

NET2008 DEVOPS

Week 1

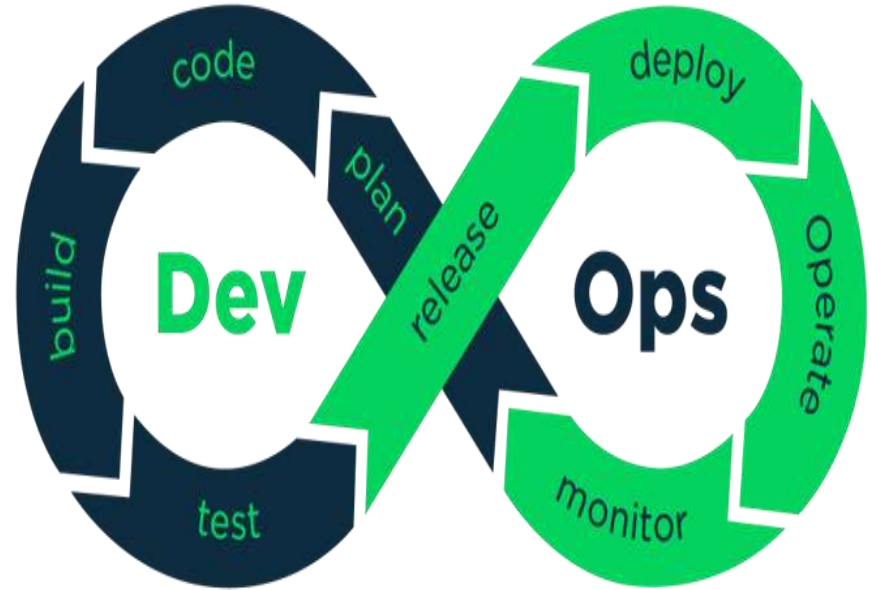
Introduction to DevOps

DevOps In Software Development



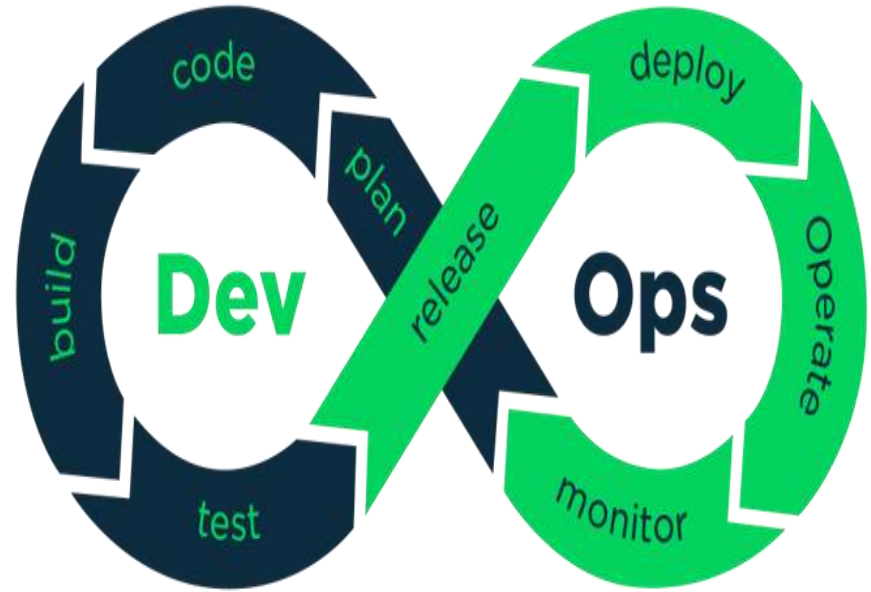
What is Dev ?

- Software development
- Write code to implement functions
- Fix bugs found in software testing and production
- Job title:
Software Development Engineer (SDE)



What is Ops?

- Deploy the software in production environment in a highly available method
- Monitor health of the applications
- Resolve dependency and integration with different components
- Log collection
- Upgrade
- Job title: Site Reliability Engineer (SRE)



What is DevOps?

- DevOps is a set of software development practices that combine:
 - Software development (Dev)
 - Information-technology operations (Ops)

to shorten the systems-development life cycle, while delivering features, fixes, and updates **continuously** in close alignment with business objectives.



DevOps

- Source code management
- Source code review
- Configuration management
- Build management
- Repository management
- Release management
- Test automation
- Continuous integration
- Continuous delivery
- Continuous deployment
- Infrastructure as Code
- Application performance monitoring
- Routine automation/continuous improvement
- DevOps frameworks



Benefits of DevOps

- DevOps processes can be implemented as standalone or a combination of other processes
- Automation frameworks will improve business efficiency
- DevOps frameworks will help to build resilience into the application's code
- DevOps processes incorporate SLAs for operational requirements
- In DevOps processes, application-specific monitoring is part of the development process



The industry trend

- DevOps engineers are in high demand as cloud-native environment faces explosive growth
- Software engineers also need DevOps skills to accelerate development
- Networking world needs a lot of automations and DevOps.



REQUIREMENTS AND QUALIFICATIONS

Essential requirements:

- 2+ years of work experience directly in a DevOps role or similar within a software development organization.
- Previous exposure to the software development lifecycle of applications targeting multiple platforms.
- Experience configuring and maintaining Windows, macOS and Linux systems.
- Experience designing and maintaining GitLab CI pipelines (YAML is required).
- At a minimum, intermediate proficiency scripting in Python and Bash.
- Previous experience using Git, GitLab and Ansible on your daily work.
- Interest in the latest CI/CD/DevOps processes, ideas, solutions, and industry trends.
- Ability to multitask, prioritize, and manage time efficiently.
- Ability to communicate clearly in spoken and written English.

In addition, the ideal candidate will have at least some of the following

- Previously had exposure to common DevOps tooling, including some of the following:
- PowerShell
- Perl
- Jenkins
- Azure
- Zabbix
- Prometheus
- Grafana
- Docker
- Database management systems
- Can configure network equipment and troubleshoot daily network issues
- Are interested in security technology, issues, and best practices within the context of the software development lifecycle
- Passion about music, film or media is always a plus!



DevOps Engineer

Time Doctor · Canada (Remote)

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Job poster

1 mutual connection

About the Role:

This is a unique opportunity to develop your career as a DevOps Engineer during an exciting period of growth. You'll have a passion for working with high throughput platforms (a 200k+ strong userbase), ensuring high levels of stability, efficiency, uptime and reacting to solve production challenges promptly. You'll continually work towards creating stable, performance and efficient and cost-effective solutions.

Responsibilities:

- Build and maintain various GCP Public / Private Cloud deployments.
- Continually automate and improve development and deployment processes.
- Ensure Time Doctor systems are safe and secure against cyber security threats.
- Progress technology evolution on core GCP-based platform.
- Maintain end-of-life journey for legacy AWS-based platform.
- Debug issues and provide timely resolutions.

What are the top 5-10 skills or competencies that are must haves for this role?:

Required Skills & Experience

- Excellent terraform skills
- Understanding mongo and MySQL indexing
- Understanding MySQL replication and its recovery
- Understanding mongo sharding+replication and its recovery
- Excellent experience of AWS ecosystem
- Excellent experience of GCP ecosystem
- Understanding scaling up/down, HA, failover concepts
- Experience with container orchestration tools EC2 VM's and LXC containers
- Deep understanding of IP Networking (TCP/IP, DNS, HTTP, SSL/TLS, etc.)
- Troubleshooting skills at multiple levels of complexity.
- Scripting language ability (e.g. Bash, PowerShell, Ruby, Python, Node.JS)



DevOps Developer

Blindside Networks · Ontario, Canada (Remote)

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to operate and scale our infrastructure

- Maintain a full "staging" copy of our infrastructure for testing updates before deployment to production
- Assist developers on delivery and integration of new features into our infrastructure
- Develop tools for monitoring the health of our infrastructure
- Manage continuous integration (CI) and continuous deployment (CD) infrastructure for the developer team
- Enhance and document processes for CI/CD
- Create DevOps solutions for on-premise deployment for products

Key Qualifications

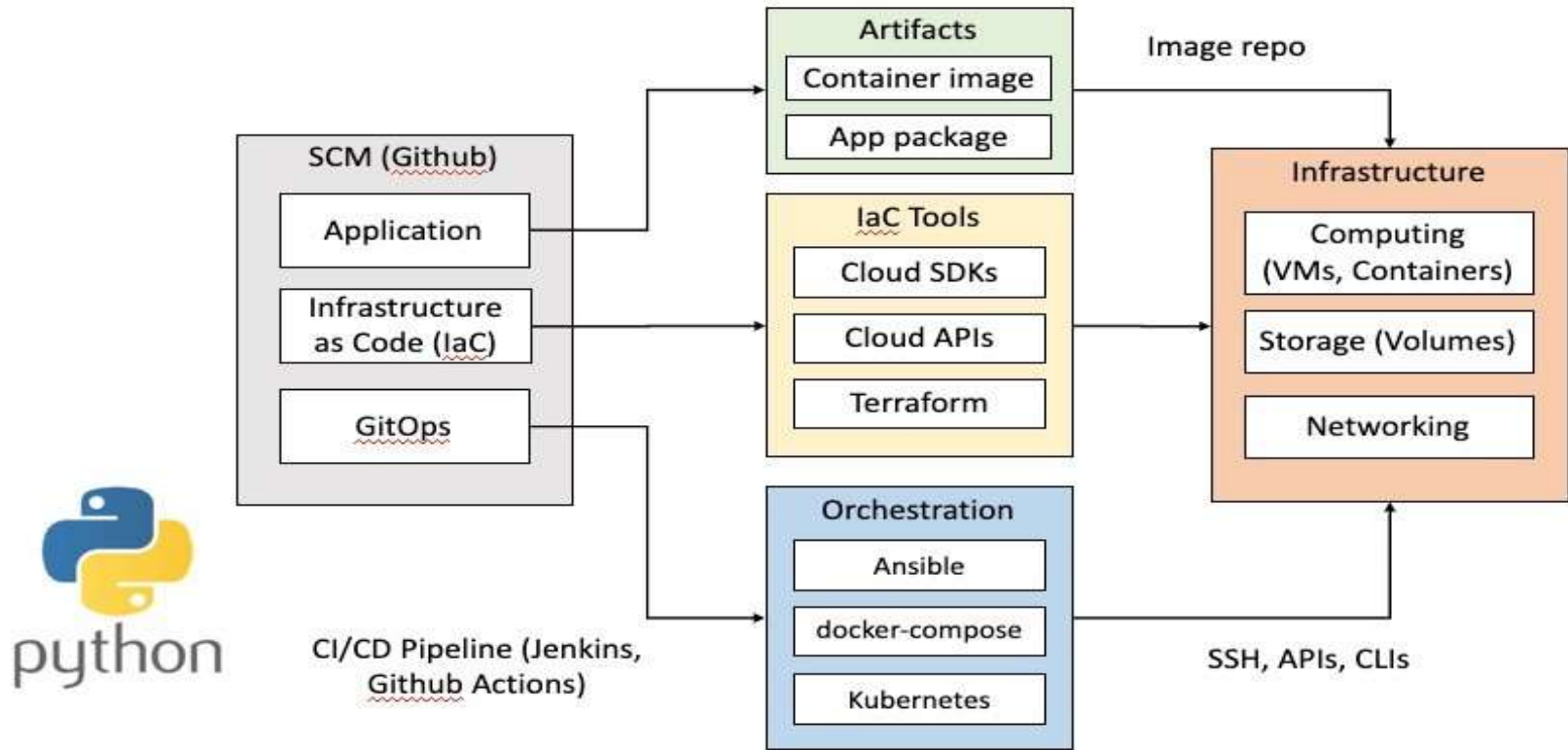
- Bachelor's degree or equivalent experience/training in computer science, engineering, software engineering, or related field
- Experience with Amazon Web Services (AWS) and/or Google Cloud Platform (GCP)
- AWS Certified DevOps Engineer certification is highly desirable (or you can demonstrate equivalent)
- Minimum 3 years of previous experience in development and operations, or related IT, computer, or operations field - and the ability to demonstrate some of the DevOps skills you have learned
- A strong working knowledge of Ruby on Rails is required for this role.

Preferred Qualifications

- Previous experience with software development, infrastructure development, or development and operations
- Experience with Linux infrastructures, database (Postgres), CI/CD tools (Jenkins, Ansible, etc.), scripting such as JavaScript, Python, Ruby, Bash
- Deep understanding of Docker and Kubernetes and other orchestration tools (Ansible, Terraform, etc.)
- Excellent interpersonal skills and communication with all levels of management
- Able to multitask, prioritize, and manage time efficiently
- Ability to work independently and as part of a team - you will be likely working remotely for the first months
- Fast learner and willing to take on new challenges.



Course Outline



Documentation



python

[The Python Tutorial](#)



Azure

[Azure for Students](#)



ANSIBLE

Ansible Docs



kubernetes

Kubernetes Docs

