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1. <https://www.astronomer.io/guides/dynamically-generating-dags/>

**Dynamically Generating DAGs in Airflow | Astronomer**

Get to know the best ways to dynamically generate DAGs in Apache Airflow. See examples of how to generate DAGs using single- and multiple-file methods.

1. <https://www.astronomer.io/guides/airflow-passing-data-between-tasks/>

**Passing Data Between Airflow Tasks | Astronomer**

Learn more about the most commonly used methods to implement data sharing between your Airflow tasks, including an in-depth explanation of XCom.

1. <https://www.astronomer.io/guides/task-groups/>

**Using Task Groups in Airflow | Astronomer**

Check out Astronomer’s step-by-step guide on how to use Task Groups to organize tasks within your DAG’s graph view in the Airflow User Interface.

1. <https://www.astronomer.io/guides/airflow-dbt/>

**Integrating Airflow and dbt | Astronomer**

See how to use the dbt Cloud Provider to orchestrate dbt Cloud with Airflow. We walk you through use cases for orchestrating dbt Core via the BashOperator.

1. <https://www.astronomer.io/guides/airflow-branch-operator/>

**Branching in Airflow | Astronomer**

Learn about Airflow’s multiple options for building conditional logic and branching within DAGs, including the BranchPythonOperator and ShortCircuitOperator.

1. <https://www.astronomer.io/guides/scheduling-in-airflow/>

**Scheduling and Timetables in Airflow | Astronomer**

Get to know Airflow scheduling concepts and different ways to schedule a DAG. Learn how timetables in Airflow 2.2 brought new flexibility to scheduling.

1. <https://www.astronomer.io/guides/error-notifications-in-airflow/>

**Error Notifications in Airflow | Astronomer**

Master the basics of Apache Airflow notifications. Find out how to set up automatic email and Slack notifications to be alerted of events in your DAGs.

1. <https://www.astronomer.io/guides/airflow-scaling-workers/>

**Scaling Out Airflow | Astronomer**

See which parameters to modify when scaling up data pipelines to make the most of Airflow. Learn about the environment-, DAG-, and task-level settings.

1. <https://www.astronomer.io/guides/dag-best-practices/>

**DAG Writing Best Practices in Airflow | Astronomer**

Keep up to date with the best practices for developing efficient, secure, and scalable DAGs using Airflow. Learn about DAG design and data orchestration.

1. <https://www.astronomer.io/guides/airflow-sql-tutorial/>

**Using Airflow to Execute SQL | Astronomer**

Learn the best practices for executing SQL from your DAG. Get to know Airflow’s SQL-related operators and see how to use Airflow for common SQL use cases.

1. <https://www.astronomer.io/guides/what-is-an-operator/>

**Operators 101 | Astronomer**

Learn the basics of operators—the building blocks of Airflow DAGs. See an example of how to implement several common operators available in Apache Airflow.

1. <https://www.astronomer.io/guides/what-is-a-sensor/>

**Sensors 101 | Astronomer**

Get an overview of Airflow sensors and see the new sensor-related features Airflow 2 includes. Learn best practices for implementing sensors in production.

1. <https://www.astronomer.io/guides/what-is-a-hook/>

**Hooks 101 | Astronomer**

Learn what hooks are and have a look at general guidelines on using them in Apache Airflow. See an example of implementing two different hooks in a DAG.

1. <https://www.astronomer.io/guides/using-airflow-plugins/>

**Using Apache Airflow Plugins | Astronomer**

Get familiar with Apache Airflow plugins and see how they can help customize your installation. Discover plugin capabilities by looking at some examples.

1. <https://www.astronomer.io/guides/managing-dependencies/>

**Managing Dependencies in Apache Airflow**

Find out how to manage dependencies between tasks and TaskGroups in Apache Airflow, including how to set dynamic dependencies.

1. <https://www.astronomer.io/guides/managing-airflow-code/>

**Managing Airflow Code | Astronomer**

Dive into the Airflow project organization. Learn when to separate out DAGs into multiple projects and how to manage code used across different projects.

1. <https://www.astronomer.io/guides/intro-to-airflow/>

**Introduction to Apache Airflow | Astronomer**

Have a look at our guide to Apache Airflow. Learn how to use Airflow and get to know its core components. Get free access to valuable learning resources.

1. <https://www.astronomer.io/guides/dags/>

**Introduction to Airflow DAGs | Astronomer**

Find out what exactly a directed acyclic graph is and get tips on how to define an Airflow DAG in Python. Learn all about DAG parameters and their settings.

1. <https://www.astronomer.io/guides/connections/>

**Managing Connections in Apache Airflow | Astronomer**

Check out Astronomer's tips on how to set up, manage, and maintain various connections in Apache Airflow. Have a look at example connection configurations.

1. <https://www.astronomer.io/guides/airflow-ui/>

**The Airflow UI | Astronomer**

Explore the possibilities of the Airflow UI—a tool for monitoring and troubleshooting your data pipelines. See some of its key features and visualizations.

1. <https://www.astronomer.io/guides/airflow-components/>

**Airflow's Components | Astronomer**

Get to know the core components of Apache Airflow 2.0+. Understand their functions and find out where to learn more about them.

1. <https://www.astronomer.io/guides/templating/>

**Templating in Airflow | Astronomer**

Learn about Jinja templating in Apache Airflow and see examples of how to pass dynamic information into task instances at runtime.

1. <https://www.astronomer.io/guides/subdags/>

**Using SubDAGs in Airflow | Astronomer**

Find out why we recommend against using SubDAGs in Apache Airflow. Discover alternatives to SubDAGs and get access to resources for their implementation.

1. <https://www.astronomer.io/guides/scripts-bash-operator/>

**Using the BashOperator in Airflow | Astronomer**

Learn how to use the BashOperator to run bash commands and bash scripts. See an example of how to run scripts in other languages than Python.

1. <https://www.astronomer.io/guides/testing-airflow/>

**Testing Airflow DAGs | Astronomer**

Learn about testing Airflow DAGs and gain insight into various types of tests — validation testing, unit testing, and data and pipeline integrity testing.

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1. <https://www.astronomer.io/guides/kubepod-operator/>

**Using the KubernetesPodOperator | Astronomer**

Get to know how to use and configure the KubernetesPodOperator. See an example of how to run the KubernetesPodOperator in a separate cluster.

1. <https://www.astronomer.io/guides/logging/>

**Logging in Airflow | Astronomer**

Learn about logging in Airflow, including how to find logs, add custom task logs, log remotely, and more. Check out our step-by-step logging to S3 example.

1. <https://www.astronomer.io/guides/airflow-talend-integration/>

**Executing Talend Jobs with Airflow | Astronomer**

Get to know the benefits of using Apache Airflow with a popular data management tool—Talend. See a few examples of how Talend and Airflow work together.

1. <https://www.astronomer.io/guides/airflow-database/>

**Understanding the Airflow Metadata Database | Astronomer**

Find out why a healthy metadata database is critical for your Airflow environment. Learn metadata database best practices and methods for retrieving data.

1. <https://www.astronomer.io/guides/airflow-great-expectations/>

**Integrating Airflow and Great Expectations | Astronomer**

Learn how to integrate Great Expectations with Airflow to implement data quality checks. Find out how to configure the GreatExpectationsOperator.

1. <https://www.astronomer.io/guides/airflow-azure-data-factory-integration/>

**Executing Azure Data Factory Pipelines with Airflow**

Learn how Azure Data Factory can be used in combination with Apache Airflow. See an example of how to orchestrate multiple ADF pipelines with Airflow.

1. <https://www.astronomer.io/guides/airflow-azure-container-instances/>

**Orchestrating Azure Container Instances with Airflow**

Find out more about the easiest method for orchestrating an Azure Container Instance (ACI) with Apache Airflow and have a look at an example DAG.

1. <https://www.astronomer.io/guides/airflow-kedro/>

**Deploying Kedro Pipelines to Airflow | Astronomer**

Learn how to translate a Kedro pipeline into a clean, legible Airflow DAG with one command. See how the kedro-airflow plugin improves developer experience.

1. <https://www.astronomer.io/guides/airflow-databricks/>

**Orchestrating Databricks Jobs with Airflow | Astronomer**

Find out how Databricks and Apache Airflow can work together seamlessly. See an example DAG showing how to submit and run a Spark Job in Databricks.

1. <https://www.astronomer.io/guides/custom-xcom-backends/>

**Custom XCom Backends | Astronomer**

Explore the benefits of a custom XCom backend. Learn how to implement an XCom backend with S3 and how to set this up if you’re running Airflow on Astro.

1. <https://www.astronomer.io/guides/airflow-azure-data-explorer/>

**Executing Azure Data Explorer Queries with Airflow**

Find out how to make your Azure Data Explorer cluster work with Apache Airflow. See an example DAG that runs a query against a database in that cluster.

**Effortless Data Ecosystem Integrations with Astro**

Find out how to seamlessly integrate your data ecosystem using Astro — the fully managed data orchestration service powered by Apache Airflow.