KOVEX
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DevOps & Cloud Engineering

DevOps; Analyze, Design, Automate, Implement, Secure.

We are a technology company, focused on Infrastructure designing, developing, securing & maintaining cloud-native applications and services.

https://www.kovexsystems.com/

Greenville, North Carolina, USA.

If you think it's expensive to hire a professional, wait until you hire an amateur.

RED ADAIR

Introduction

Mission & Vision

Mission

Kovex Systems' mission is to maintain and be a dominant thought-leader in digital solutions by facilitating client success through superior expertise and a full range of digital services. Our aim is to offer significant value to our clients by maximizing productivity and ROI.

Vision

Our vision is to help clients achieve an ultra-rapid and cost-efficient solutions delivery cycle that reduces their time to market

To enable tech companies to run business with a greater efficiency via the adoption of cutting-edge technologies.

Through highly refined processes and a vast code repository, we want to position our client for success and offer a complete range of services designed to maximize ROI.

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Why Us?

We are Fast

We are a leading provider of DevOps services. Expert team of senior engineers ready to provide you fast, efficient & high-quality solutions.

We have Solutions

We can help you move away from a capital-intensive, hardware-oriented infrastructure toward a software-defined and intelligent one - ever-ready for any opportunity

We use the right Approach

We follow a consultative-driven approach for providing end-to-end expertise in providing the right solutions.

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Services

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Our Services

Description

Whether you need to improve the way you work, enhance the software architecture of your product or create something custom, Kovex Systems has you covered.

Cloud Native Architecture

Infrastructure as Code

CI/CD

Monitoring and Logging

Cost Optimization

Security

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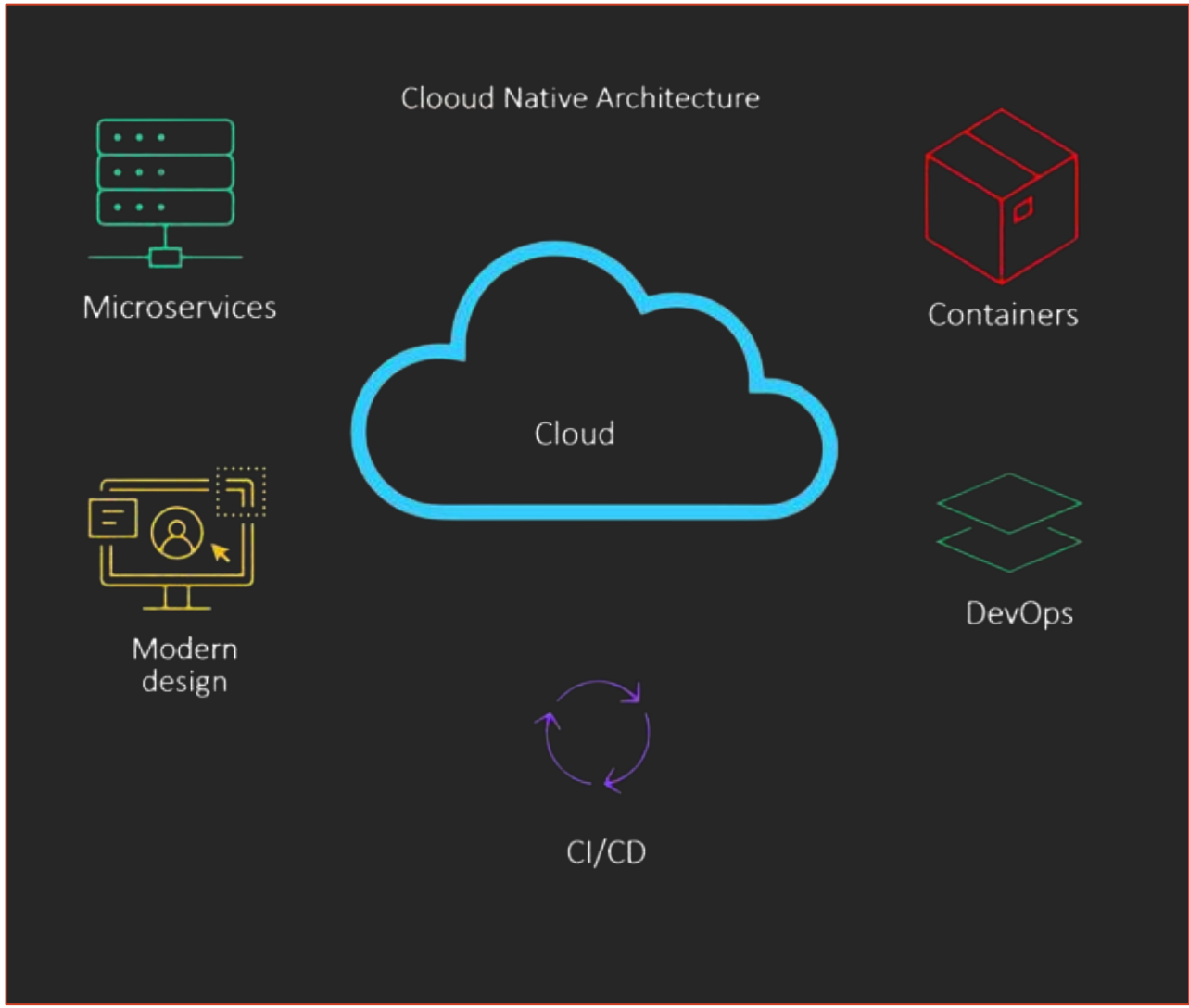
Cloud-Native Architecture

Cloud-Native Architecture uses the core cloud principle of on-demand provisioning to build reliable, fault-tolerant, and cost-effective solutions, all with a faster time to market when compared to legacy architectures. The decoupling of architectural components allows continuous improvement and deployment of your product without any downtime.

At Kovex Systems, our cloud-certified architects can work with your team to either build a cloud-native architecture from scratch or recast your existing application architecture to achieve the target requirements. We can quickly identify areas of improvement in your architecture and propose cloud-native elements including pub-sub, streaming, microservices, and server-less components.

- ✔ **Project architecture design**
- ✔ **Creating a Roadmap for Implementation**
- ✔ **Scalable server infrastructure development**
- ✔ **Performance tuning**



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Infrastructure as Code

Infrastructure as code automates processes to provision and maintain infrastructure and applications. A code-based approach makes it easier to get more done in less time and reduces the risk of human errors by minimizing human intervention.

Our engineers can leverage automation tools for cloud-agnostic infrastructure provisioning, configuration, and deployment. Thus, reducing the time to market for your products, enabling your teams to easily set up/tear down multiple development environments and optimize operations.

- ✔ **Transformation of your infrastructure into code**
- ✔ **Managing the scale and speed of your environment needs**

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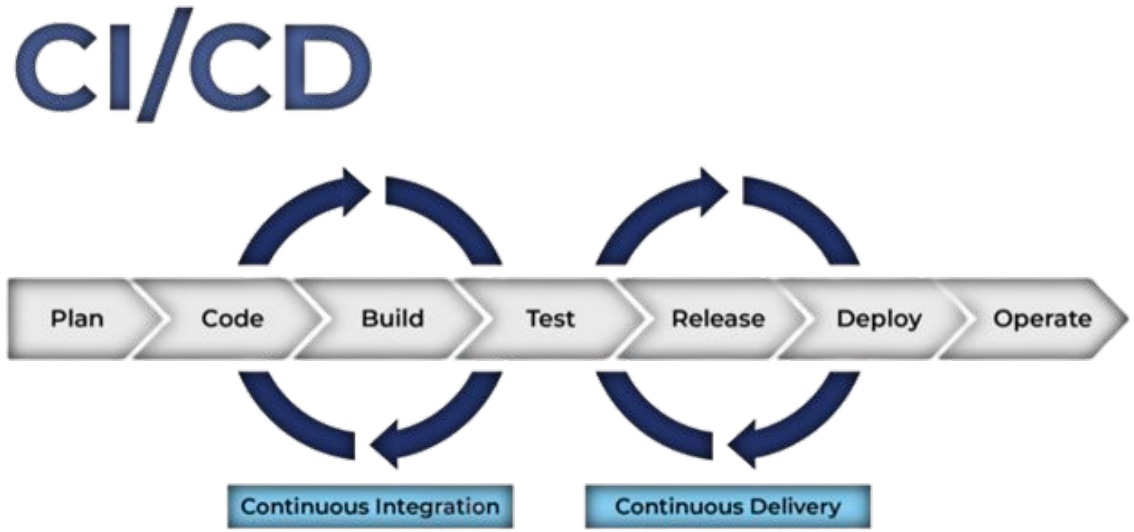
Continuous Integration
Continuous Deployment

In the agile world of software development, where features need rapid feedback from users, CI/CD setup has become an integral part of any development project. Properly designed, CI/CD systems bridge the gap between development and operational activities by automating the build, test, and deploy processes of the applications.

Our DevOps team has wide experience in building next-generation CI/CD pipelines that help development teams achieve blue/green, red/black, and canary deployments, making sure new application versions are deployed with zero downtime. We also have experience in integrating data pipelines into a CI/CD system, allowing for rapid and low-touch change processes for what has traditionally been a slow and high touch area.



- ✔ **CI/CD implementation in the project**
- ✔ **Automatic tests that detect and fix errors at an early stage**

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Monitoring & Logging

Cloud-Native Architectures require an effective monitoring and logging setup, to ensure quick response and root-cause analysis in the complexity of a distributed architecture. Comprehensive and easy-to-use monitoring and logging infrastructure increase the efficiency of incident response.

Our engineers have set up centralized monitoring and logging systems for both SMB and enterprise-scale applications. We can rapidly set up dashboarding and alerting ability to keep your operational teams informed about the state of your system and enable them to perform rapid RCA and take corrective measures to ensure SLA compliance.

- ✔ **Full-stack deployment monitoring**
- ✔ **Custom parsing rules, dashboards**
- ✔ **Alerts to emails and instant messengers**
- ✔ **Log management of suite installation**

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Cost Optimization

With most cloud resources just a few clicks away, cloud workloads typically have excess resources that negatively affect the bottom line. Managing the cost of your cloud infrastructure is a must for any company deploying its solution in the cloud.

Our certified engineers leverage the best practices of Well-Architected Frameworks (WAFs) and can optimize infrastructure resources. This optimization can involve several approaches: usage adaptive resource utilization, audit of existing resource inventory, and set up of billing thresholds and automated alerts for staying on top of cloud expenses.

- ✔ **Utilizing Heat Maps**
- ✔ **Right Size Computing Services**
- ✔ **Designing workload for scalability**
- ✔ **Considering Hybrid-Cloud vs. Single Cloud**

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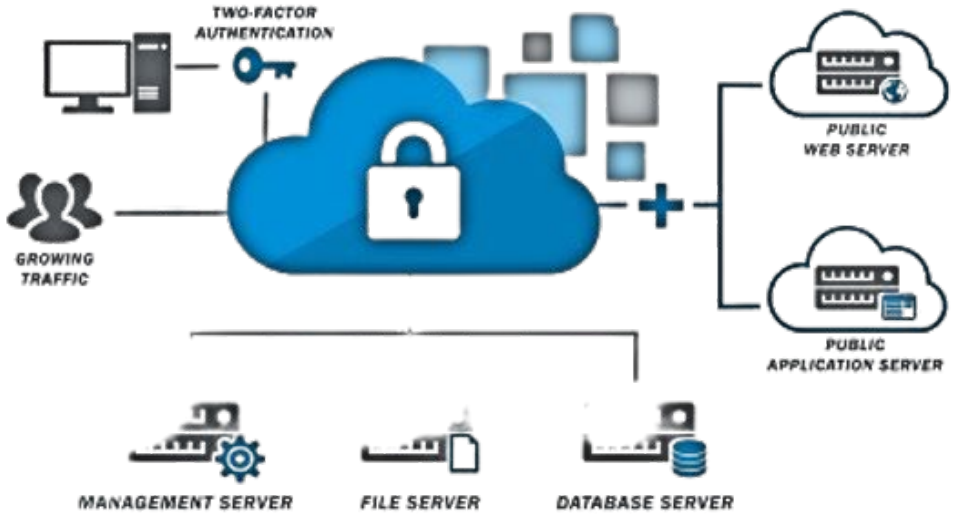

Security

Organizations are taking a "cloud-first" approach to transforming with agility at scale in the public cloud. But, as its name suggests, every new instance of the public cloud has the potential to brew up a security storm.

Our cloud engineers can perform in-depth security analyses of your infrastructure and implement stringent security measures. Hence, minimizing security risks and ensuring data privacy and integrity.

- ✔ **Intellectual DDOS Protection**
- ✔ **Security audit**
- ✔ **Government standard security policies**

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Technologies we use


amazon
web services


Microsoft
Azure


vmware


kubernetes


RANCHER


docker


HashiCorp
Terraform


ANSIBLE


AMBASSADOR


circleci


kafka


Kong


git


Jenkins


argo


influxdata


ELK


Grafana


Prometheus


HashiCorp
Vault

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Portfolio

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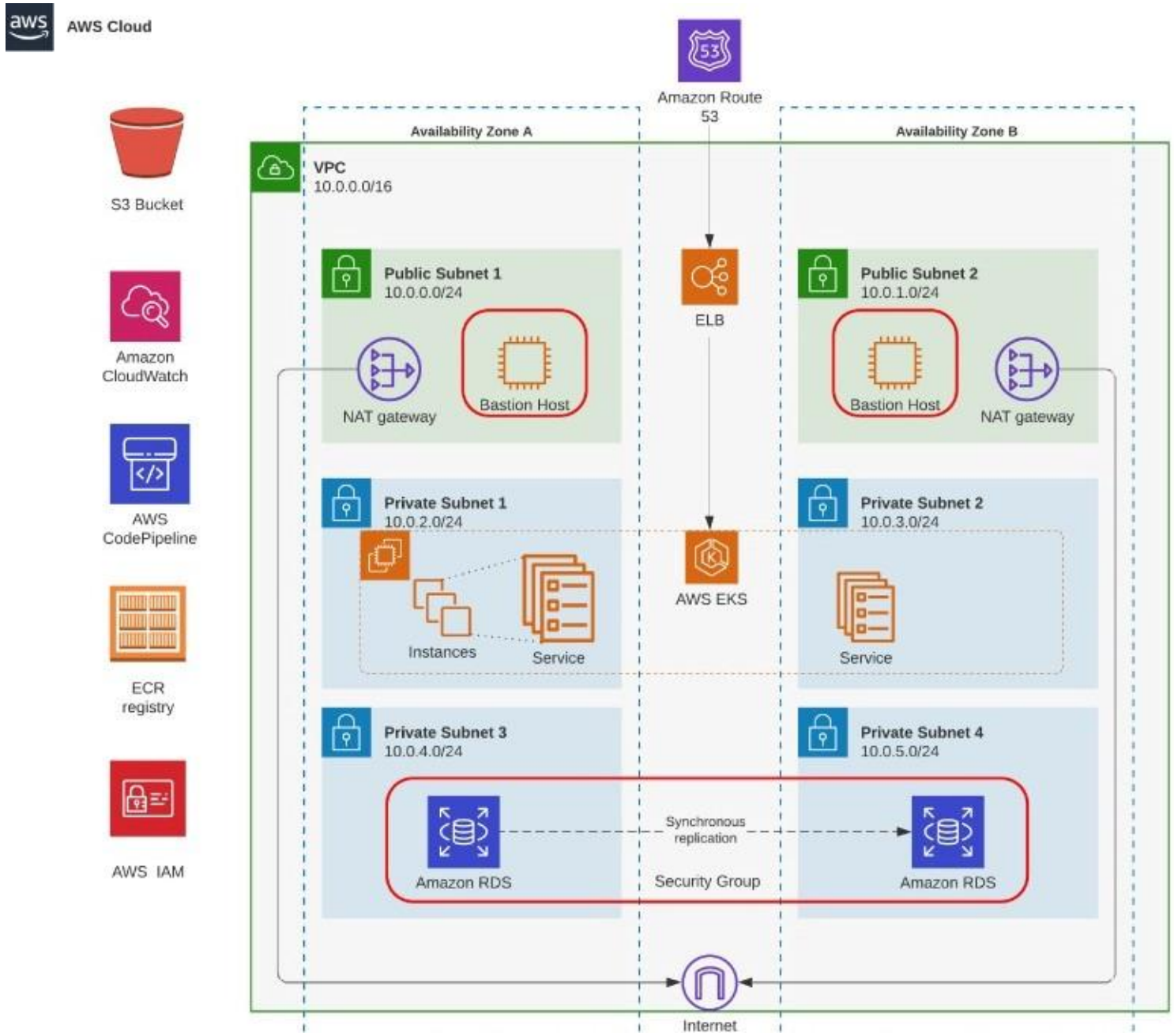
AWS

Elastic Kubernetes Service

Amazon EKS automatically manages the availability and scalability of the Kubernetes control plane nodes responsible for scheduling containers, managing application availability, storing cluster data, and other key tasks.



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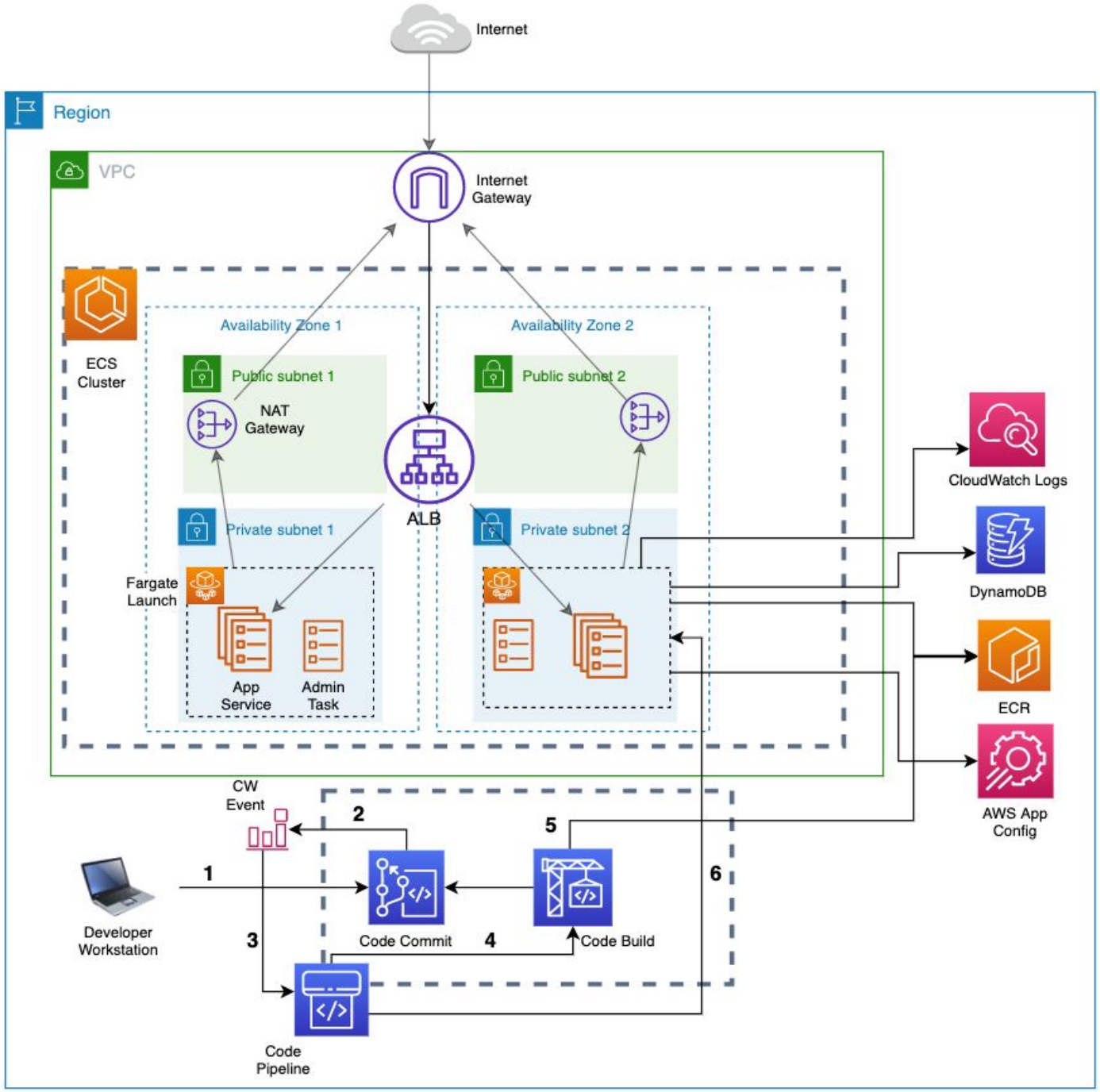
AWS

Elastic Container Service

Amazon ECS is a fully managed container orchestration service that makes it easy for you to deploy, manage, and scale containerized applications. AWS Code pipeline is used to fully automate the build, release and delivery process in a secure environment.



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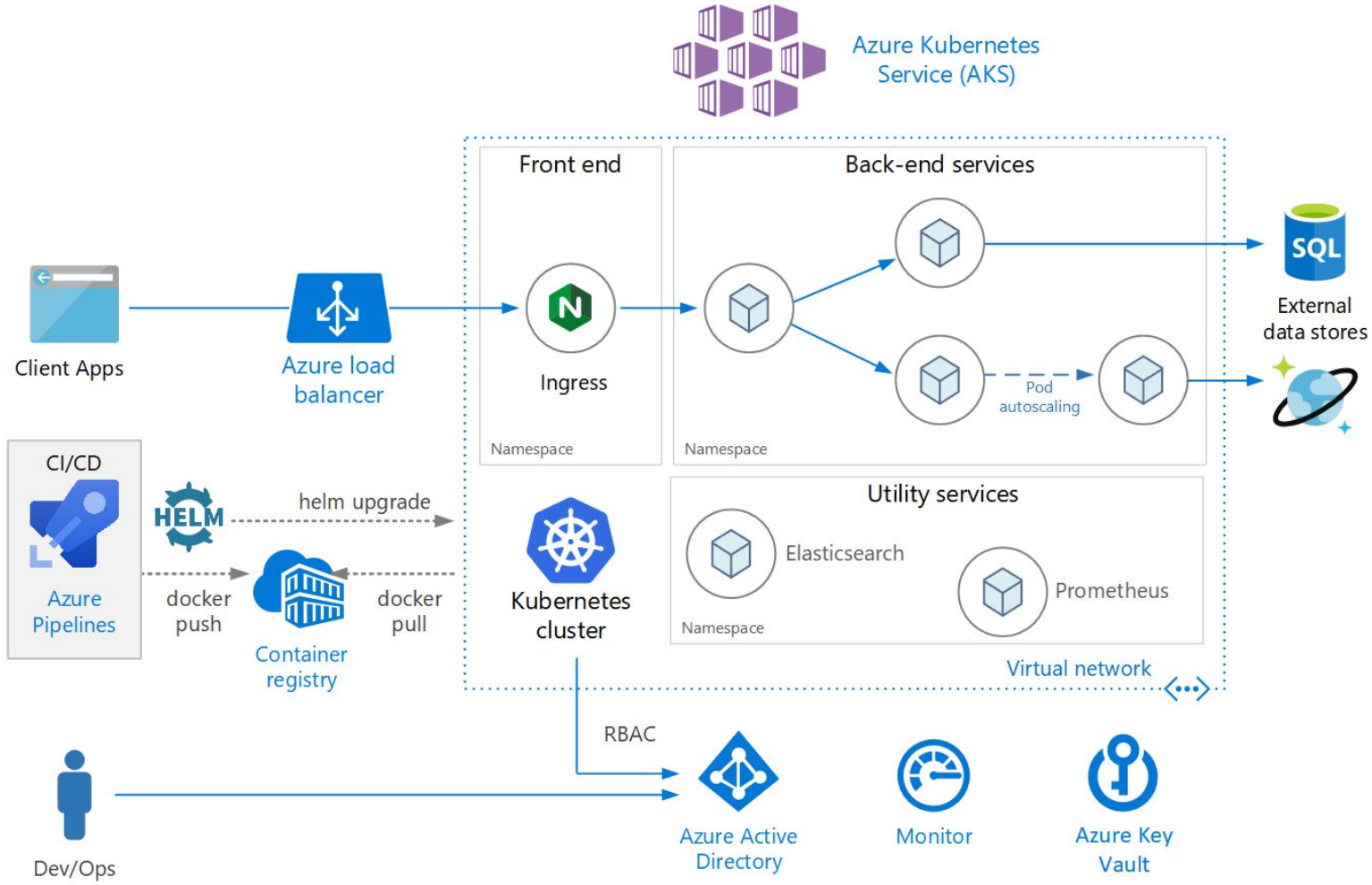
Azure

Kubernetes Service

Azure Kubernetes Service (AKS) offers serverless Kubernetes, an integrated continuous integration and continuous delivery (CI/CD) experience, and enterprise-grade security and governance.



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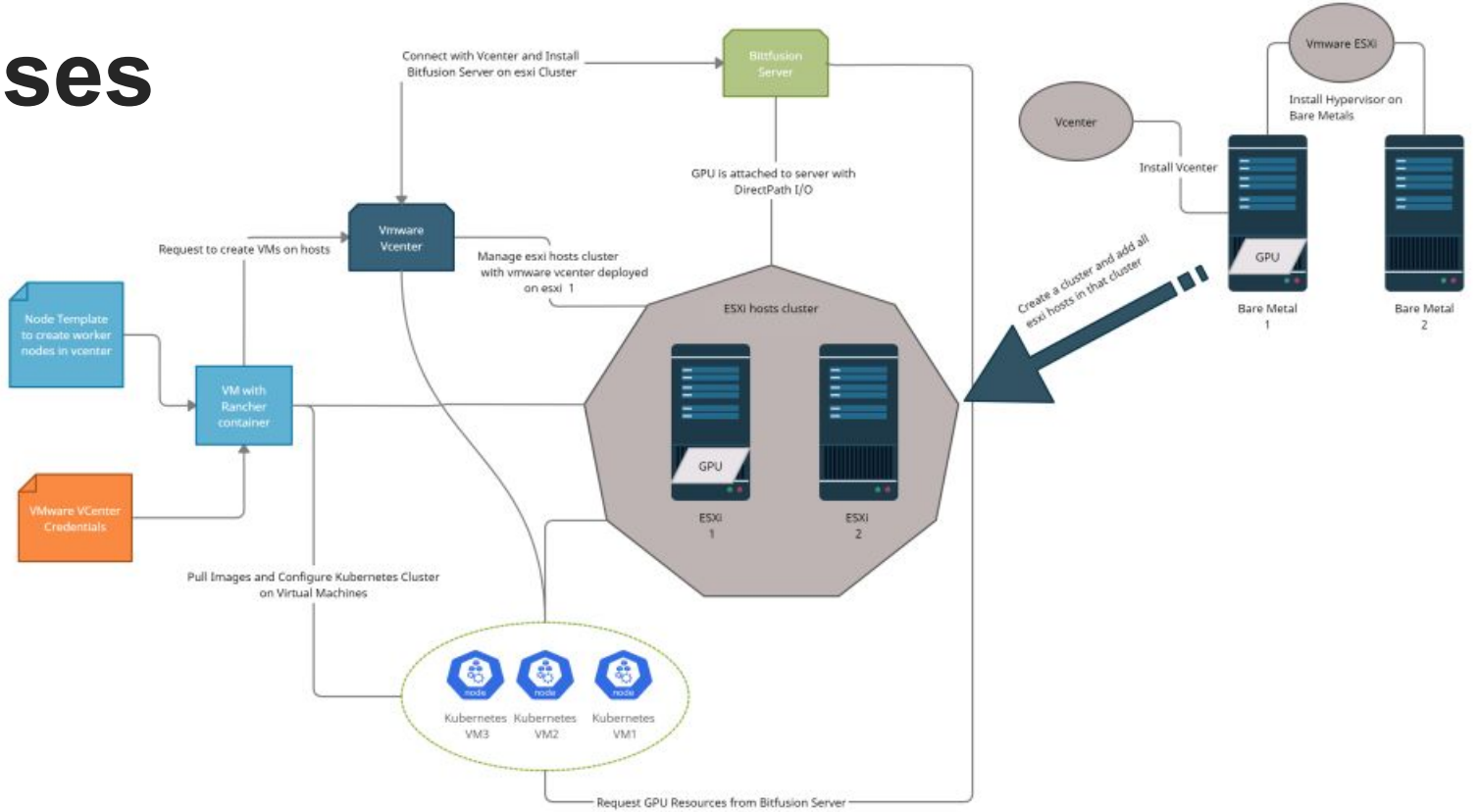
Kubernetes On-Premises

With GPU sharing Nodes

Vmware bitfusion is highly effective to share GPU resources across different virtual machines available in a cluster of ESXi server. Rancher is an efficient tool to spin up and manage Kubernetes on various environments including On-premise solutions. A highly effective, scalable and optimized solution for secure applications.



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Why Choose DevOps?

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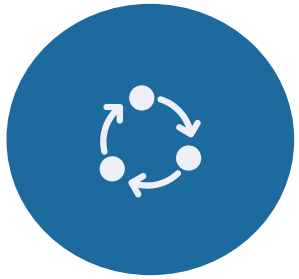
Why DevOps Important?

DevOps helps organizations align development and operations teams to improve the quality of code, undertake continuous integration, and deliver faster.

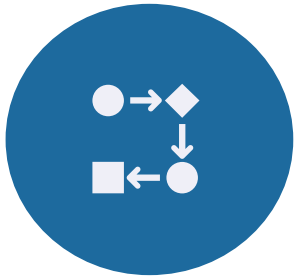
DevOps automates and standardizes the processes for infrastructure deployment. With the help of DevOps, enterprises get faster innovation, better operational efficiency, and improved deployment quality that enables them to focus on their business goals better.

DevOps allows early testing which helps in fixing any problems the developers find right away in the process. As a result, Automated Regression Testing has become common practice here.



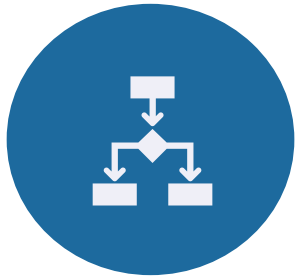
Fast and speedy execution

DevOps enables rapid development, testing, and release. It also automates workflows, hence, develops with an exceptional edge and incredible speed.



Improved effectiveness

DevOps consulting companies help you automate deployments and testing and add greater value to your business.



Efficiency in operations

DevOps speeds up release cycles by identifying and eliminating wasteful processes. This speeds up the flow of value, having a positive impact on costs.

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Process

How do we identify the best infrastructure for your application?

Step 1

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Identifying End Users

Many organizations have all types of users, from the task-based up to the 3D graphical image user. As creators and consumers of content they demand access to increasingly rich data, images, video and sound in order to do their jobs, while some of the more extreme users need to interact with images at high precision. To achieve the required level of flexibility, agility and mobility often requires new cloud optimized infrastructures that can be scaled on demand with simple, automated, processes and tools.

Step 2

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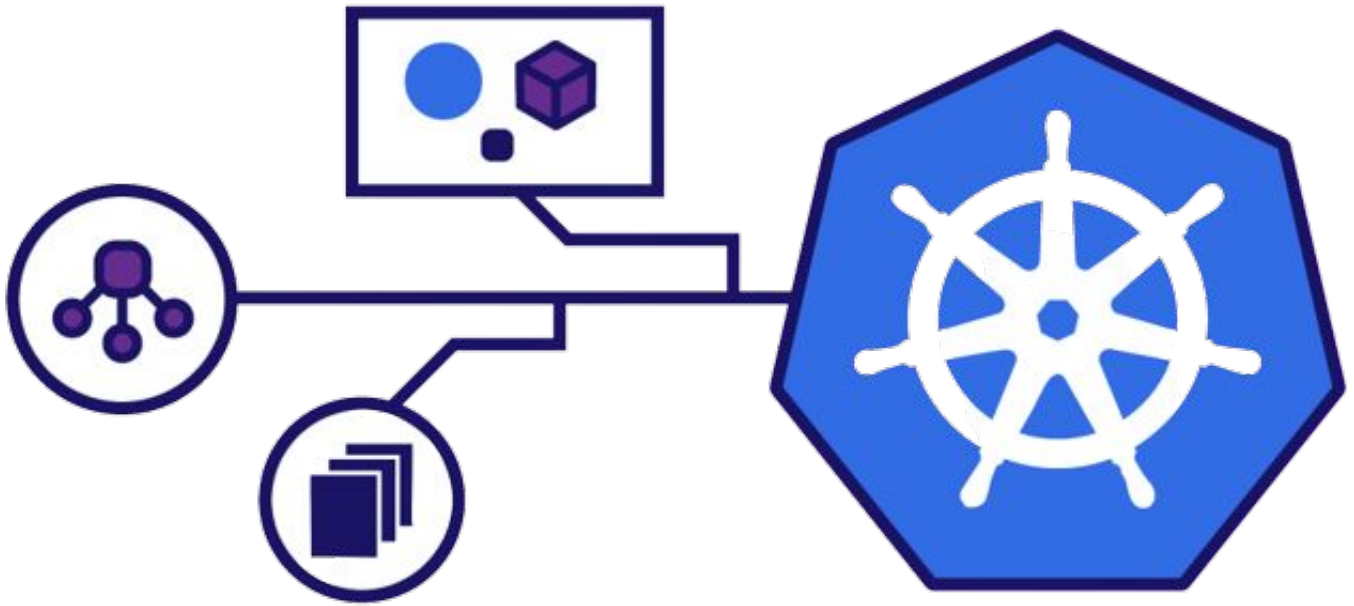
Deployment Strategies

Bursty applications that have erratic request volumes have very different needs than applications that have consistent volumes, and different kinds of infrastructure are more cost-effective for each. For an application with a low request volume, you might want to consider a serverless deployment. Serverless/FaaS easily scales if there is ever a sudden increase in volume and doesn't require you to pay for infrastructure you aren't using, making it more economical.



Step 3

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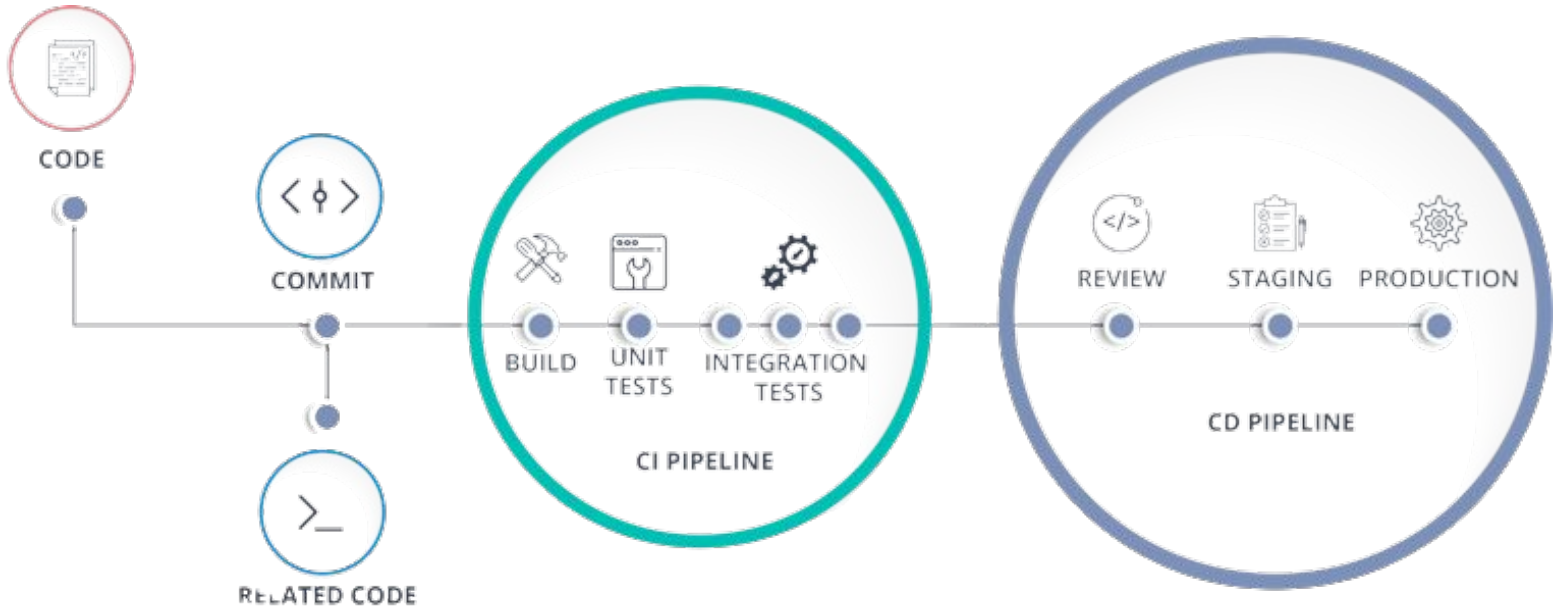
CI/CD pipeline

By implementing continuous integration, we often start with the version control configuration and practice definitions. Although checking in code is done frequently, we develop features and fixes on shorter and longer timeframes. We also implement CI using different techniques to control what features and code are ready for production. Moving forward to the continuous delivery, we have several environments to stage application changes for testing and review. We use a CI/CD tool such as Jenkins, CircleCI, AWS CodeBuild, Azure DevOps, Atlassian Bamboo, Argo CD, Buddy, Drone, or Travis CI to automate the steps and provide reporting.



Step 4

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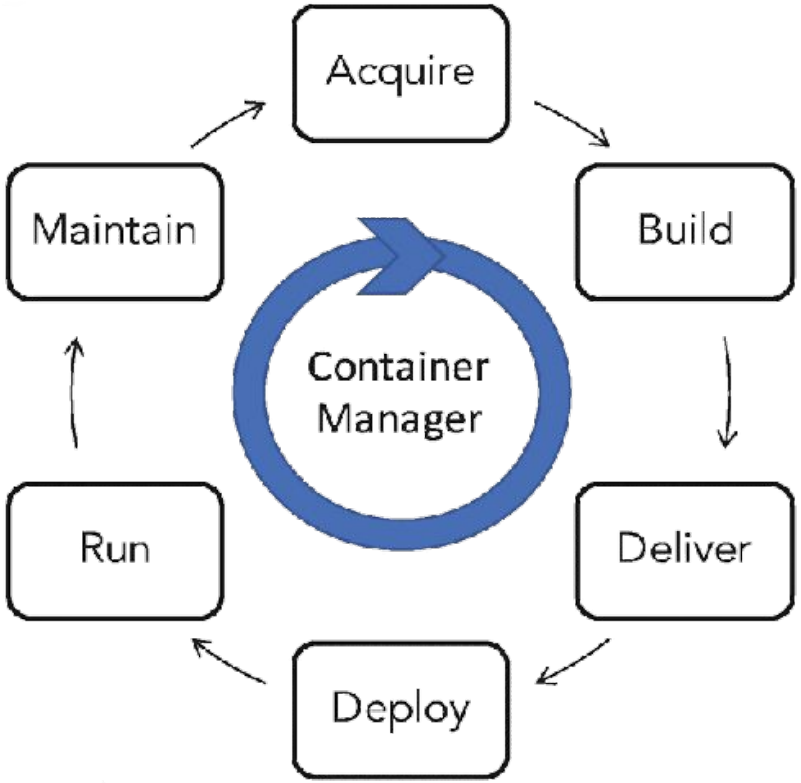
Container orchestration platform

The more features and functionality there are, the more complexity it introduces, and the more resources you will need to manage your ecosystem. Even though Kubernetes is an increasingly popular container orchestration platform choice, that doesn't mean it's the right solution for your business needs. With that in mind, we determine the limitations of your services to deploy on the cloud and then recommend you the best container orchestration platform based on your usage, budget, and preference.



Step 5

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Cost optimization

Cost modeling can be somewhat tricky, especially with newer cloud-based offerings that often have per-request, per-transaction, or per-event pricing components, which can be hard to predict. We Figure out your budget ahead of time and use it as a guidepost for making final decisions. Eventually, we model out your expected usage and push back on vendors for clarity when their pricing is too opaque.

Final Step

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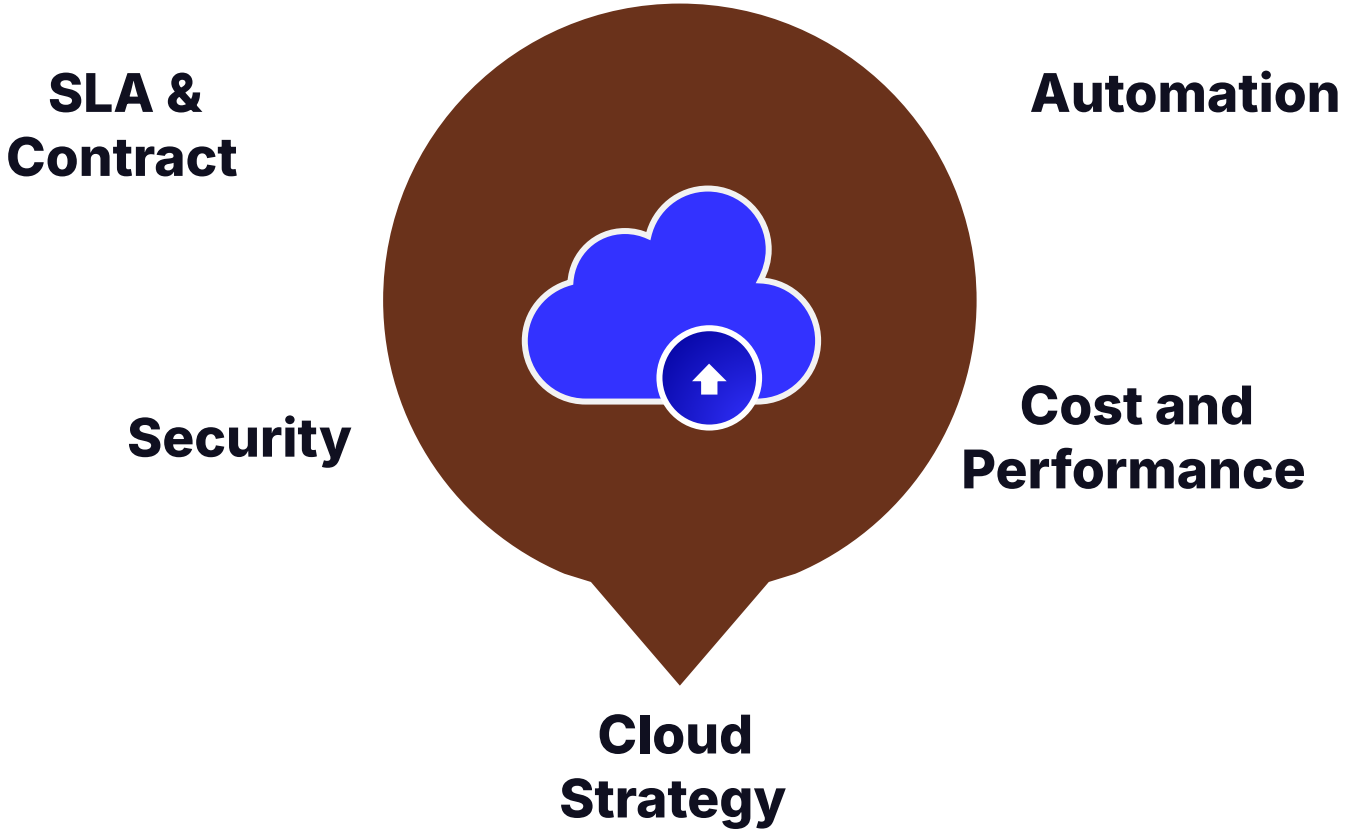
Cloud selection

Flexibility is key to finding the right and most cost-effective cloud infrastructure for your application. We do our best to consider both the bleeding edge, as well as options that are not as flashy, but work well for your application and budget.



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Pros and Cons

Public Cloud vs Private Cloud

Public Cloud

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Pros:

Simple and Easy: Public clouds are available as a service on the internet, they are easy to deploy.

Cost Reduction: The costs associated with the hardware, applications and bandwidth are the responsibility of the supplier.

Less Time: The IT resources and services are available immediately saving time for the company.

No Maintenance: The hardware and networks are maintained by the cloud services provider. Internal IT staff have no responsibility in maintaining the infrastructure.

No Contracts: No long-term commitment with service providers because public clouds are usually pay-as-you-go models.

Cons:

Lacks Proper Controls: The client has no control of data or infrastructure. There are issues of data privacy and integrity. The service level policies and compliances are completely enforced by the service provider.

Performance: The performance of the network depends on the various connectivity services which are some pre-planned template services provided by cloud platforms. Sometimes a complete infrastructure is challenging to optimize for a maximum throughput .

Weak on Security: Since the hardware resource is shared between multiple users, IT security issues are more profound, and data is vulnerable to thefts.

Customization: Customization of resources or services is not possible.

Private Cloud

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Pros:

Controls: Better controls for data, users and information assets.

Security: The cloud belongs to a single client. Hence, the infrastructure and systems can be configured to provide high levels of security.

Superior Performance: Normally private clouds are deployed inside the firewall of the organization's intranet which ensures efficiency and good network performance.

Easy Customization: The hardware and other resources can be customized easily by the company.

Compliance: Compliance is achieved easily in private clouds.

Cons:

Cost: Costs are substantial in the case of building an on-premise private cloud. The running cost would include personnel cost and periodic hardware upgrade costs. In the case of outsourced private cloud, operating cost will include per resource usage and be subject to change at the discretion of the service provider.

Under-utilization: In some instances, the resources subscribed can be under-utilized. Hence, optimizing the utilization of all resources is a challenge.

Capacity Ceiling: Due to physical hardware limitations with the service provider, there could be a capacity ceiling to handle only a certain number of servers or storage.

Vendor Lock-in: This can be a major impediment in private cloud adoption especially when the hardware and infrastructure is outsourced. This is a service delivery technique where the client company is forced to continue with the same service provider, thus preventing the client from migrating to another vendor.

Greenville, North Carolina, USA.

Get in Touch

https://www.kovexsystems.com/

+1 (252) 999-2658

sales@kovexsystems.com

https://www.kovexsystems.com/

Thank you For Your Attention.

If you have any further questions or want to clarify any existing topics of discussion, feel free to reach out over Email or Call. We're available 24/7.

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