QUADRANT RESOURCE
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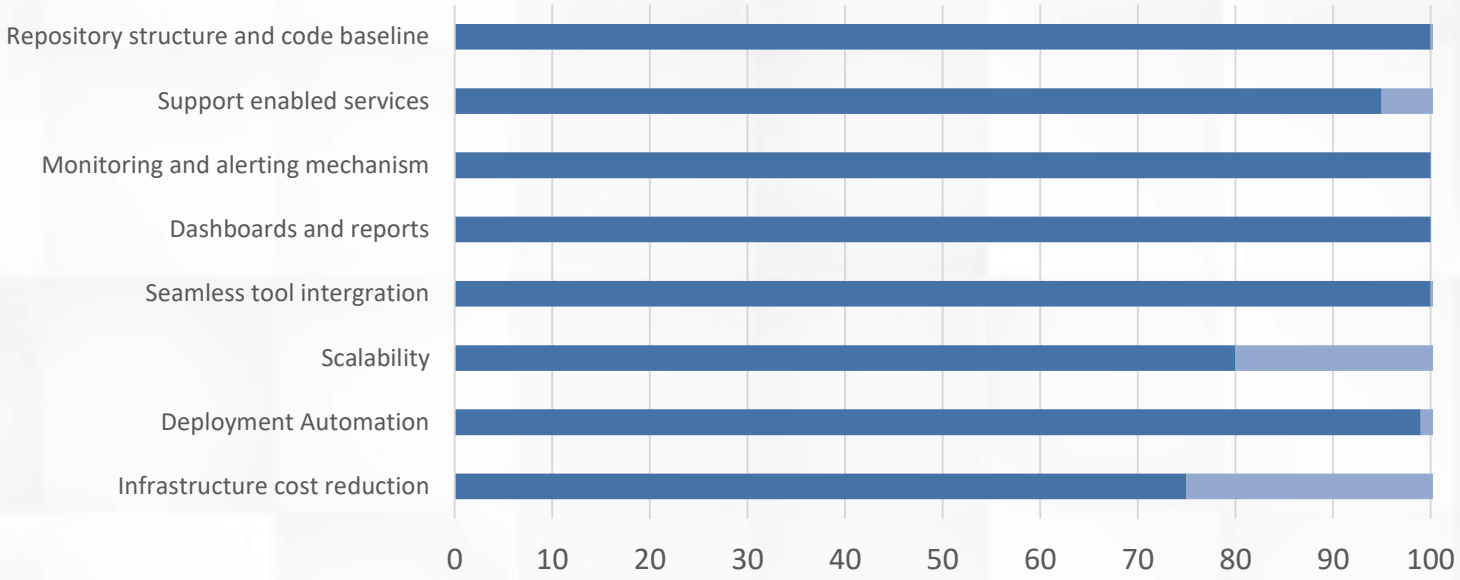
# DLITES - DevOps Livesite Engineering and Support with Quadrant Resource

## MISSION & VISION


DLITES is an end-to-end framework with a suite of tools and services which enables customers to establish a robust and concrete modernized DevOps, SRE practice using Microsoft Azure services.

DLITES handles all the aspects of DevOps, Live Site Engineering and Support system which enables customers to have a smooth deployment and monitoring processes.

## DLITES Features




## FEATURES

**Migrating existing classic pipelines to YAML pipelines:** Flexibility across platforms/projects, version control for pipelines, Single pipeline model for CI/CD, Reusability, multistage pipeline.

**Implementing Security code scan:** Helps in detecting various security vulnerability patterns, SQL injection, Cross-Site Scripting etc. in application.

**Linking Azure Key vaults along with variable groups:** Accessing secrets dynamically related to any sensitive information in pipelines in more secure & standard manner.

**Dynamic pipelines instead of static pipelines:** Avoiding hardcoded values, accessing environment related configurations, Application specific configurations etc.. via variables and variable groups in centralized location.

**Implementing Branching & Security policies:** Enforcing proper branching and security policies for users.

**Implementing Quality gates using Sonar Cloud:** Measuring & analyzing the source code quality, reduces the risk of software development.

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**Infrastructure provisioning (Iac)**: Creating pipeline for setting up and configuring infrastructure for different environments with minimal manual intervention using ARM template , terraform etc.

**Addressing Security issues from Software Composition Analysis (SCA):** Identifying the security concerns from packages in code like related artifacts, registry, licenses, compliance data using tools like OWASP & others.

**Validating code changes using Deployment slots :** Validate webapp changes in staging deployment slot before swapping it with production slot.

**Automating custom test cases through Azure test plan:** Automating required custom test cases to validate the application after deployment or release process.

## IMPLEMENTATION PROCESS

### 14-18 Days

- Assess and evaluate the repository and code base.
- Prioritize scope and build a plan that addresses value, impact, and risk.
- Prototype build, deploy, and migrate work patterns.

### 60 Days

- Develop build and deploy setup.
- Complete automation of deployments using scripts.
- Continuous Integration and Continuous Deployment model.

### 120-180 Days

- End to End automation using tools and scripts.
- Enablement of dashboards and monitoring tools.
- Setup a SRE process to provide continuous monitoring and release support.

## PRINCIPLES AND PRACTICES

### Continuous planning

- Objectives & Key Results (OKR)
- Lean product discovery
- Lean product definition
- Release planning
- Sprint planning
- Agile requirements
- Security requirements
- Architecture design
- Capacity planning
- UX architecture design
- Threat modeling
- Prioritization & estimation
- Demos & Retrospectives

### Continuous integration

- Behavior-driven development (BDD)
- Test-driven development (TDD)
- Microservices & container development
- Mono-repo & Multi-repo
- Unit testing & code coverage
- Version control
- Git pull request
- Trunk-based policies
- Security static code scan
- CredScan
- Open Source software (OSS) component compliance
- Build parallel & serial pipeline

### Continuous delivery

- Release pipeline
- Secure infrastructure deployment
- IaaS deployment
- PaaS deployment
- Shared services
- Infrastructure as code (IaC)
- Change management
- Configuration management
- Release management
- Blue-green deployments
- Canary deployments
- Feature flags
- Trunk production ready

### Continuous operations

- Site reliability engineering (SRE)
- Telemetry & monitoring
- Application performance monitoring
- Auto Failover, scaling, & DR
- Modern service management
- Secure access & application data
- High availability, security, cost & performance advisory
- Secure DevOps ChatOps
- Shift-right testing
- Secrets management
- Governance & GDPR support
- Automation & AIOps
- Continuity & resilience

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| Continuous quality ☆☆☆ | Quality requirements | Shift-left testing | Governance & standards | Test automation | Compliance & audits | Shift right testing |
| Continuous security | Security architecture | Access & identity management | Application & data security | Security infrastructure | Secure operations | Governance, risk, & compliance |
| Continuous collaboration | Collaborative culture | Alignment & autonomy | Kanban collaboration | Wiki & Teams collaboration | ChatOps collaboration | Feature Team & SRE |
| Continuous improvement | Lead time & cycle time | Deployment frequency | Mean time to restore (MTTR) | Change fail percentage | Continuous feedback | Value stream mapping |

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