



Amazon Managed Workflows for Apache Airflow: What's New

3.0

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What you will learn today:

- AWS involvement in Apache Airflow project
- Core features of Amazon Managed Workflows for Apache Airflow (MWAA)
- Recent and upcoming MWAA feature releases
- How customers use MWAA today
- Resources for getting started with MWAA

AWS involvement in Apache Airflow



AWS and Open-Source Apache Airflow

AWS OSS team dedicated to furthering the development of Apache Airflow



▪ Recent contributions:

- ❑ Testing, bug fixing for AF 3.0, 3.1
- ❑ Event Driven Scheduling
- ❑ Simple Auth manager
- ❑ Deadline alerts

• WIP contributions:

- ❑ Deadline alerts in 3.2 w/custom callback
- ❑ Multi-team

Overview of MWAA

3.0



Amazon MWAA

Performance & scalability



- Native AWS integrations
- Auto scaling
- Supports complex, high-concurrency DAGs
- Isolated environments

High availability & enterprise security



- Multi-AZ , high availability
- AWS-managed security updates
- IAM controls, KMS
- Built-in security and compliance

Lower overall cost of ownership



- Reduced operational costs
- Auto scaling to prevent overprovisioning
- Pay-as-you-go pricing

Fully-managed, open-source compatible



- Full access to Apache Airflow features
- Cloud agnostic
- Available on-premise
- image development on Github

MWAA core features



Run 100% OSS Apache Airflow
(no forks)



Fully Managed



Multi AZ with
automated failover



Auto-scaling



Granular monitoring &
observability



Multi-cloud ready



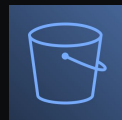
Compatible with
on-premise
environments



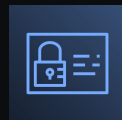
Integrated with 1P & 3P
services



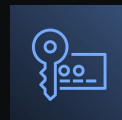
Secure & Compliant,
RBAC, HIPAA, SOC
1,2,3, PCI, DSS



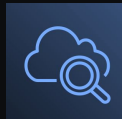
Amazon S3



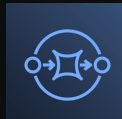
Amazon IAM



Amazon KMS



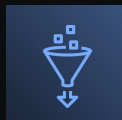
Amazon
CloudWatch



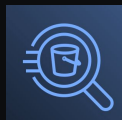
Amazon SQS



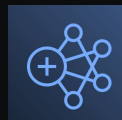
Amazon
Sagemaker AI



AWS Glue



Amazon Athena



Amazon EMR

*A live dashboard monitors the health of AWS
integrations available in the Amazon Provider Package*

“ *With Amazon MWAA, we can focus on building reliable data pipelines that achieve business goals rather than patching and securing instances.*

Eric Smith
Data Platform Engineer



”

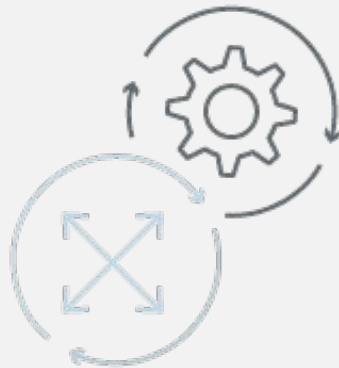
MWAA used across a variety of use cases

MWAA orchestrates complex workflows



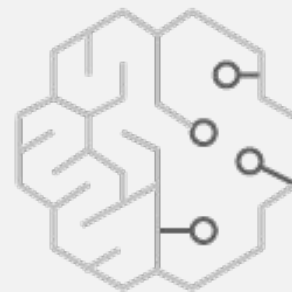
ETL

Automate ETL and data workflows
across AWS & 3P services



DevOps/LLMOps

Automate operational tasks

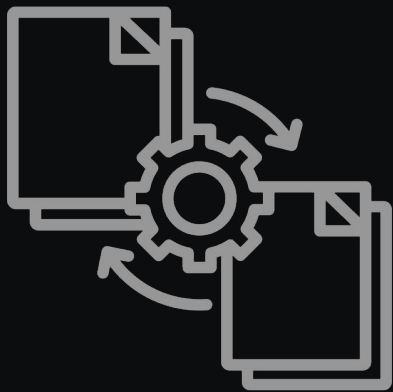


AIML & GenAI

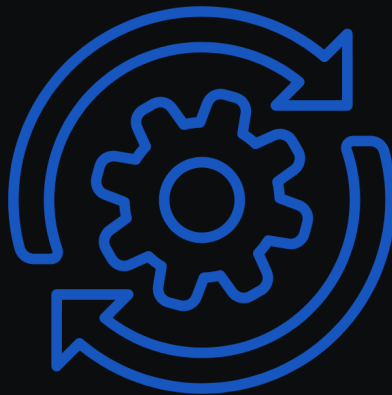
Orchestrate end-to-end AI/ML
pipeline

What's New

MWAA team has delivered some key features in 2025



**In place version
downgrades**



Graceful updates



**Amazon Sagemaker
Unified Studio Integration**

Try it today!

Airflow 3.0

On MWAA

- Improved Security with new REST API
- Event-driven scheduling for increased agility
- Execute tasks securely in any environment
- MWAA AF3 OSS Image publicly available for local testing

Team also working on these features...



Region expansion



Maintenance window



AF 3.1 support

Wrap Up

Catch these sessions to learn more

Data & AI Orchestration at GoDaddy



10/9/2025



11:30 am



Columbia C

AWS Lambda Executor:

Speed of local Execution with
advantages of Remote



10/9/202



5



3:00 pm

Beckler



Get Started with MWAA

- **MWAA Product Page:**
<https://aws.amazon.com/managed-workflows-for-apache-airflow/>
- **MWAA Resources:**
<https://aws.amazon.com/managed-workflows-for-apache-airflow/resources/>
- **#airflow-aws Slack Channel:**
<https://apache-airflow.slack.com/>

A screenshot of the AWS website's product page for Amazon Managed Workflows for Apache Airflow (MWAA). The page has a light purple header with the AWS logo and navigation links: "Agentic AI", "Discover AWS", "Products", "Solutions", "Pricing", and "Resources". On the right of the header are a search icon, "Sign in to console", and a "Create account" button. Below the header is a white navigation bar with "Amazon Managed Workflows for Apache Airflow" as the active link, followed by "Overview", "Features", "Pricing", "Getting Started", "Resources", and "FAQs". A yellow banner below the navigation bar states: "Amazon Managed Workflows for Apache Airflow is accessible in the next generation of Amazon SageMaker" with a right-pointing arrow. The main heading is "Amazon Managed Workflows for Apache Airflow (MWAA)" in a large, bold, dark font. Below it is the subtext "Secure and highly available managed workflow orchestration for Apache Airflow". A dark blue button with white text says "Get started with Amazon MWAA". Further down, the section "Why Amazon MWAA?" is followed by a paragraph: "Amazon MWAA is a managed service for Apache Airflow that lets you use your current, familiar Apache Airflow platform to orchestrate your workflows. You gain improved scalability, availability, and security without the operational burden of managing underlying infrastructure." To the right of this text is a video player with a colorful abstract background and a play button icon in the bottom left corner.

Thank you!

Krystal Nzeadibe
Knzead@amazon.com

Questions?

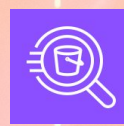
book my show



Amazon MWAA



Amazon EMR



Amazon Athena





















“

Amazon MWAA has made our workload management system scalable as we accomplish our business goals.

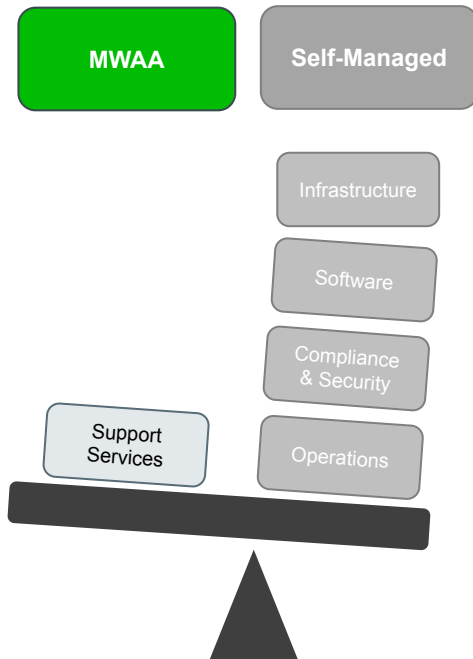
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Michael Bennett
Distinguished Software Engineer

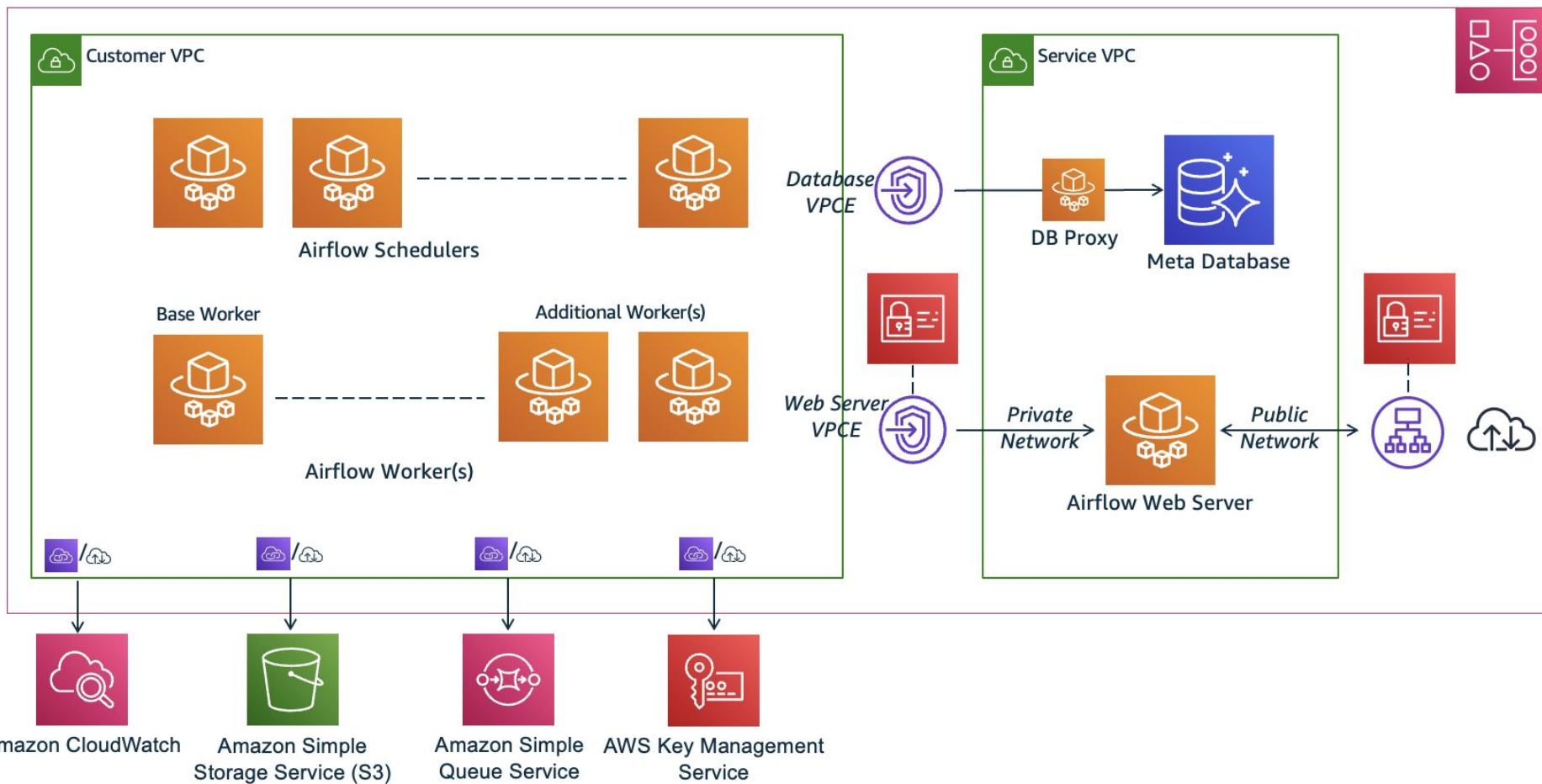
Self-managing Apache Airflow can be tedious

	Self-managed Apache Airflow	Amazon MWAA
Availability	 Manual set up & maintenance of availability	 Multi-AZ w/ automated failover, managed redundancy
Built-in Compliance	 Additional price & effort	 Built-in compliance, automated encryption
Enhanced Security	 Manual configuration of tools & dashboards	 IAM Auth, KMS encryption, VPC network isolation
Monitoring & Observability	 Manual configuration of tools & dashboards	 CloudWatch integration
Enhanced Performance	 Manual set up and maintenance	 Autoscaling, celery executor
Reliability	 Manual patching	 Automated recovery, maintenance, managed upgrades
Setup & Maintenance	 Manual set up and maintenance	 automated upgrades, managed patching
Cost Management	 Prone to overprovisioning	 Pay-as-you-go pricing, AWS billing native integration
Integration Scope	 Manual configuration, custom connectors	 Native AWS integrations & operators
Serverless	 Manual configuration, custom connectors	 Native AWS integrations & operators

Example Workload



Amazon MWAA Architecture



Environment capabilities

	mw1.micro	mw1.small	mw1.medium	mw1.large	mw1.xlarge	mw1.2xlarge
Recommended Workflow Capacity	Up to 25 DAGs	Up to 50 DAGs	Up to 250 DAGs	Up to 1000 DAGs	Up to 2000 DAG	Up to 4000 DAG capacity
Scheduler vCPU	1	1	2	4	8	16
Worker vCPU	1	1	2	4	8	16
Web Server vCPU	1	1	1	2	4	8
Concurrent tasks	3 (by default)	5 (by default)	10 (by default)	20 (by default)	40 (by default)	80 (by default)
RAM	3 GB	2 GB	4 GB	8 GB	24 GB	48 GB