



cloud native based systems
on-premise migration





Gartner quotations

- Cloud Will Be the Centerpiece of New Digital Experiences
- Use of Cloud-Native Technologies Will Be Pervasive, not Just Popular
- Low-Code and No-Code Technologies Use Will Nearly Triple by 2025
- In 2022, global cloud revenue is estimated to total \$474 billion, up from \$408 billion in 2021
- By 2025 over 95% of new digital workloads will be deployed on cloud-native platforms, up from 30% in 2021
- More than 85% of organizations will embrace a cloud-first principle by 2025

A decorative graphic on the right side of the slide. It features a large, stylized orange quotation mark "“" on a light gray background. Above the quote, there is a small orange circle with a string passing through it, hanging from the top. The background is split into orange and light gray sections.

“



Universal Concepts



01 Interoperability

The ease with which one can move or reuse components of an application or service

02 Performance, Availability, Resiliency

Aspects of any cloud environment due to the nature of cloud infrastructures and models

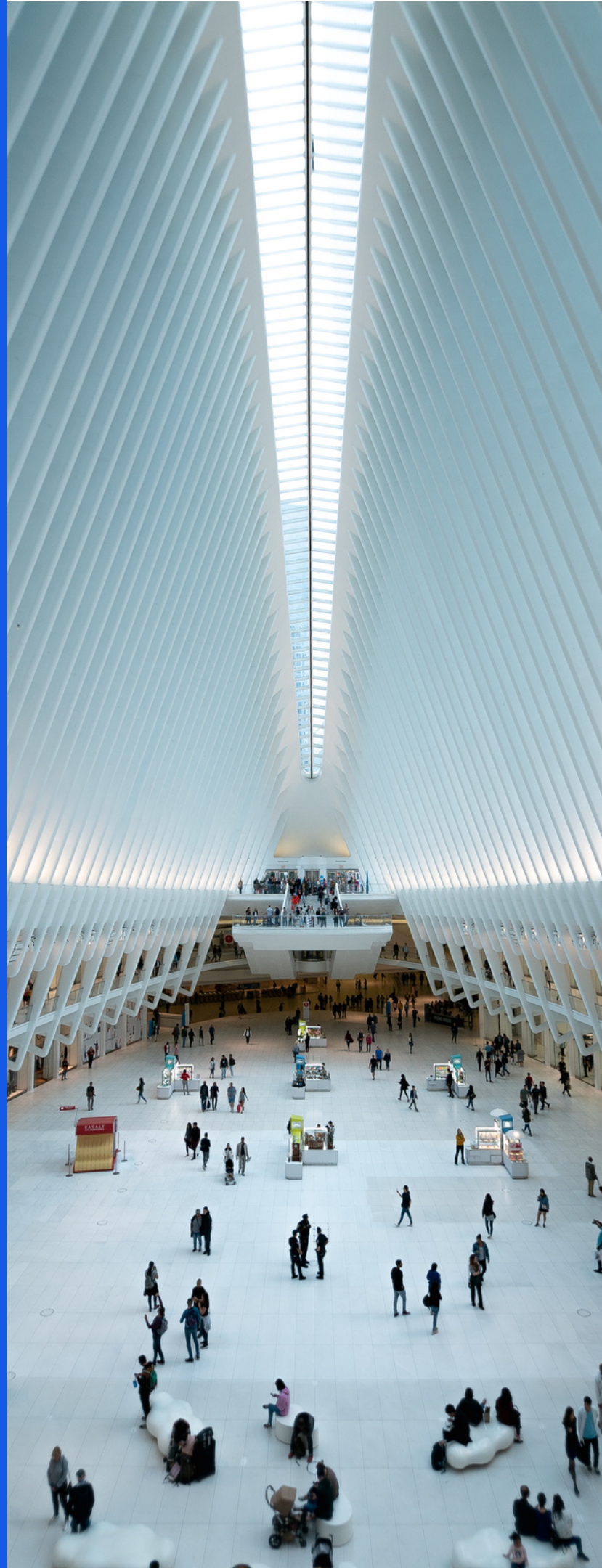


03 Elasticity, Scalability

Changing of resources allocated to a system or application to meet current demands

04 Portability

Key feature that allows systems to easily and seamlessly move between different cloud providers



Cloud characteristics



On-Demand Self-Service

services can be requested, provisioned, and put into use without the need to interact with a person

Broad Network Access

components are accessible over the network and accessible in most cases through many different vectors

Resource Pooling

you always will have a mix of applications that coexist within the same set of physical and virtual resources

Rapid Elasticity

services can be rapidly expanded at any time additional resources are needed

Metered Service

resources are metered and logged for billing and utilization reporting

Multitenancy

cloud environment can have many different customers running resources and applications within the same physical hardware

Cloud Benefits



Operating costs

- Pay as you go
- No hidden costs
- No additional license cost
- No subscription fee
- No dedicated infrastructure or datacenter
- Easy costs calculation
- Costs transparency and allocation



Time to market

- Fast kickoff
- Complete ecosystem
- No additional dependencies
- 200+ ready services
- Marketplace
- Complete documentation

Security & Reliability

- Strict security policy
- Certification
- Datacenter architecture
- Availability zones
- Scaling and monitoring
- Recovery procedures

Standardisation

- Security standardization
- Architecture standardization
- Support for IaC & DevOps
- Unified tools
- Well described services

Worldwide

- 20+ independent regions
- 100+ availability zones
- Customers from 240+ countries
- High efficient edge locations
- New locations coming soon



Cloud deployment models



IaaS

- Scalability
- Cost of ownership of physical hardware
- High availability
- Physical and logical security requirements
- Location and access independence
- Metered usage
- Potential for “green” data centers
- Choice of hardware



PaaS

- Auto-scaling
- Multiple host environments
- Choice of environments
- Flexibility
- Ease of upgrades
- Cost-effective
- Ease of access
- Licensing



SaaS

- Support costs and efforts
- Reduced overall costs
- Licensing
- Ease of use and administration
- Standardization



Private

- Ownership retention
- Control over systems
- Proprietary data and software control



Public

- Setup
- Scalability
- Right-sizing resources



Hybrid

- Split systems for optimization
- Flexibility in data processing
- Retain critical systems internally
- Disaster recovery
- Scalability





Designing



Architecture & Services

Design system architecture, choose appropriate cloud components and services, do mappings and design migration plan

Development



Adjust or implement system

Implement or adjust application to be compliant with the cloud requirements for data privacy, computing, storage. Consider security and performance requirements

Automation



Deployment & Infrastructure

Create automation scripts for infrastructure using IaC pattern and tools like Terraform. Design and implement CI/CD mechanisms and pipelines using tools like GitLab CI/CD

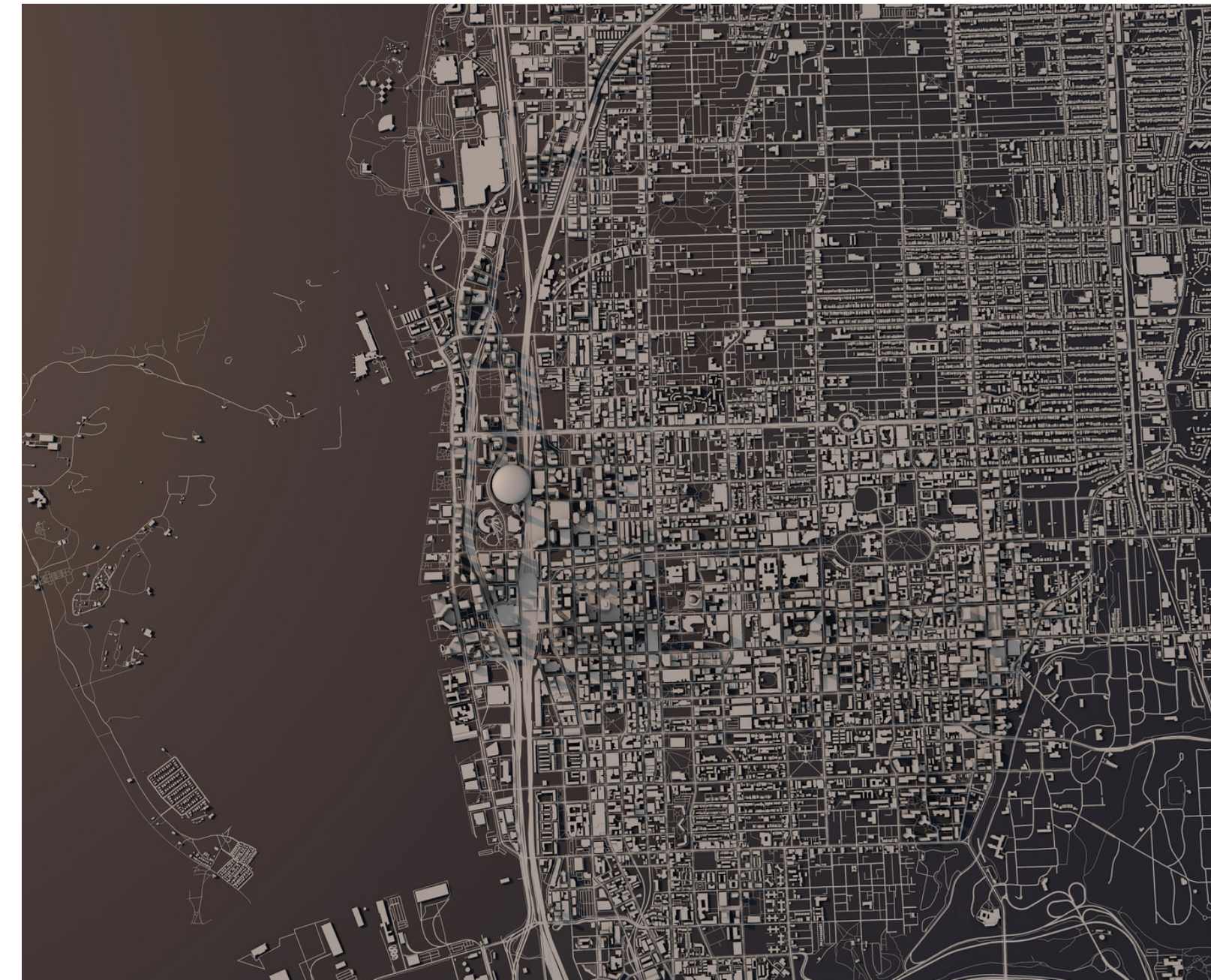
Monitoring



Monitor and maintain

Implement diagnostic and administration tools using automation scripts. Define limits, alerts and notifications for specific events and activities inside of the cloud ecosystem

Cloud Onboarding Roadmap





Architecture and Design



Preliminary

- Choose Cloud provider
- Establish principles
- Choose architecture framework



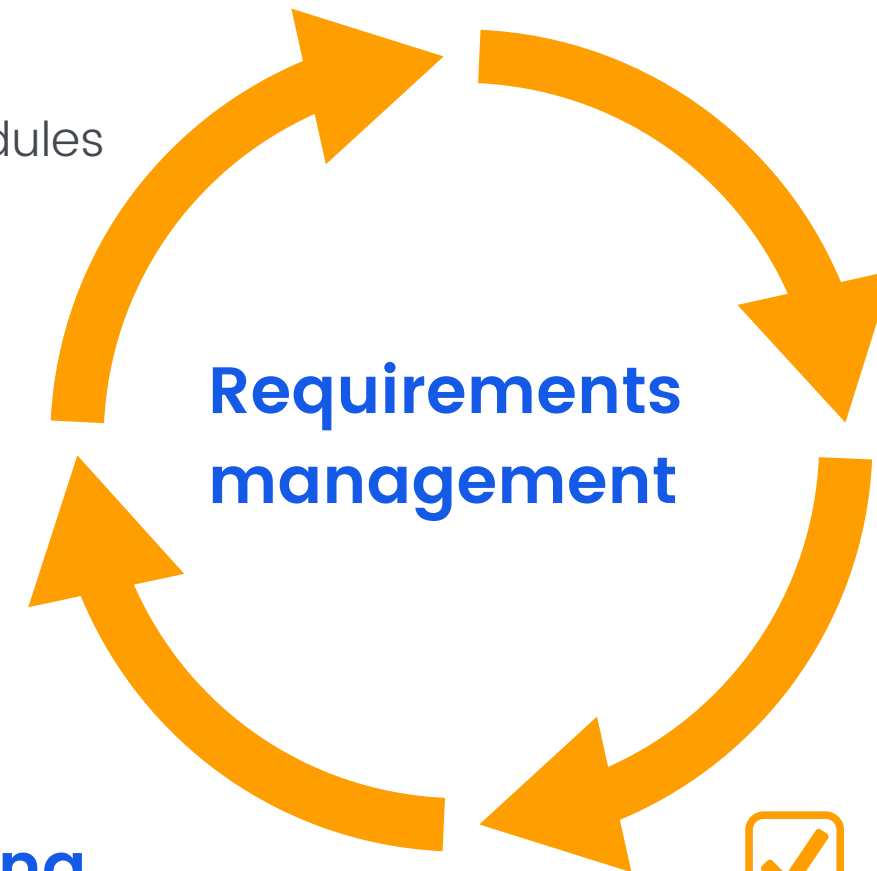
Implementation governance

- Implementation modules
- Develop projects
- Compliance review



Architecture vision

- Get stakeholder requirements
- Analyse gaps
- Create architecture vision



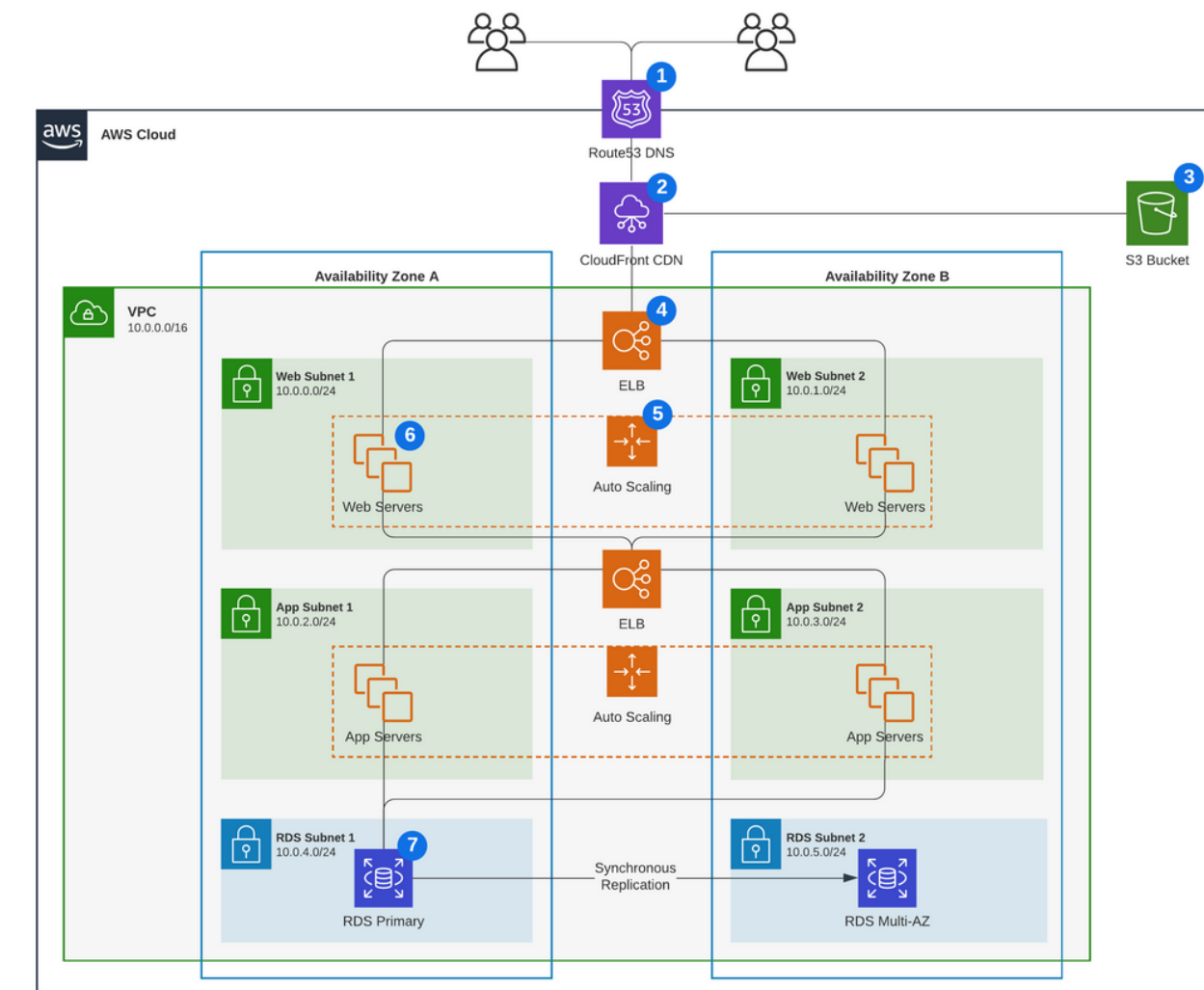
Migration planning

- Create roadmap
- Create migration plan
- Licensing
- Costs planning
- Risk management



Architecture implementation

- Implement business architecture
- Implement information architecture
- Implement technology architecture





QUALITY IS NEVER AN
ACCIDENT, IT IS ALWAYS THE
RESULT OF HIGH INTENTION

Development

Development process is an iteration of new business requirements, implementations and check compliance

- 01 **Implement interfaces and contracts**
- 02 **Prepare functional tests**
- 03 **Create data layer**
- 04 **Implement main login processes**
- 05 **Create microservices and microfrontends**
- 06 **Implement events and streams**
- 07 **Prepare E2E tests**



Automation

A NoOps environment means no operations. NoOps is when an IT environment becomes so automated from the underlying infrastructure – through technologies including artificial intelligence (AI) and machine learning – that there's no need for a dedicated team to manage software in-house

- 01

Design CI/CD process
- 02

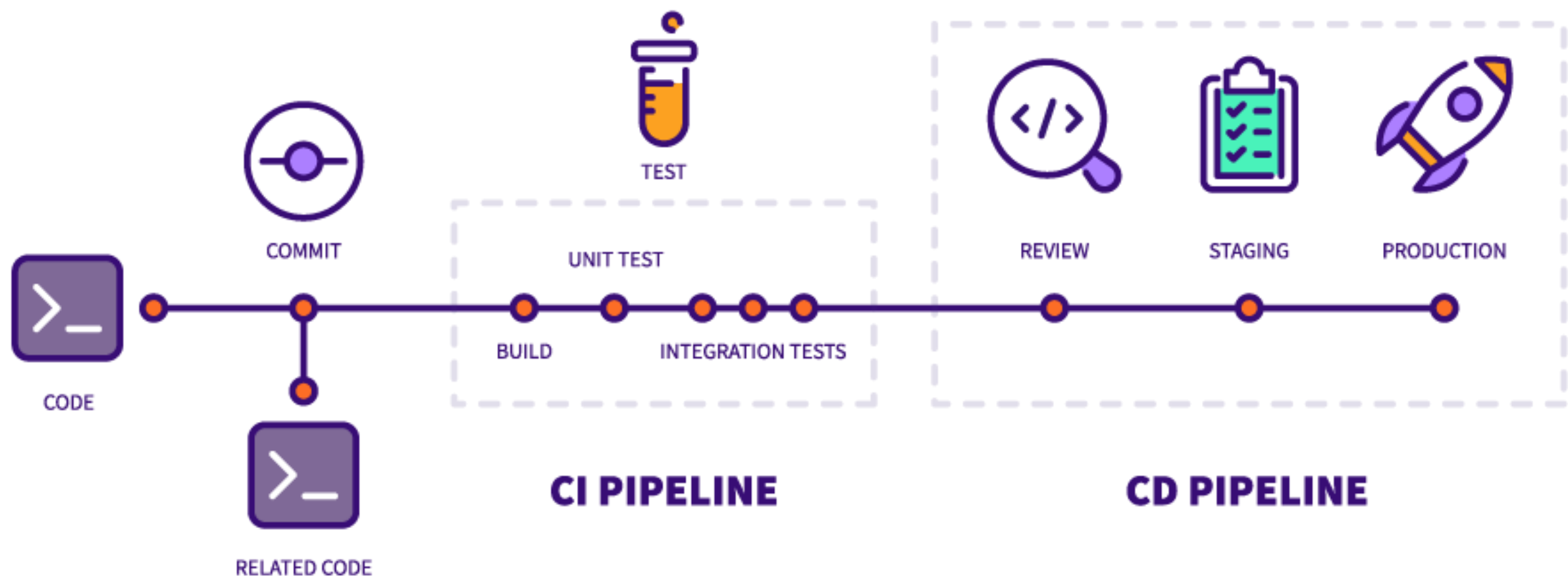
Implement Pipelines
- 03

Set up automated tests
- 05

Implement Infrastructure as Code
- 06

Deploy components automatically
- 07

Publish documentation





Monitoring



Stable and reliable application

Cloud offers robust monitoring and auditing tools that span the breadth of all service offerings. Monitoring systems are designed to collect and consolidate event data and auditing information from any services allocated under your account and provide them to you from a uniform and centralized dashboard.



Tools

Every cloud component can be monitor during native technologies and dedicated tools like Prometheus, Grafana, ElasticSearch Kibana Logstash. Configuring such tools, administrator can easily trace logs and monitor component health and stability.



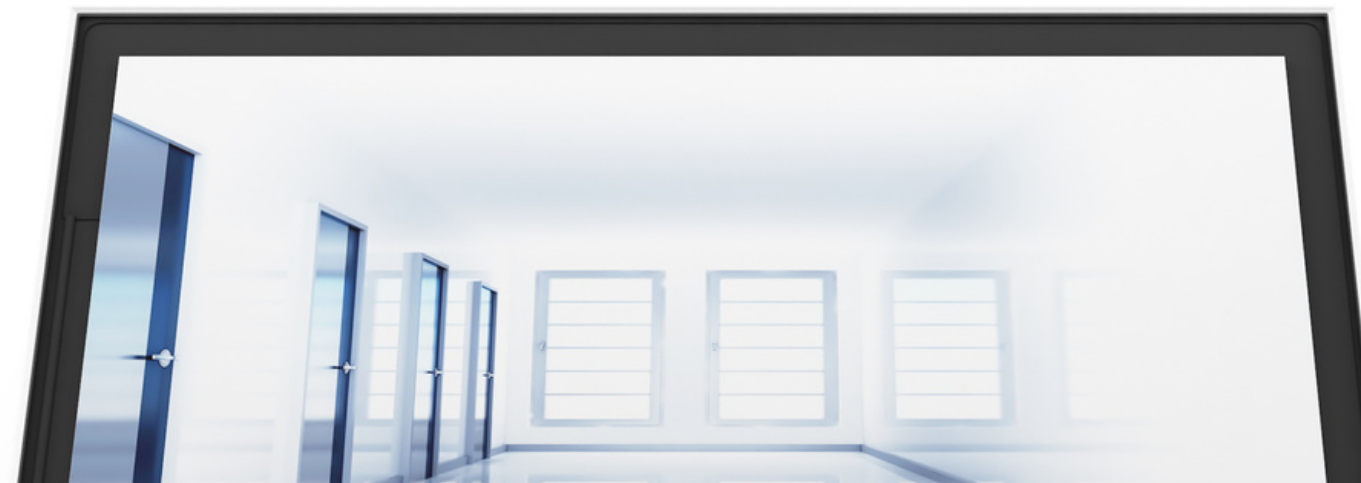
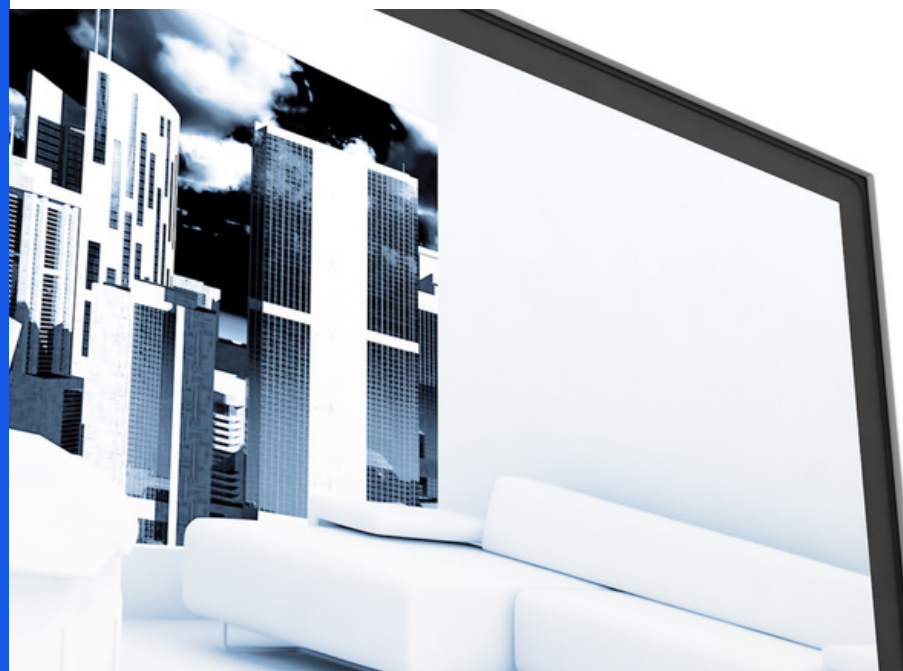
Audit

Cloud dedicated services can log all account activities performed, regardless of the method through which they were done. It logs all activity through the Management Console, CLI, and any API calls that are made, along with the originating IP address and all time and date data. If any unauthorized changes are made, or if a change causes a disruption in services or system problems, the logs and reports available can enable an admin to quickly determine what was done and by whom.



Alerts

Native cloud components allow to track budget utilisation and components statuses for infrastructure. Usingdedicated mechanysms e-mail, SMS or other type of notification can be easily trigerred to administrators.



Thank You

We're here to help you

Your proven Technology Partner



 Address

Reformacka 6
35-026 Rzeszów
Poland

 Telephone

+48 668 474 710
+48 694 150 492

 Website

www.qrsolve.com