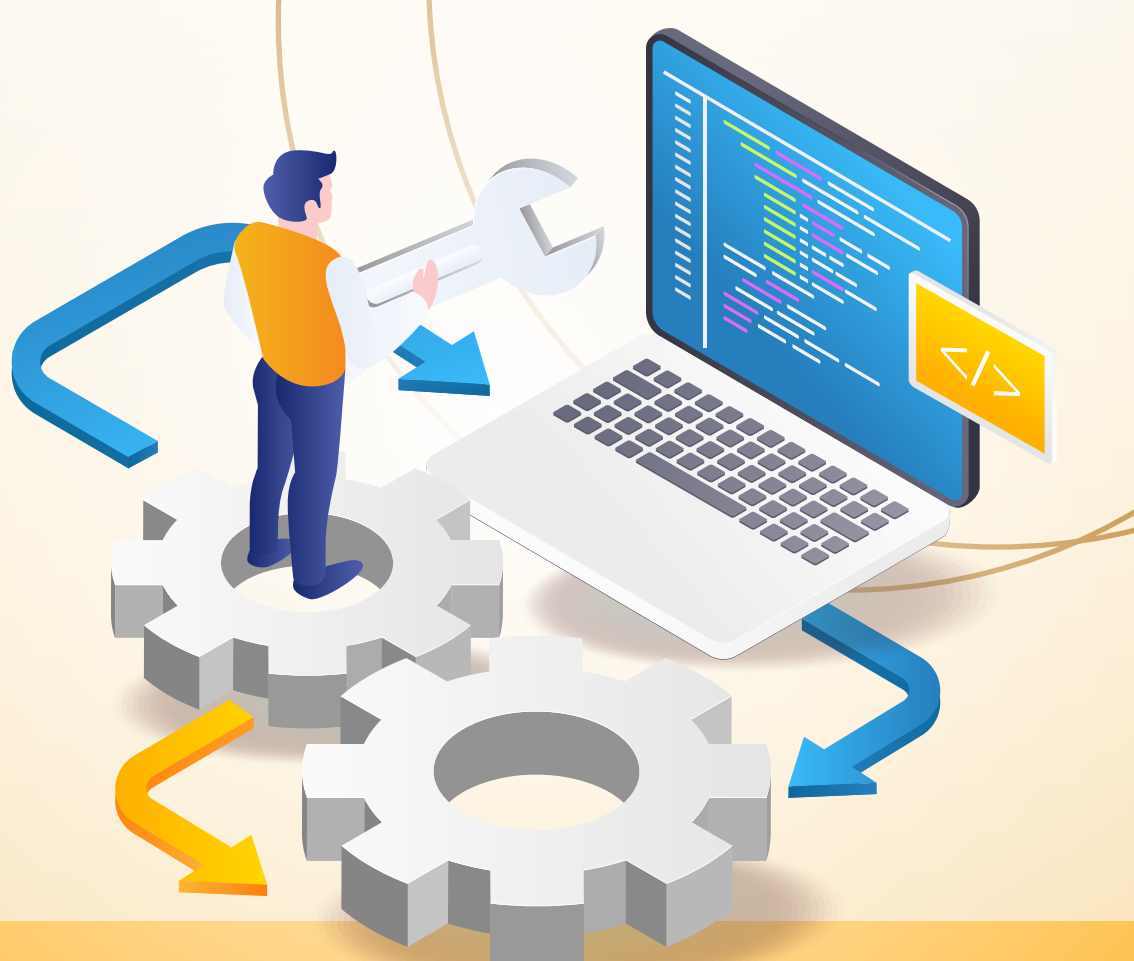


# Transformation of Deployment and Maintenance in DevOps Integration Platform



The company faced significant challenges in deploying and maintaining their integration platform. The previous approach relied on deploying applications individually for each tenant on IIS servers, resulting in complexity and inefficiency.

## Company Overview

A leading service provider in the DevOps integration space, is committed to delivering cutting-edge solutions to streamline deployment and maintenance processes for businesses across various industries. With a focus on innovation and excellence, the company aims to revolutionize how organizations manage their integration platforms, ensuring efficiency, scalability, and reliability.

## Objectives

- Streamline deployment processes for the integration platform.
- Improve version control and server management.
- Enhance scalability and reliability.
- Automate maintenance tasks for SSL certificate management and renewal.

## Challenges

- Version Control Chaos**  
Difficulty in tracking deployed versions for each tenant.
- Manual Server Maintenance**  
Tedious management of servers and SSL certificates for different tenants.
- Downtime during Deployment**  
Service availability impacted due to downtime during deployment and upgrades.
- Scalability Challenges**  
Difficulty in scaling individual client instances to accommodate increased load.

## Solutions

### Kubernetes Deployment

Transitioned to Kubernetes for centralized deployment, ensuring uniform application versions across all tenants.

### Pipeline Automation

Created deployment pipelines to automate deployment processes and eliminate downtime during upgrades.

### Cluster Configuration

Configured clusters for continuous availability and seamless deployment transitions.

### Automated SSL Certificate Management

Implemented automated processes for tracking and renewing SSL certificates, reducing manual efforts.

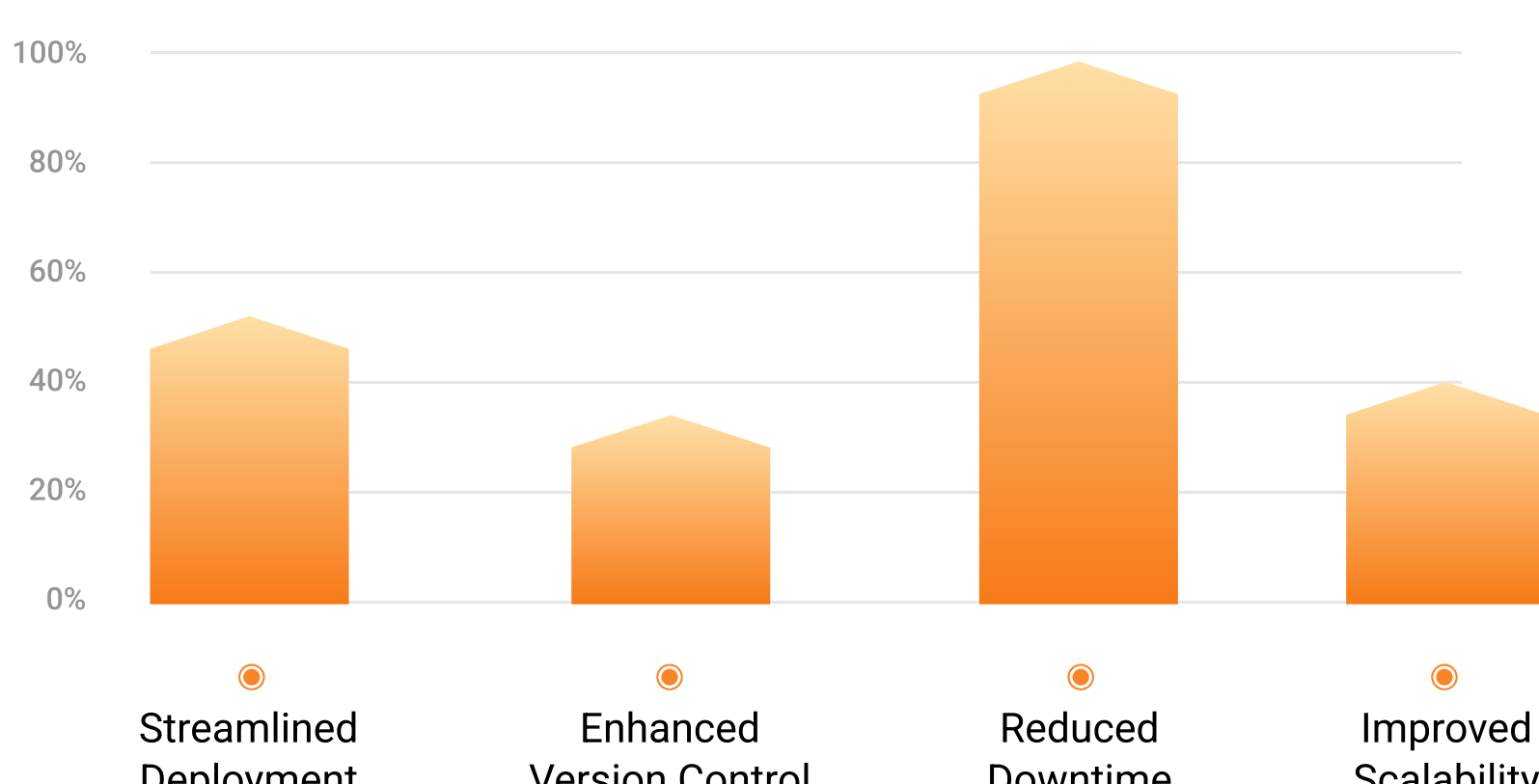
### Auto-Scaling Implementation

Utilized auto-scaling capabilities to dynamically adjust resources based on load, improving scalability without manual intervention.

## Technical Stack

- Microsoft Azure for cloud deployment and maintenance.
- Kubernetes for container orchestration.
- LENS for local monitoring of Kubernetes clusters.

## Outcomes



- Kubernetes deployment reduced deployment times by **50%** and improved consistency across all tenants.
- Centralized deployment through Kubernetes ensured better version control, leading to a **30%** reduction in versioning errors.
- Deployment pipeline automation minimized downtime during upgrades, resulting in **99.5%** service availability.
- Auto-scaling capabilities facilitated seamless scaling, accommodating a **40%** increase in peak load without manual intervention.

## Key Takeways

The adoption of Kubernetes-based deployment and automation solutions revolutionized deployment and maintenance processes in the DevOps integration platform, leading to enhanced efficiency, scalability, and reliability. The company's commitment to innovation and excellence drives its continuous efforts to deliver top-notch solutions that empower businesses to thrive in today's rapidly evolving digital landscape.