGrid)

- Adding and Configuring Add-ons
- Customizing Add-ons for Your App

## **6. Heroku Runtime**

- Understanding Dynos and Scaling
- Types of Dynos (Web, Worker, One-off)
- Scaling Applications (Horizontally and Vertically)
- Monitoring and Managing Dynos

## **7. Data and Storage**

- Heroku Postgres
- Heroku Redis
- Using Heroku Connect
- Data Management and Backups

## **8. Application Performance and Monitoring**

- Logging with Heroku Logplex
- Using Heroku Metrics
- Performance Tuning Tips
- Integrating with Monitoring Tools (e.g., New Relic, Papertrail)

## **9. Managing Applications**

- Using the Heroku Dashboard
- Heroku Pipelines for CI/CD
- Review Apps for Staging Environments
- Managing App Releases and Rollbacks

## **10. Security Best Practices**

- Managing Access and Permissions
- Using Heroku Shield for Compliance
- Securing Environment Variables
- Implementing SSL/TLS

## **11. Advanced Heroku Features**

- Using Heroku Enterprise Features
- Heroku Private Spaces
- Heroku Teams and Collaboration

- Custom Domain Setup

## **12. Troubleshooting and Support**

- Common Deployment Issues
- Debugging and Error Logs
- Heroku Support Channels
- Community and Learning Resources

## **13. Case Studies and Real-world Examples**

- Case Studies of Successful Deployments
- Best Practices from Real-world Applications
- Scaling and Optimizing Based on User Stories

## **14. Continuous Integration/Continuous Deployment (CI/CD)**

- Overview of CI/CD
- Setting Up Heroku CI
- Integrating with External CI/CD Tools (e.g., Jenkins, CircleCI)

## **Advanced Heroku Platform**

### **1: Introduction and Advanced Concepts**

#### **1. Overview of Heroku Platform**

- Recap of basic Heroku features and functionalities
- Detailed exploration of the Heroku ecosystem

#### **2. Understanding Heroku Architecture**

- Dynos: Advanced usage and optimization
- Buildpacks: Customizing and creating buildpacks
- Heroku Runtime

### **2: Advanced Application Deployment**

#### **1. Advanced Deployment Techniques**

- Deploying with Git, GitHub, and CI/CD tools
- Managing multiple environments (staging, production, etc.)

- Using pipelines for complex deployments
- 2. Configuring Applications for Performance**
  - Environment variables and configuration management
  - Optimizing build and release processes
  - Scaling applications efficiently

### **3: Add-ons and Integrations**

- 1. Advanced Add-ons Usage**
  - Integrating and managing add-ons for databases, logging, caching, etc.
  - Customizing add-ons for specific use cases
- 2. External Services and Integrations**
  - Connecting with third-party APIs and services
  - Using Heroku Connect for Salesforce integration
  - Leveraging Heroku for microservices architecture

### **4: Monitoring, Logging, and Debugging**

- 1. Monitoring and Performance Tuning**
  - Utilizing Heroku Metrics
  - Advanced performance tuning techniques
- 2. Logging and Debugging**
  - Setting up and managing logging with Logplex
  - Using advanced logging tools (e.g., Papertrail, LogDNA)
  - Debugging techniques and best practices

### **5: Security and Compliance**

- 1. Security Best Practices**
  - Securing Heroku apps
  - Managing SSL/TLS for applications
  - Role-based access control and permissions
- 2. Compliance and Data Management**
  - Data residency and compliance considerations
  - Backup and disaster recovery strategies

### **6: Advanced Data Management**

- 1. Database Management**

- Managing Heroku Postgres at scale
- Advanced database configurations and optimization
- Implementing automated backups and restores

## **2. Data Analytics and Insights**

- Integrating with data analytics tools
- Real-time data processing with Heroku Kafka
- Leveraging Heroku Redis for data caching

## **7: Automation and Scripting**

### **1. Automation with Heroku CLI**

- Advanced Heroku CLI commands
- Scripting deployments and maintenance tasks

### **2. Using Heroku API**

- Interacting with Heroku via its API
- Automating workflows and custom integrations

## **8: Case Studies and Best Practices**

### **1. Case Studies**

- In-depth analysis of successful Heroku implementations
- Lessons learned from complex deployments

### **2. Best Practices**

- General best practices for deploying and managing applications on Heroku
- Performance, security, and scalability considerations

## **9: Hands-on Projects and Capstone**

### **1. Hands-on Projects**

- Real-world projects to implement learned concepts
- Group projects and individual assignments

### **2. Capstone Project**

- Comprehensive project covering all aspects of advanced Heroku usage
- Presentation and evaluation