

# DEVOPS CLOUD

```
1 <?php
2 include ('includes/prod_query.php');
3 ?>
4 <div class="nav">
5 <ul class="nav" class="group">
6 <li class="current_page_item">
7 <div id="home_btn"><a href="index.php"><div class="ico"></div></a> </div>
8 <a href="produkcija.php"><? if ($_COOKIE['lang'] == 'eng'){
9 "Production";
10 $_COOKIE['lang'] == 'rus' ) {
11 echo "Производство";
12 }
13 }
14 else
15 echo "Производство";
16 ?></a> </li>
17 <li><a href="projektu-vadiba.php">
18 <? if ($_COOKIE['lang'] == 'eng'){
19 echo "Project management";
20 }
21 elseif ($_COOKIE['lang'] == 'rus' ) {
22 echo "Руководство проектами";
23 }
24 echo "Проекту vadiba";
25 ?></a> </li>
26 <li><a href="foto-galerija.php">
27 <? if ($_COOKIE['lang'] == 'eng'){
28 echo "Foto galerija";
29 }
30 elseif ($_COOKIE['lang'] == 'rus' ) {
31 echo "Фотогалерея";
32 }
33 else
34 echo "Foto galerija";
35 ?></a> </li>
36 <li><a href="sadarbibas-partneri.php">
37 <? if ($_COOKIE['lang'] == 'eng'){
38 echo "Partners";
39 }
40 elseif ($_COOKIE['lang'] == 'rus' ) {
41 echo "Партнеры";
42 }
43 else
44 echo "Sadarbibas partneri";
45 ?></a> </li>
46 <li><a href="kontakti.php"><? if ($_COOKIE['lang'] == 'eng'){
47 echo "Contacts";
48 }
49 elseif ($_COOKIE['lang'] == 'rus' ) {
50 echo "Контакты";
51 }
52 else
53 echo "Kontakti";
54 ?></a> </li>
55
```







# DEVOPS

## CLOUD COMPUTING (GCE) [ 2 Days ]

- Creating GC Account
- Cloud Features & Creating Instances
- Working with Network
- Working with Firewall

## LINUX [ 6 Days ]

- Introduction to Linux OS
- CentOS Installation
- File and Directory Management
- Text Editor
- Links
- Utility Commands
- Archives & Backups
- User & Group Management
- File Security & Permissions
- Package & Service Management
- LAMP [ 3 Days ]
- Introduction & Installation Apache
- Working with Apache
- MySQL DB Installation
- Working with MySQL
- Setting up CMS - Wordpress

## GIT [ 4 Days ]

- What is Git
- Installing Git
- Getting started
- Git Architecture
- Making changes to file
- Using git with real project
- Undoing changes
- Ignoring files
- Navigating tree commit
- Branching
- Merging Branches
- Stashing Changes
- Remotes

## MAVEN [ 3 Days ]

- Introduction to Maven
- Maven Structure
- Maven Installation
- Maven Hands-on
- NEXUS [ 2 Days ]
- Introduction to Nexus
- Nexus Installation
- Creating Repos
- Pushing the generated war to Nexus



## **JENKINS [ 5 Days ]**

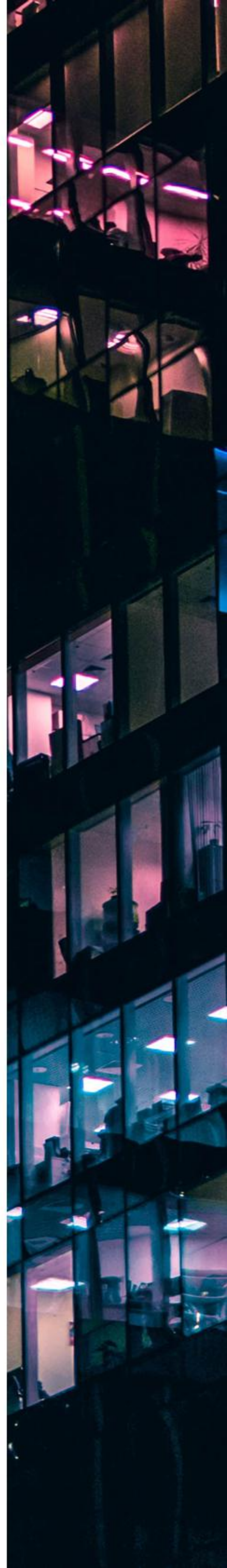
- Overview of Jenkins
- Getting Started with Jenkins
- Plugins and its uses
- Setting Up Your Build Jobs
- Setting up Build Jobs and Security
- Implementing Automated Testing
- Using Metrics to Improve Quality
- Nodes and Master-Slave Configuration
- Plugins and its uses
- Performing Automated Deployment and Continuous Delivery

## **CHEF [ 6 Days ]**

- Introduction to Configuration Management
- Chef User management
- Chef Organization management
- Chef Distribution Kit
- Chef Workstation setup
- Chef Resources
- Chef Recipes
- Chef Cookbooks
- Chef Attributes
- Chef Supermarket
- Chef Databags

## **NAGIOS [ 2 Days ]**

- Introduction to Nagios
- Concepts behind Nagios
- Nagios Installation
- Hands-on
- Vagrant [ 2 Days ]
- Introduction to vagrant
- Vagrant Terminologies
- Vagrant System & Commands
- Vagrant Plugins & Provisions







## DOCKER [ 3 Days ]

- Introduction to Docker
- Installation of Docker
- Data and Docker Volumes
- Docker Architecture
- Container life cycle
- Networking with docker
- Working with docker images
- Building images with docker files

## Project [ 5 Days ]

### Implementing Continuous Integration with **JAVA based web application.**

- Git Integration
- Maven Integration
- Junit Integration
- Test Cases Report Generation
- Cobertura Code Coverage & Report Generation
- Sonarqube Static Analysis
- Nexus Artifact Upload
- Auto Deployment [Tomcat]
- Performance Testing [Jmeter]
- Continuous Feedback [Notifications]





## **Course Introduction**

### **Getting Started**

- Welcome to the AWS Course
- What is a Solutions Architect
- Features of the Course

## **AWS Organization**

### **AWS Account & Physical Organization**

- A Look at the AWS Account and Services Layer
- A Look at the AWS Physical and Networking Layer
- Essential CSA Terminology
- Quiz

## **Access Management**

- AWS IAM (Identity & Access Management)
- AWS IAM (Essentials, Policies & Users)
- AWS IAM (Groups and Roles)
- AWS IAM Security Token Service (STS)
- AWS IAM API Keys
- Quiz

## **The AWS Console**

- A look at the AWS Console

## **Introduction to AWS Networking**

- VPC Essentials
- VPC Network Routing Basics
- VPC Security Basics
- Lab: Building a VPC from Scratch
- Quiz



## Server Based Compute Services

### EC2 (Elastic Compute Cloud)

- EC2 Essentials
- EC2 Purchasing Options
- EC2 AMIs and Virtualization
- EC2 Instance Types
- Public, Private and Elastic IP Addresses
- EC2 Bootstrapping, User-Data and Meta-Data
- EC2 Storage Options
- EC2 Security Groups
- Key-Pair and Connecting to an EC2 instance
- EC2 and Networking
- EBS Snapshots
- EC2 Placement Groups
- Elastic File System (EFS)
- Lab: Provisioning an EC2 Instance
- Lab: EC2 Backup Solutions with AMIs and Snapshots
- Lab: Accessing Instances User Data and Metadata
- Quiz

### Serverless-Based Compute Services

- Lambda Essentials

### Introduction to Some other important Services

- Introduction to CloudWatch, CloudTrail and SNS
- **Advanced Networking**
- Highly Available & Fault Tolerant VPC Networking
  - Auto Scaling and Elastic Load Balancing Essentials
  - Classic vs Application Elastic Load Balancers
  - Creating an Application ELB
  - Lab: Setting up a Classic ELB and Auto Scaling Group
  - Quiz





- Advanced VPC Networking for Increased Security
  - Serving Traffic to and from Private Servers
  - Lab: Building a More Secure Application with a Bastion Host and NAT Gateway
  - Quiz
- Network Connectivity Troubleshooting
  - EC2 Troubleshooting Scenarios
  - VPC Troubleshooting Scenarios
  - ELB Troubleshooting Scenarios
  - Auto Scaling Troubleshooting Scenarios
  - Lab: Troubleshooting Connectivity Issues Session 1
  - Lab: Troubleshooting Connectivity Issues Session 2
  - Lab: Troubleshooting Connectivity Issues Session 3
  - Quiz

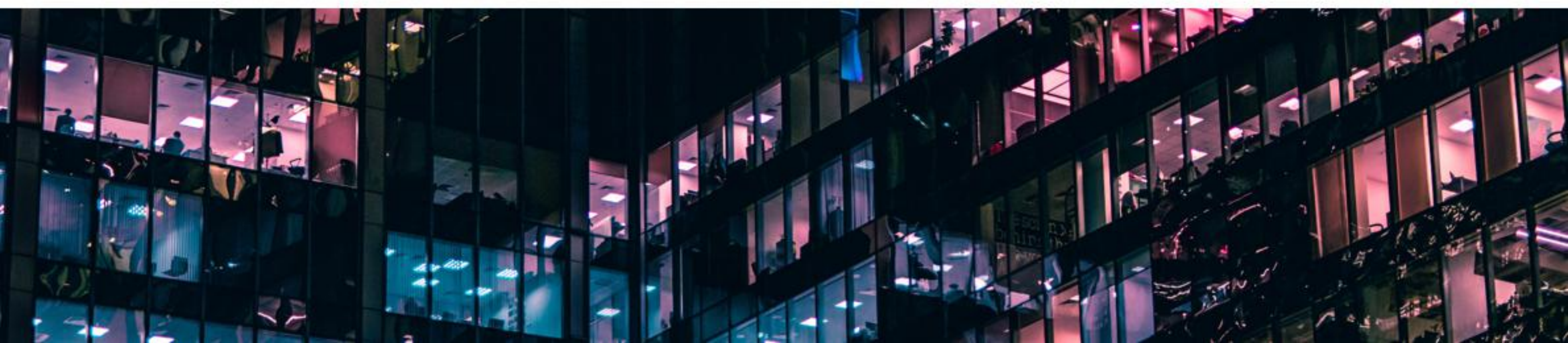
## **Storage Services**

### **S3 (Simple Storage Service)**

- S3 Essentials
- S3 Permissions
- S3 Storage Classes
- Object Versioning
- S3 Lifecycle Policies
- S3 Events
- Website Hosting with S3
- Cross-Origin Resource Sharing (CORS)
- Getting Data Into and Out of S3
- Lab: Using S3 for Static Web-Hosting
- Lab: Configure Backup and Archiving Solutions in S3
- Quiz

## **The AWS CLI**

### **Install and Configure the AWS CLI**







## Hybrid Environments

- Advanced DNS, CDN, and Failover Networking
  - Route 53 Essentials
  - Route 53 DNS Failover
  - CloudFront Essentials
  - Performance Considerations with CloudFront
  - Lab: Configuring Route53 DNS Record Sets
  - Lab: Configuring a CloudFront Distribution
  - Quiz
- Hybrid Environments & VPC Peering
  - Virtual Private Network (VPN)
  - AWS Direct Connect
  - AWS Storage Gateway
  - VPC Peering
  - Lab: VPC Peering
  - Quiz

## Database Services

- RDS (Relational Database Service)
  - RDS Essentials
  - Lab: Create and Configure an RDS DB with Backup Solutions
- DynamoDB Essentials
- ElastiCache Essentials
- Redshift Essentials
- Quiz

## Application & Messaging Services

- SNS (Simple Notification Service) Essentials
  - Lab: Create & Use an SNS Topic with an S3 Event
- SQS (Simple Queue Service) Essentials
  - Using SQS to build Decoupled Application Architectures
- SWF (Simple Workflow Service) Essentials
- API Gateway Essentials
- Quiz

## Monitoring

- CloudWatch Essentials
- CloudTrail Essentials
- Flow Logs
- VPC Flow Logs Essentials & Creation
- Quiz



## Deployment Services

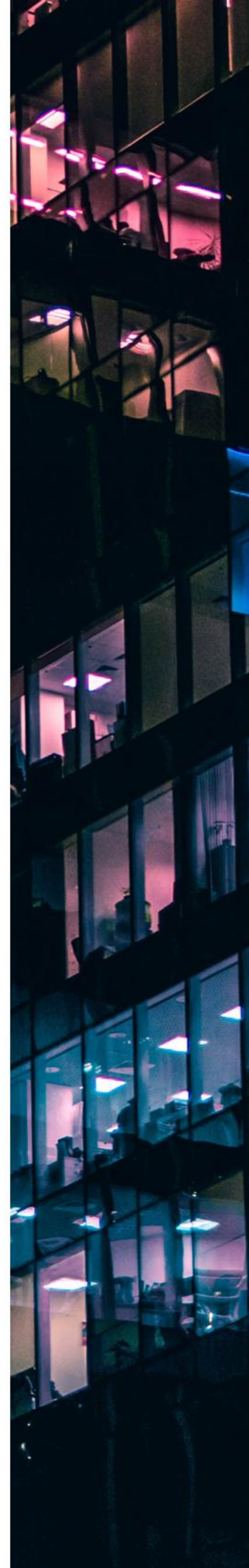
- CloudFormation Essentials
  - Lab: Creating an S3 Bucket with CloudFormation
- Elastic Beanstalk Essentials
  - Lab: Deploying a Simple Web Application with Elastic Beanstalk
- Quiz

## Analytics

- Kinesis Essentials
  - Kinesis Workflow, Producers and Consumers
- Elastic MapReduce
  - EMR Essentials
- Quiz
- 
- **Container Services**
- EC2 Container Service (ECS) Essentials
- Quiz

## Certified Solution Architect Concepts

- Implementation & Deployment
  - How to Design Cloud Services and Best Practices
  - Monitoring your AWS Environment
  - Architectural Trade-Off Decisions
  - Elasticity and Scalability
- Security Architecture with AWS
  - Shared Security Responsibility Model and Attributes
  - AWS Platform Compliance and Security Services
  - Incorporating Common Conventional Security Products
  - DDoS Mitigation
  - Encryption Solutions
  - Complex Access Controls
  - Amazon CloudWatch for Security
  - CloudHSM
- Disaster Recovery
- Quiz: Concepts of Architecting







# AZURE

## **Course Introduction**

### **Module 1: Getting Started with Microsoft Azure**

What is cloud computing?

What is Azure?

Managing Azure

Subscription management, support, and billing

Lab : Using the Azure portals

Customizing the Azure portal interface

Viewing billing, usage, and quotas data

### **Module 2: Microsoft Azure management tools**

What is Azure PowerShell

The Azure SDK and the Azure CLI

Lab : Using Microsoft Azure management tools

Using the Azure PowerShell modules

Use the Azure CLI

### **Module 3: Virtual machines in Microsoft Azure**

Creating and configuring VMs

Configure disks

Lab : Creating a VM in Azure

Create a VM from the Azure Portal by using an Azure Marketplace image

Verify the functionality of the VM

Configure storage of a VM

### **Module 4: Web Apps and cloud services**

Creating and configuring web apps

Deploying and monitoring web apps

Creating and deploying PaaS cloud services

Lab : Web Apps and cloud services

Creating and configuring a WordPress web app

Create a cloud service



## **Module 5: Creating and configuring virtual network**

Getting started with virtual networks

Creating a virtual network

Getting started with Azure Load Balancers

Lab : Create a virtual network

Creating a virtual network

Verifying virtual network functionality

## **Module 6: Cloud storage**

Understanding cloud storage

Create and manage storage

Lab : Configure Azure Storage

Create an Azure Storage account

Create and manage blobs

## **Module 7: Microsoft Azure databases**

Understanding options for relational database deployment

Creating and connecting to Azure SQL databases

Lab : Creating a SQL Database in Azure

Create a new Azure SQL database in Azure and configure SQL Server

firewall rules

Manage content of an Azure SQL database by using SQL Server

Management Studio

## **Module 8: Creating and managing Azure AD**

Overview of Azure AD

Manage Azure AD authentication

Lab : Create users in Azure Active Directory tenants

Create users in Azure AD

Create a new Azure AD Tenant and a custom DNS domain





"WHERE INNOVATION  
MEETS TECHNOLOGY"



**Digital Lync**

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