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Releases: A piece of cake using platform Engineering

Akanksha Bhasin

Developer Community Evangelist | Devtron

TATA 1MG, GURUGRAM

15 JUNE 2024

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Releases: A piece of cake using Platform Engineering

Akanksha Bhasin

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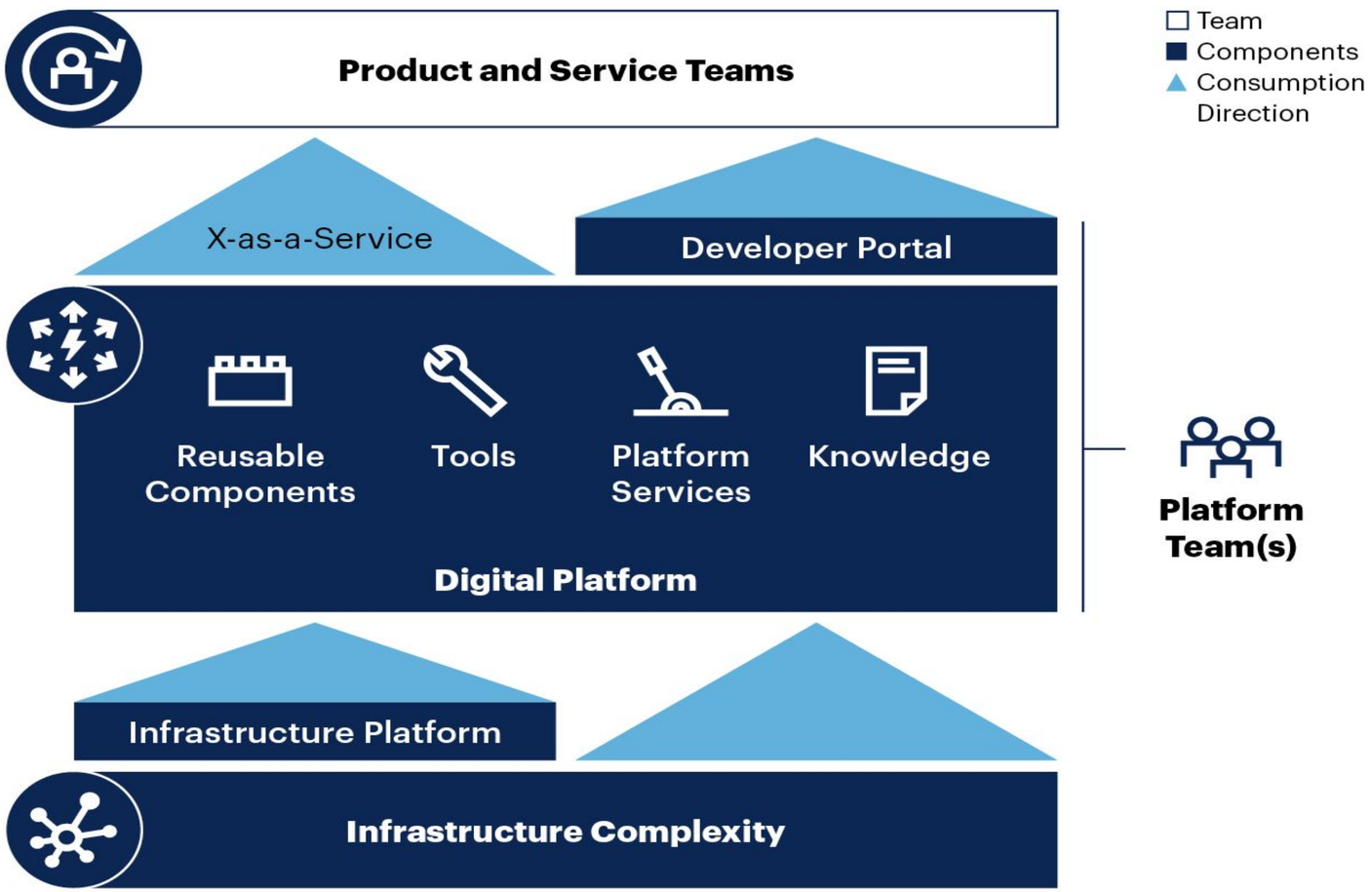
Hi, I’m Akanksha

- Developer Community Evangelist @Devtron.ai
- Founder @Women in Voice India
- Women Techmakers Ambassador
- Mentored Students at Hackathons, Google Code-In
- Spoken at 40+ events, international conferences

@Akii_20 @akankshabhasin

Why care about Platform Engineering?

Diagram of Platform Engineering



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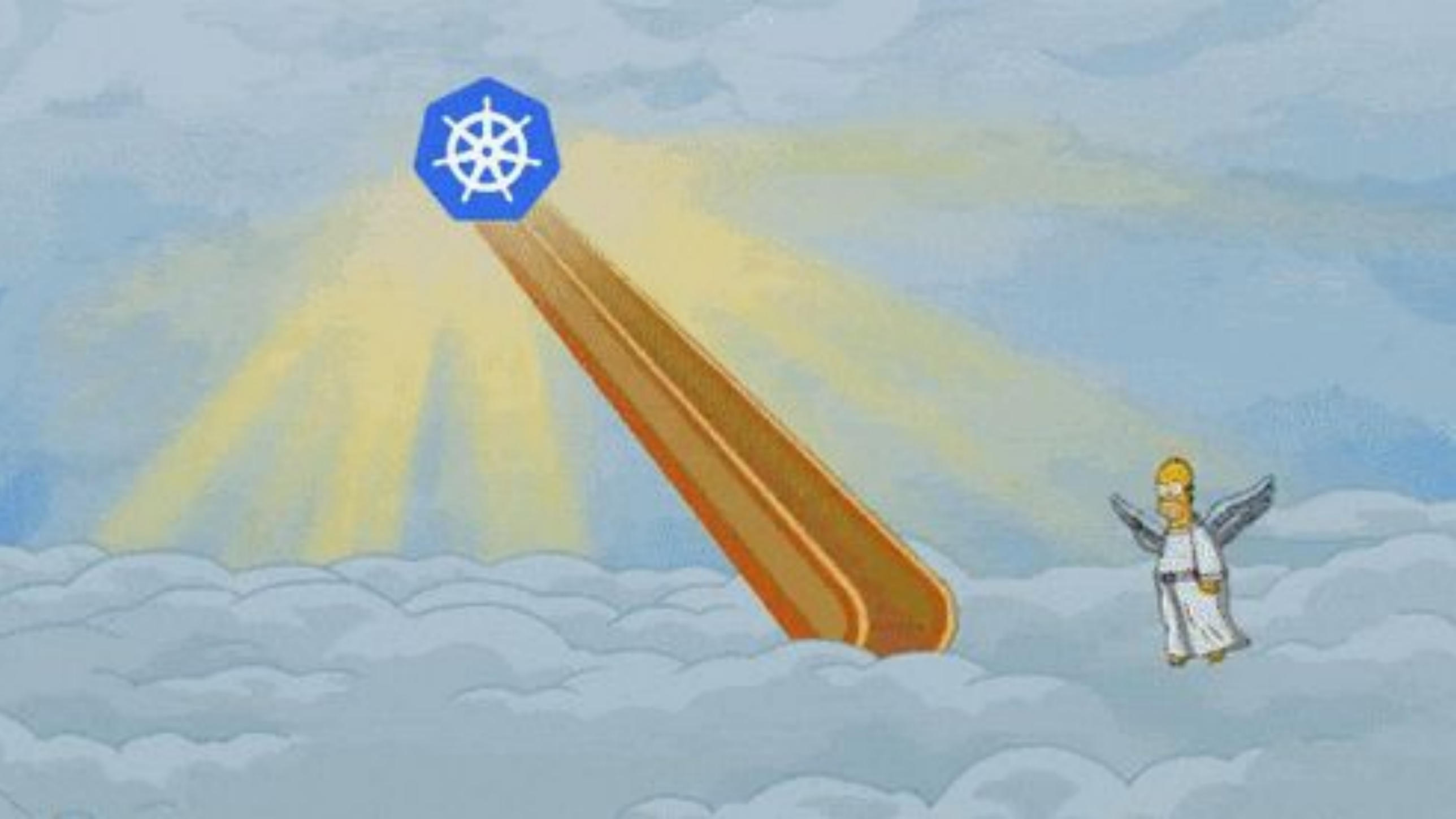

Principles of Platform Engineering

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Developer Centric Approach

- ❏ Prioritize developer productivity.
- ❏ Design intuitive, user-friendly interfaces.
- ❏ On demand access to resources, no manual provisioning, one click rollbacks, pre-configured deployment templates for common environments.

Abstraction of Complexities

- ❑ Management of multiple & complex YAML files
- ❑ Abstracting Network complexities
- ❑ Integration of cloud-native tools
- ❑ Orchestration of Clusters

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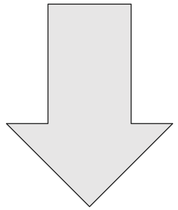
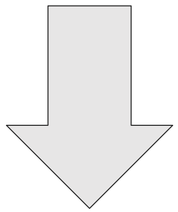
Standardization

Consistency Across Environments



Policy driven pipelines



Improved Efficiency

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PLEASE WAIT
WHILE THE WIZARD
PROVISIONS THE INFRA

Self-Service Infrastructure

- On-Demand provisioning of Infrastructure with Auto-scaling
- Easy Errors Identification And Troubleshooting

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Additional Considerations

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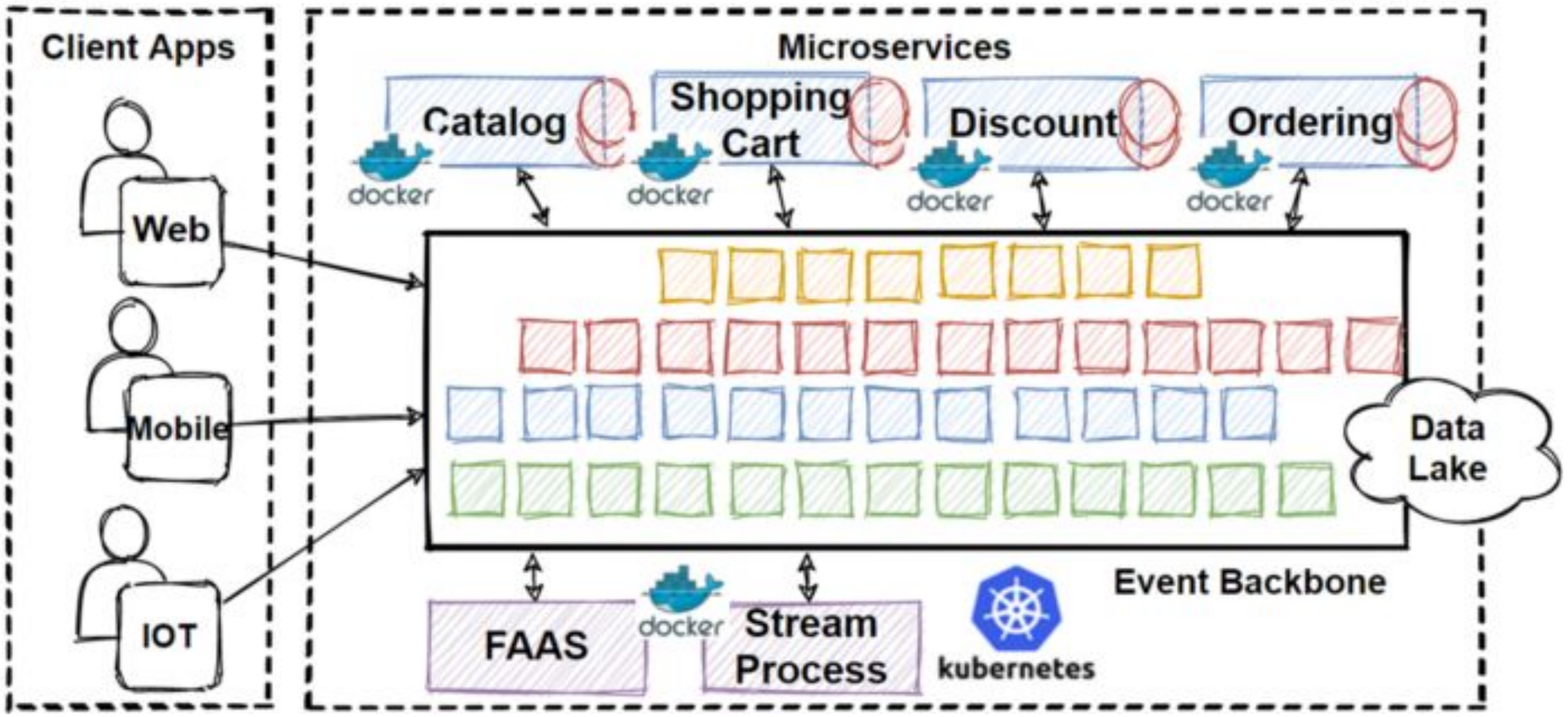
Increased Application Complexities



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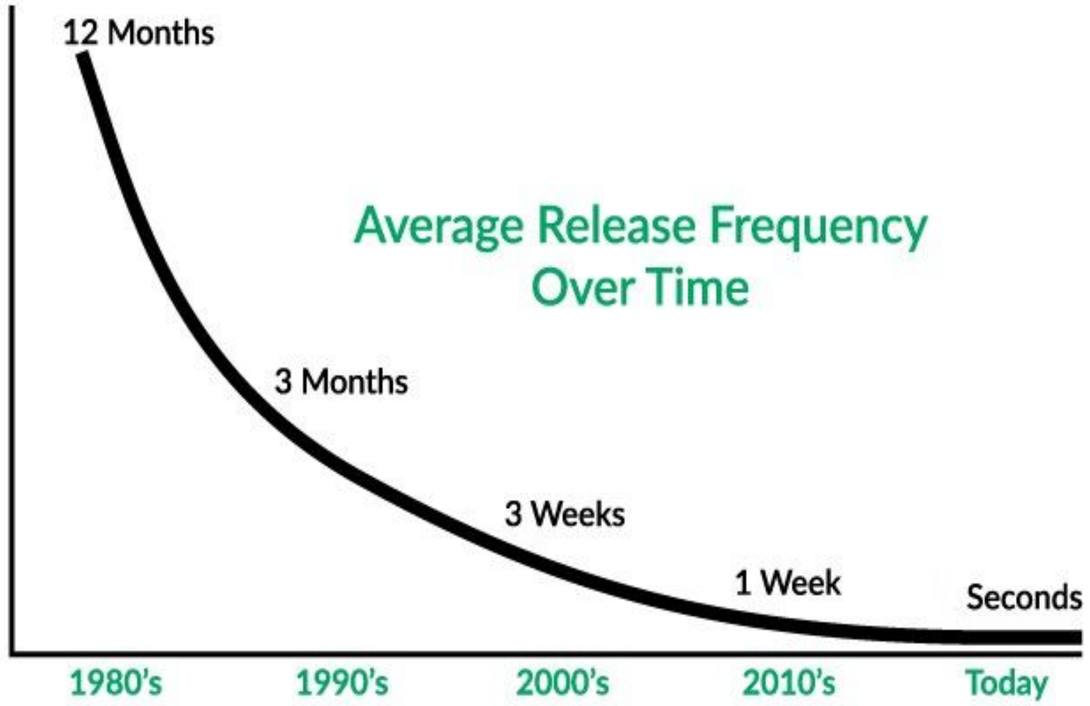
Frequent Releases



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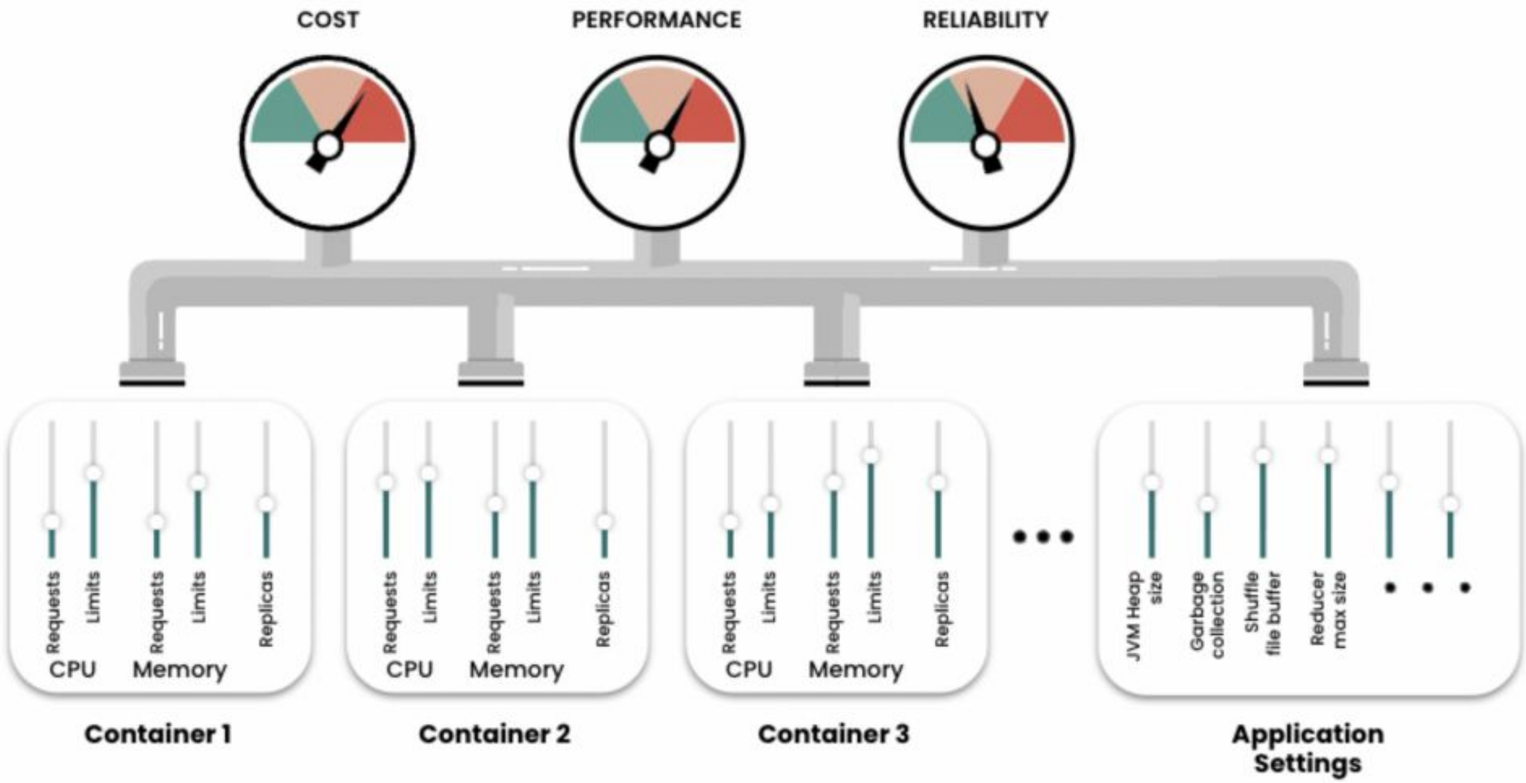
Resource & Cost Optimization



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Overcoming the Challenges of Platform Engineering with Devtron

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Platform Should Provide Proper Abstraction from Complexities

- ❏ Hides intricate technical details from end-users
- ❏ Offers intuitive, user-friendly interfaces
- ❏ Manages underlying system complexities
- ❏ Reduces learning curve for new developers

Ensure a Standard Process of Execution is Followed

- ❏ Establishes consistent workflows
- ❏ Enforces best practices across teams
- ❏ Enhances code quality and maintainability

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Automation

- ❑ Streamlines repetitive tasks
- ❑ Accelerates development and deployment cycles
- ❑ Minimizes human errors
- ❑ Automated testing, builds, and deployments

Flexibility and Scalability

- ❑ Adapts to changing business needs
- ❑ Scales resources based on demand
- ❑ Enables easy integration with new services

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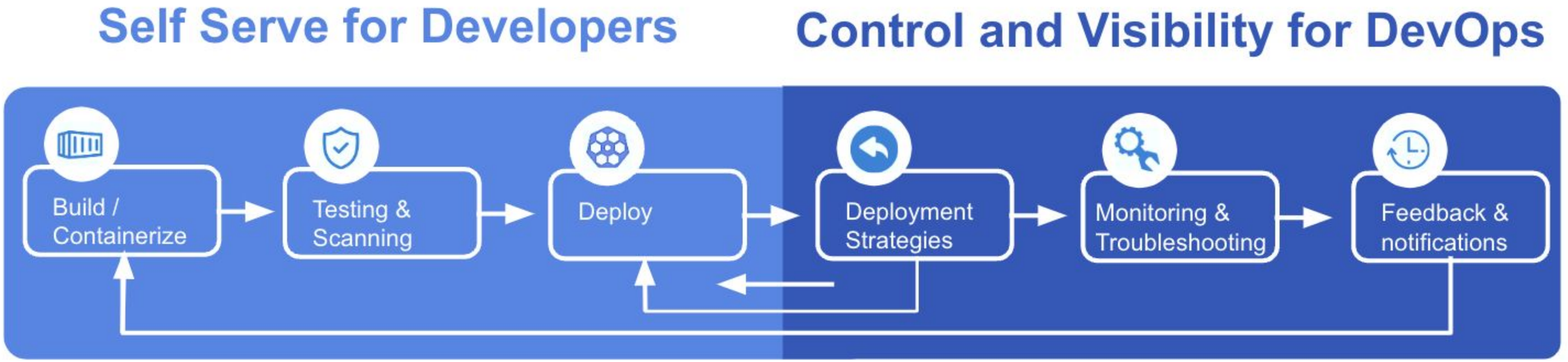
Devtron at a Glance

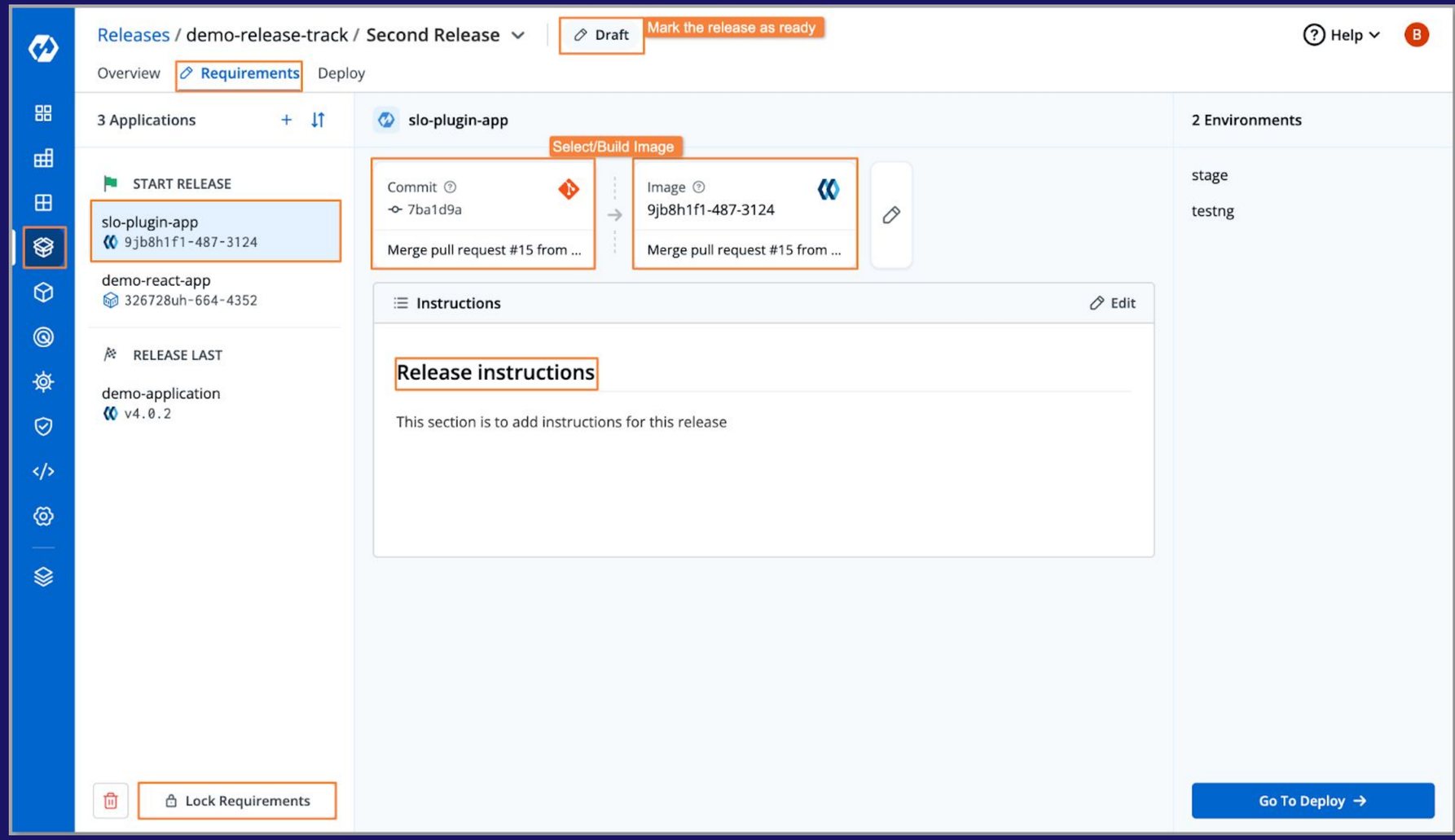


Containerization	Security and Zero tolerance policies enforcement	Scaling Deployments across multiple clusters	Performing rollback strategies at scale and multi-clusters	Tools to simplify monitoring and improve troubleshooting/ triage time	Automation of notifications and decision making with faster feedback incorporation

Releases

The releases feature simplifies the deployment process by packaging all essential details, including microservices, dependencies and release sequences, into a single bundle.

This centralization bridges the gap between teams, providing a comprehensive view for Release Managers.



How Is Devtron Different?

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Devtron	Others
✓ On-prem security - “trust yourself”	✗ SaaS security - “trust us”
✓ Single pane Build and Deployment system with RBAC	✗ Disconnected Build and Deployment system
✓ Collaboration as integral part of the platform	✗ Collaboration happens outside the tool
✓ Includes Kubernetes cluster and workload visibility	✗ Limited Kubernetes cluster and workload visibility
✓ Includes Kubernetes cluster and workload debugging capability	✗ Limited Kubernetes cluster and workload debugging capability

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Kelsey Hightower
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Platform engineering is like a gym membership. Anyone can buy into it, but results require actual work.
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