Streamlining DAG Creation With YAML In Large Organizations

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THIS IS NOT A CONTRIBUTION

Agenda

User Story

Challenges

Strategies

Lesson Learned

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Scalability

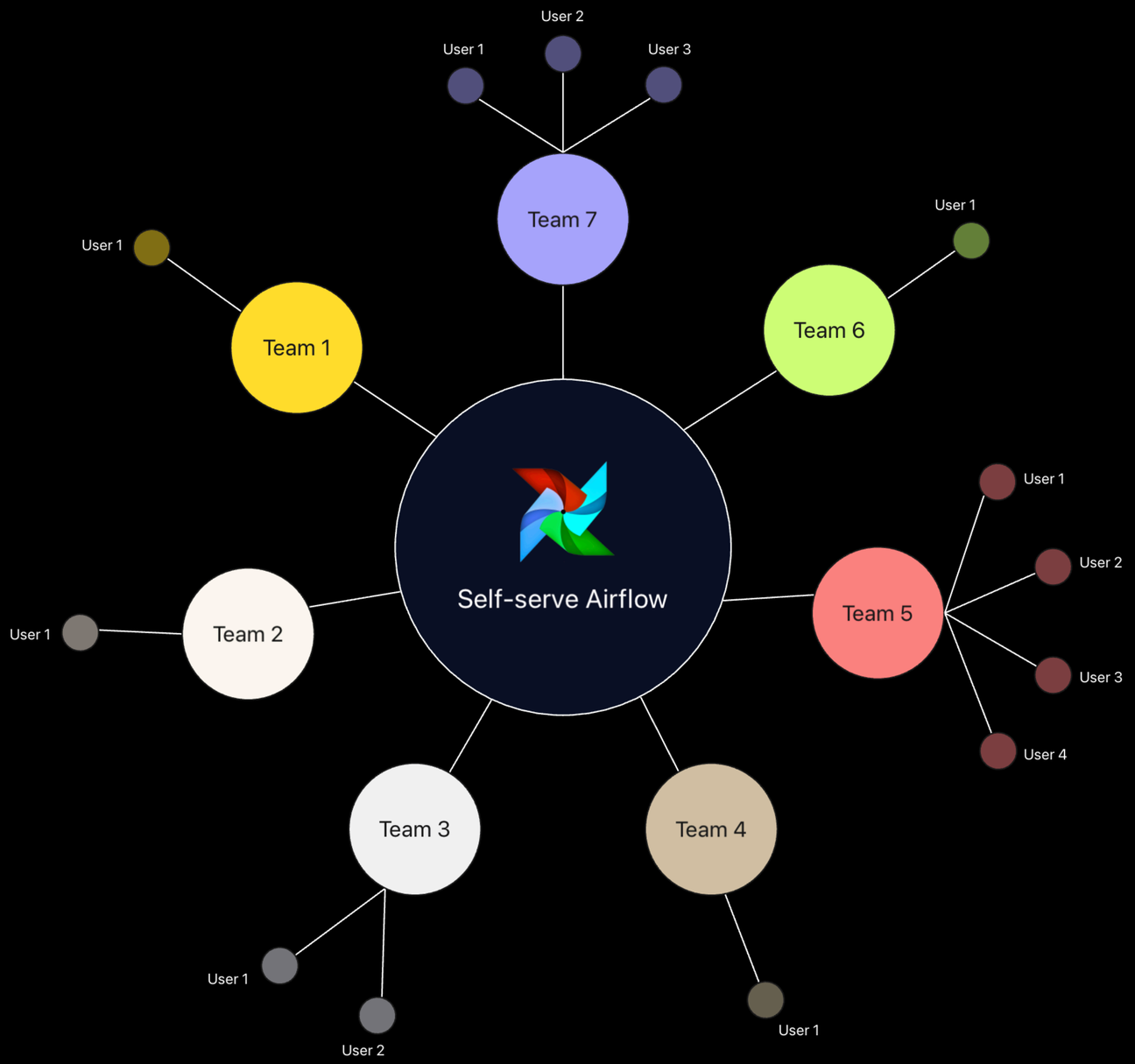
Multi-Tenancy

RBAC and Auditing

Deployment and Versioning

Monitoring and Debugging

Resource Pools



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Python Expertise

Learning Airflow

Duplicative Code

Managing DAG Changes

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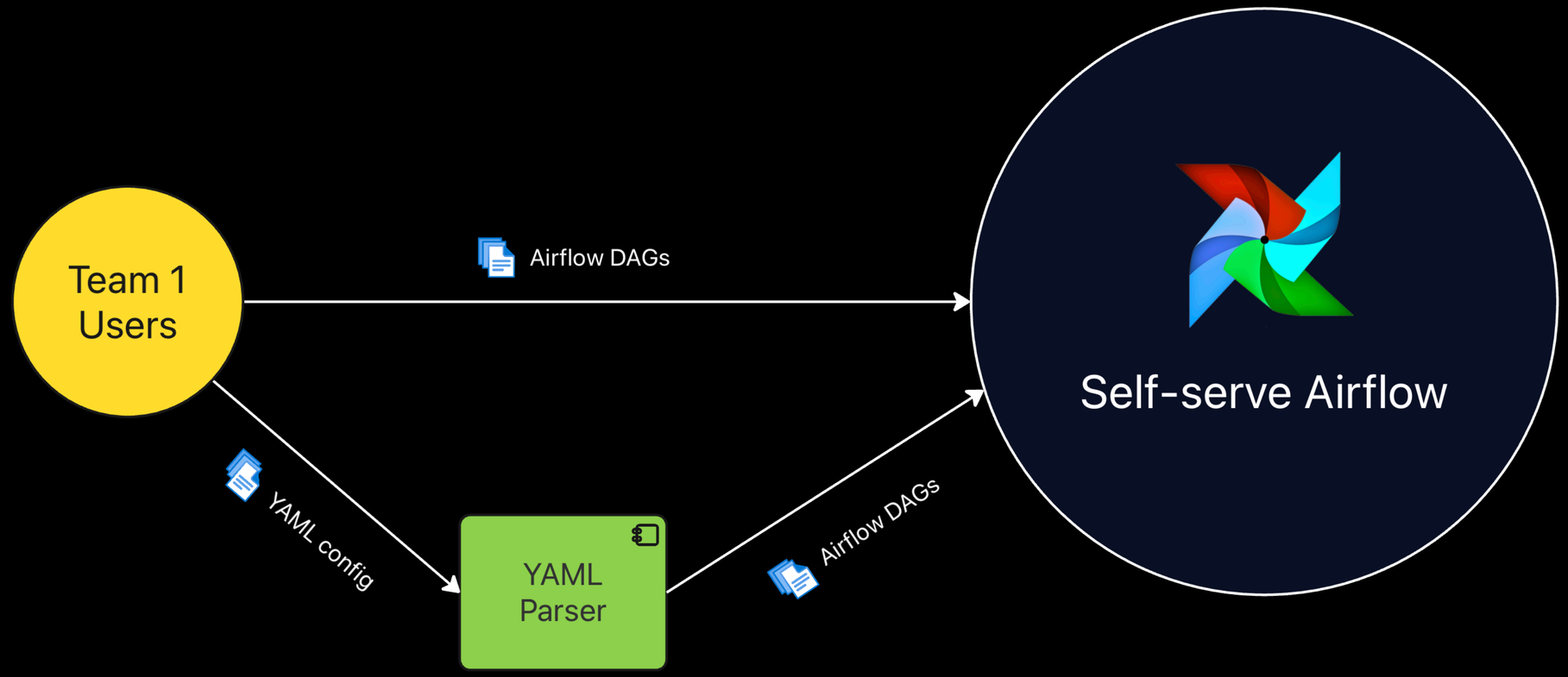
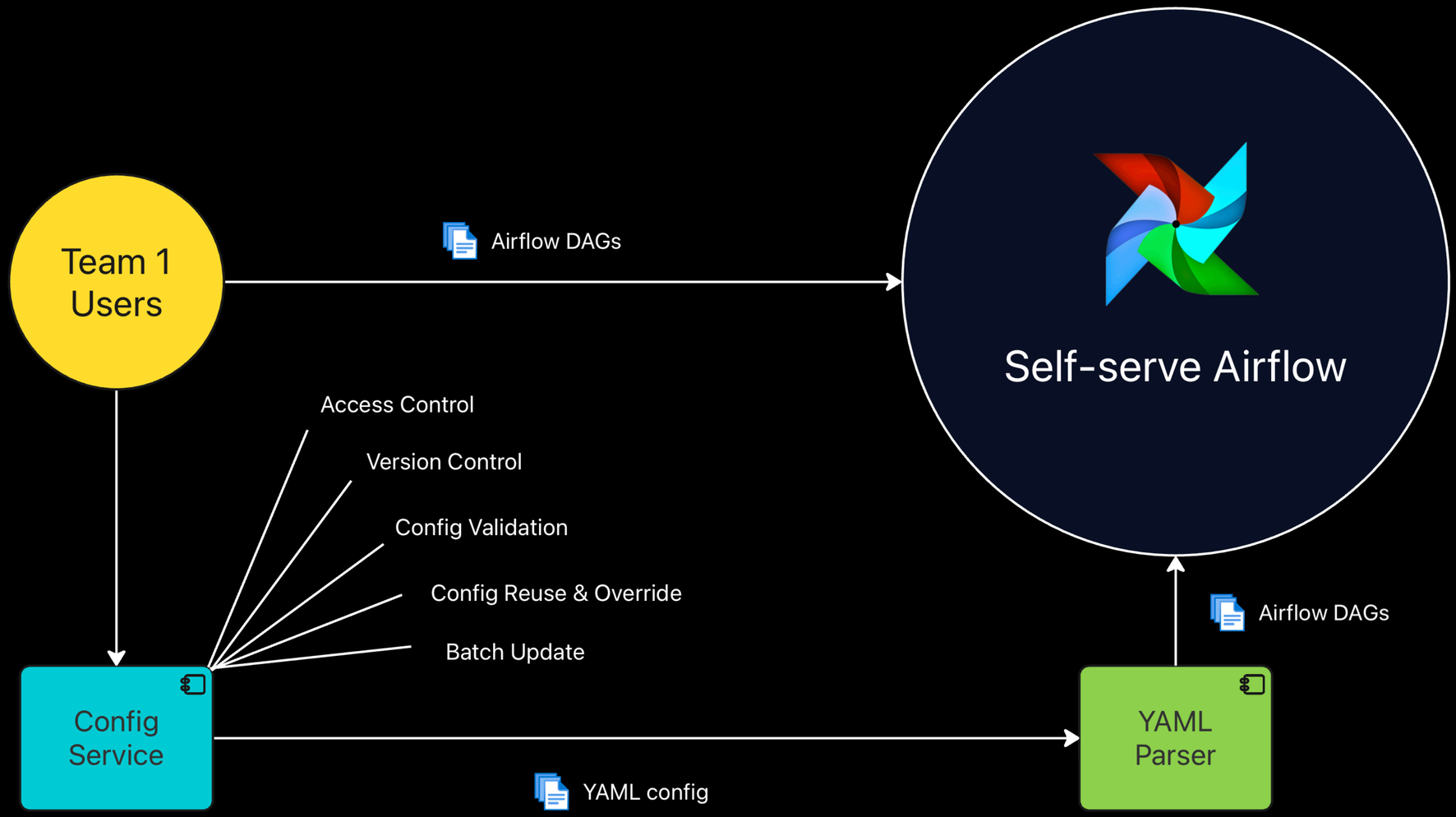
Strategy 1: Declarative DAG via YAML



Strategy 2: YAML Config as a Service



Benefits of the YAML Approach

Simplified Syntax

more human-readable compared to Python

Standardization

enforces a consistent structure for defining DAGs

Configuration Over Code

allows for easier changes and versioning of DAGs

Better Collaboration

easier to read, review, and edit by a broader range of stakeholders

Template Reusability

use template to eliminates duplicate config for common pattern

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YAML DSL also has learning curve

Mapping between Airflow Operator and YAML config must be automated

YAML validator is important

Config Service can also benefit non-Airflow service

Challenges with machine generated DAGs

Q & A