

Pipelines hands-on workshop





Microsoft Azure DevOps

The Overview

Introducing Azure DevOps



Azure
Boards

Plan, track, and discuss work across teams, deliver value to your users faster.



Azure
Repos

Unlimited cloud-hosted private Git repos. Collaborative pull requests, advanced file management, and more.



Azure
Pipelines

CI/CD that works with any language, platform, and cloud. Connect to GitHub or any Git provider and deploy continuously to any cloud.



Azure
Test Plans

The test management and exploratory testing toolkit that lets you ship with confidence.

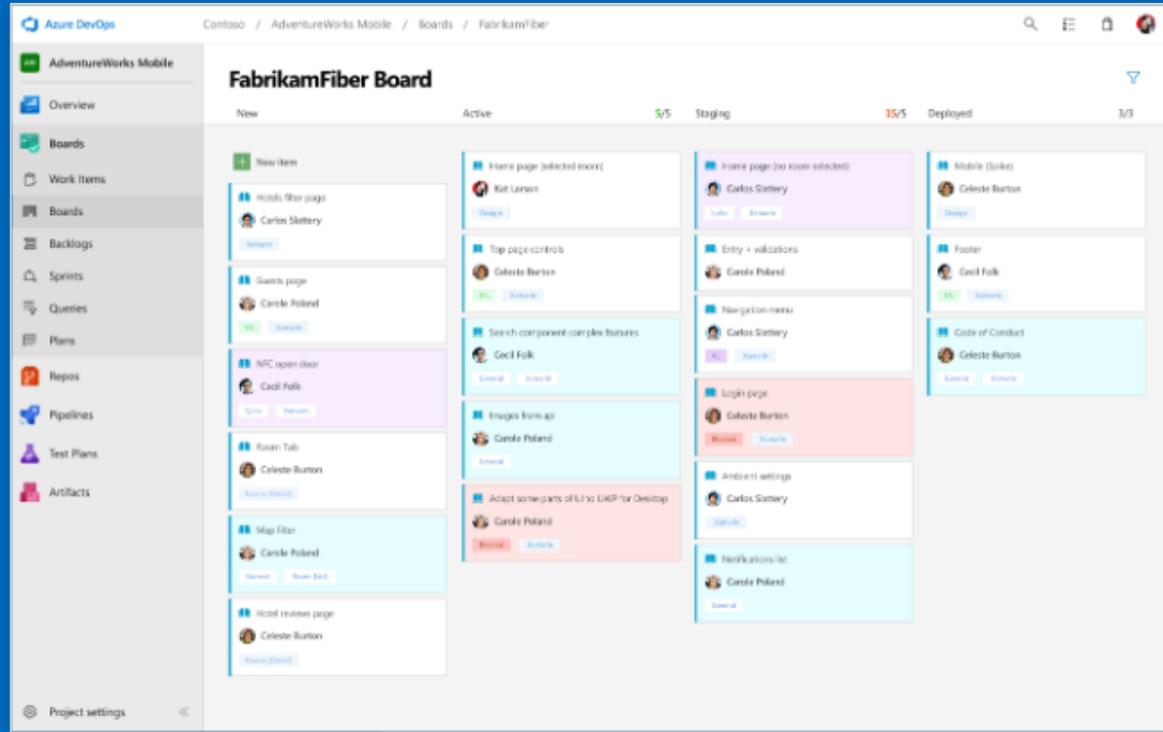


Azure
Artifacts

Create, host, and share packages. Easily add artifacts to CI/CD pipelines.



Azure Boards



Connecting ideas to releases

Scrum ready to help your teams run sprints, stand-ups, and plan work

Integrated with GitHub commits and pull requests

Insights into project status and health



Azure Repos

A screenshot of the Azure DevOps web interface showing the 'Pull requests' page for the 'AdventureWorks Mobile' repository. The page is titled 'Pull requests' and has a navigation bar with 'Mine', 'Active', 'Completed', and 'Abandoned' tabs. A search bar is present with the text 'Filter by keyword or ID'. Below this, there are sections for pull requests categorized by 'Created by me', 'Assigned to me', and 'Assigned to my team'. Each pull request entry includes a title, the requester's name, the target branch, and a status indicator (e.g., 'new pull request', 'update').

AdventureWorks Mobile

Overview

Boards

Repos

Files

Commits

Pushes

Branches

Tags

Pull requests

Pipelines

Test Plans

Artifacts

Project settings

Pull requests

New Pull Request

Mine Active Completed Abandoned

Filter by keyword or ID

Created by

Created by me

- Initialize client with .client.ini
Kat Larsson requested #230 into master
3 minutes ago
1 vote
- Testing configuration settings
Kat Larsson requested #230 into features/config
1 hour ago

Assigned to me

- Check returned identity for null status
Cabin Bainger requested #232 into master
15 minutes ago
new pull request
- [WIP] Add tests for deployment mapping
Robin Counts requested #227 into master
1/9/2018
1 update, 2 others

Assigned to my team

- Add exception on disconnect
Cabin Bainger requested #243 into master
2 minutes ago
new pull request
- Maintain structure when converting isomorphs
Robin Counts requested #234 into master
15 minutes ago
- Hotfix payload to releases/99
Robin Counts requested #207 into releases/99
30 minutes ago
2 updates

Private Git and TFVC repos for your teams

Code review via branch pull requests

Branch policies and build validation

Easy migration path to / from GitHub



A screenshot of the Azure DevOps web interface. The top navigation bar shows "Azure DevOps" and the path "Contoso / AdventureWorks Mobile / Pipelines / Builds / 10382". The main header displays the pipeline name "Enabling feature flags for Preview Attachment and Grid Views" and the repository "AdventureWorks/PackageFramework" on the "master" branch at commit "#889". A "Release" button is visible in the top right. The left sidebar contains navigation options: "AdventureWorks", "Overview", "Pipelines", "Builds", "Releases", "Library", and "Deployment groups". The main content area shows a summary of the build jobs: "Windows Job" (Running, 1m 53s), "Linux Job" (Running, 3m 26s), and "macOS Job" (Running, 3m 07s). The "Linux Job" is selected, showing its details: "Agent: Hosted Linux", "Started: Sep 5 at 11:12am", and "3m 29s". A list of steps is shown: "Prepare job" (<1s), "Initialize job" (1s), "Get sources" (24s), "Cmdline" (28s), "Nodetest" (3s), and "Install dependencies" (2m 31s). The "Install dependencies" step is expanded to show a terminal log with commands like "yarn install v1.7.0", "node build/npm/preinstall.js", and "npm run compile".

Cloud-hosted pipelines for Linux, macOS and Windows

Native support for containers and Kubernetes

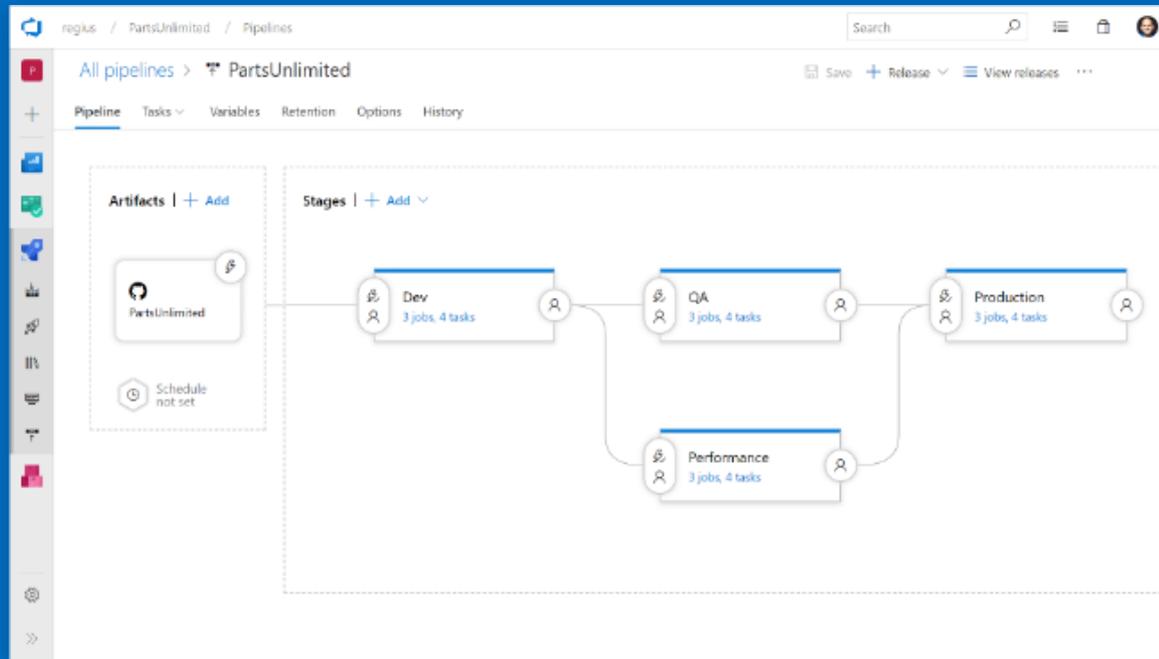
Any language, any platform, any cloud

Best-in-class for open source





Azure Pipelines



Deploy to on-premises, ANY cloud or a hybrid of cloud and on-prem

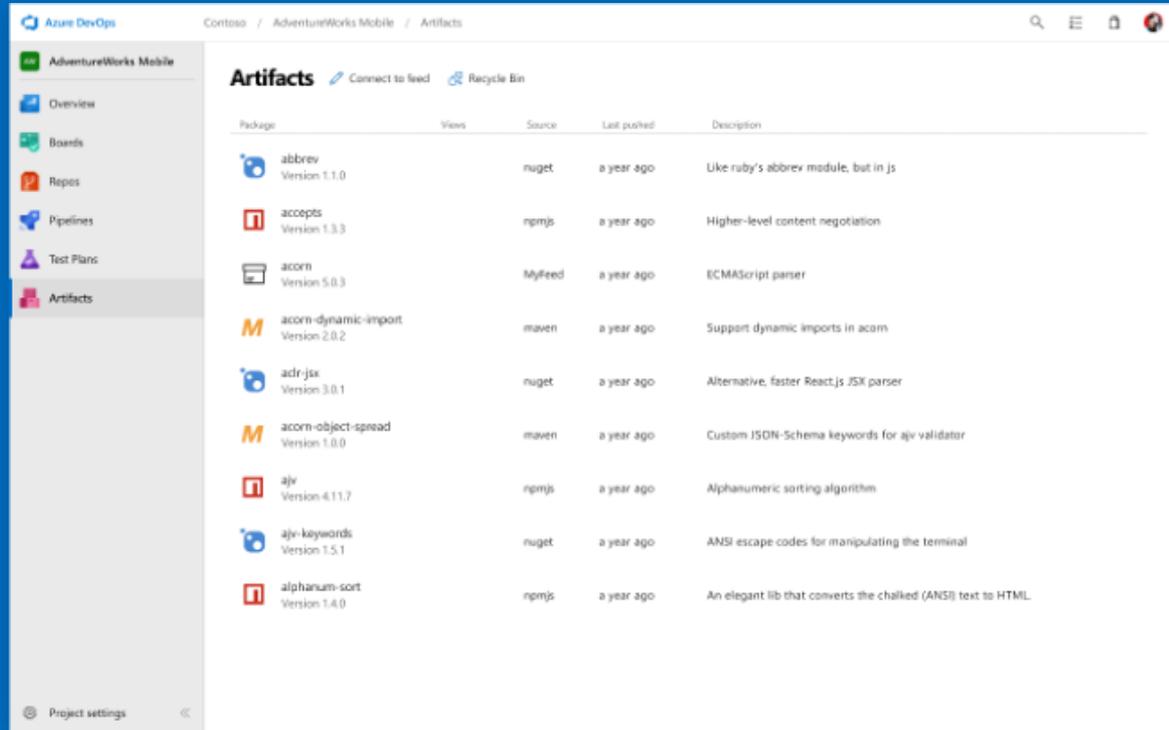
Pre and post deployment approvals with gates to automate approval based on conditions

Staged environment releases





Azure Artifacts



Share code efficiently

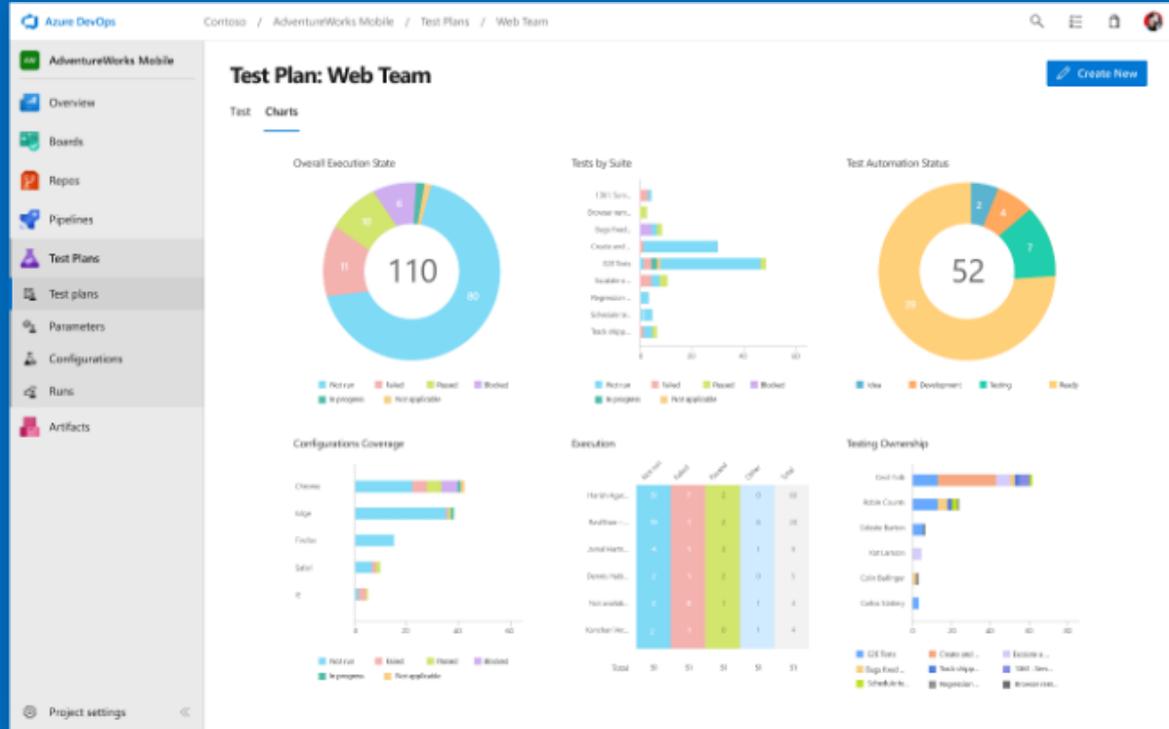
Aggregate from public registries and internal teams

Keep your Maven, npm, NuGet and Python packages and more in the same place

Publish and track from any pipeline



Azure Test Plans



Run tests and log defects from your browser

Capture rich data for reproducibility

Track and assess quality throughout your lifecycle

Create tests directly from exploratory sessions

Github Issues vs. Azure Boards

Github Issues

Simple issue tracking co-located with code stored in GitHub

Developer friendly interface

Labelling features to quickly filter lists of work

Issue alerting integrated with-in GitHub UI and visible in developer's workflow on GitHub

Quick search capabilities

Azure Boards

Easy to use agile tooling including backlogs, Kanban boards & delivery plans

Powerful querying and reporting capabilities

Scale to the largest of teams

Available as a stand-alone service suitable for stakeholders and PMO

Integration between Azure Boards and GitHub Issues

Github Code vs. Azure Repos

Github Code

Familiar toolset

Much loved brand & conversation starter with developers

Easy collaboration with people outside the company & open source

Fantastic forking and PR workflow
(leading inner-source and open-source workflows)

Azure Repos

Integration with AAD

Supports larger repos and larger teams

Has support for Git and TFVC

Wide support for Data-Sovereignty requirements

Existing customers, no need to change and migration path will be well supported in the future.

Github Actions vs. Azure Pipelines

GitHub Actions

Automation across a number of activities including issues, pull requests, pushes and commits

Lightweight serverless automation capabilities with limited logging

Pre-build automation workflows and actions (such as performing an action when a comment is left on an issue)

Limited run time & concurrency (58m, 2 concurrent actions)

Powerful graphical editor built into directly into GitHub UI

Azure Pipelines

Dedicated CI/CD service with support for unlimited numbers of concurrent jobs

Detailed build reporting including integration with unit testing and code coverage

Choice of Linux, Windows and Mac for hosted builds & ability to self-host hardware

Deployment options to on-premises, Azure, AWS and GCP (Windows, Mac and Linux)

Rich deployment approvals, UI, traceability, monitoring and logging

skaylink
former BTT Cloud

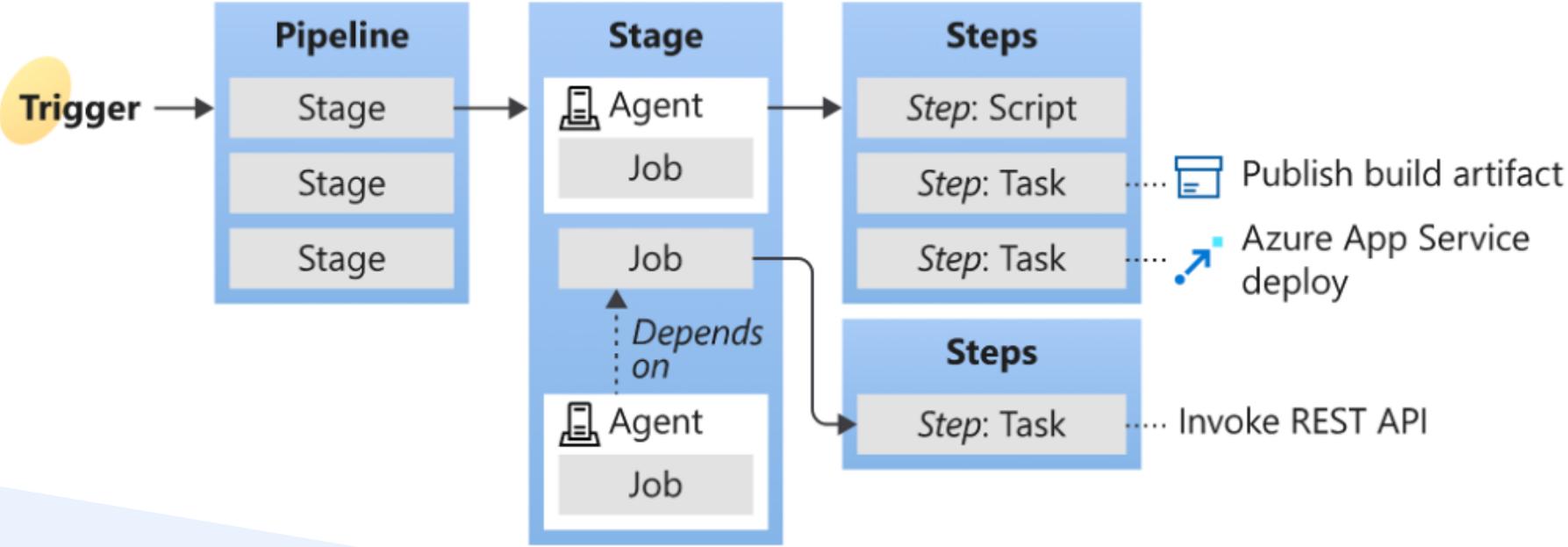


Microsoft Azure DevOps



Azure Pipelines

Key concepts



Repositories

Azure Pipelines (YAML)

- Azure Repos Git
- Github
- Bitbucket Cloud

Azure Pipelines (classic editor)

- Azure Repos Git
- Github
- Bitbucket Cloud
- Bitbucket Server
- Subversion

Extensions

Search Azure DevOps extensions

1370 Results

Showing: Azure Pipelines - Hosted On: Any - Price: Any - Certification: Any - Sort By: Installs -

 SARIF SAST Scans Task Microsoft DevLabs · 141K Add a 'Scan' tab to each Build Result and Work Item for viewing associated SARIF.	 Replace Tokens Guillaume Rochoux · 69K Task to replace tokens in files.	 SonarQube SonarSource · 81.2K Detect bugs, vulnerabilities and code smells across project branches and pull...	 ARM Outputs Koo Schöfart · 51.7K This extension reads the output values of an ARM deployment and sets them a...	 Terraform Microsoft DevLabs · 48.4K Install terraform and run terraform commands to manage resources on Azur...	 SonarCloud SonarSource · 42.7K Detect bugs, vulnerabilities and code smells across project branches and pull...
 Cattight Cattight · 42.8K Build & link status notifications in your tray.	 Team Project Health Microsoft DevLabs · 37K Enable users to visualize the overall health of builds, delivering a visual cue simila...	 IIS Web App Deploy Microsoft · 31.3K Using WebRM connect to the host Computer, to deploy a Web project using Web...	 AWS Toolkit for Azure Amazon Web Services · 35.1K Tasks for Amazon S3, AWS Elastic Beanstalk, AWS CodeDeploy, AWS Lambda...	 Kubernetes extension Tugayr Isik · 35.1K Kubernetes extension with lib endpoint. Which enable kubectl, helm, and istioct...	 Release Management Microsoft DevLabs · 33.8K Utility tasks for Release Management.

← Terraform ⓘ

Provider * ⓘ
azure/arm

Command * ⓘ
init

Configuration directory ⓘ
\$(System.DefaultWorkingDirectory)

Additional command arguments ⓘ

AzureRM backend configuration ^

Azure subscription * ⓘ

Resource group * ⓘ

Storage account * ⓘ

Container * ⓘ

Key * ⓘ

← AWS Lambda Deploy Function ⓘ

AWS Credentials ⓘ

AWS Region ⓘ

Deployment Mode * ⓘ
 Update code only
 Update code and configuration (or create a new function)

Function Name * ⓘ

Code Location * ⓘ
 Zip file in the work area
 Zip file in Amazon S3

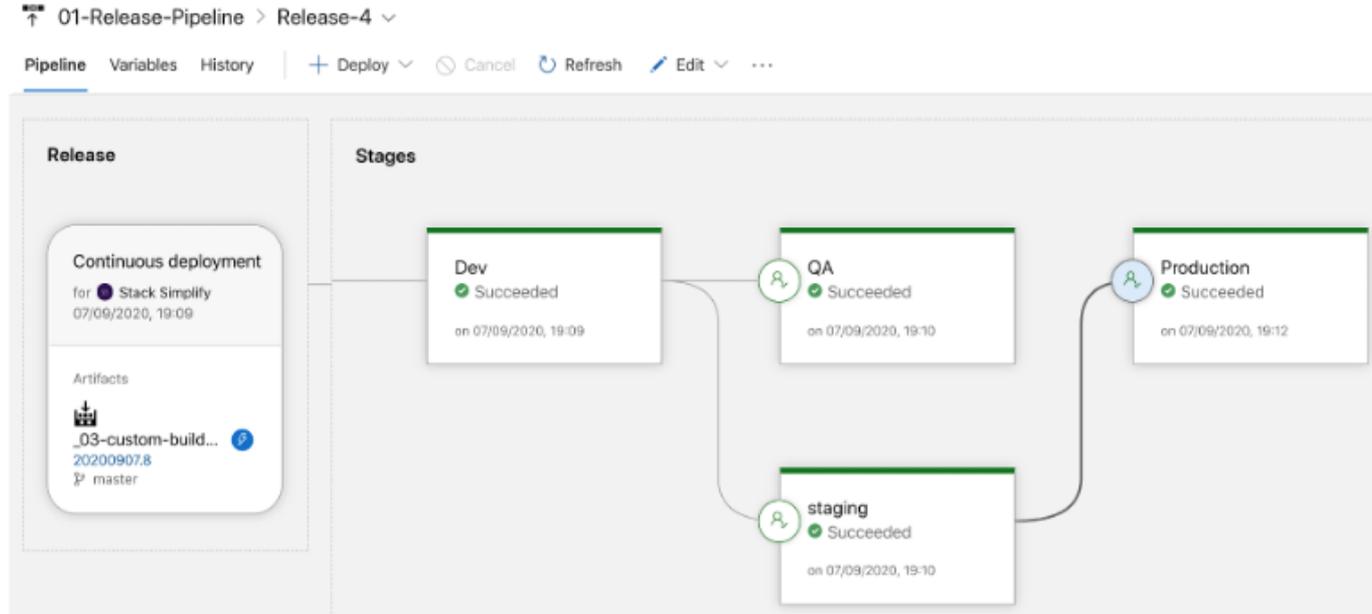
Zip File Path ⓘ

Publish

Output

Diagnostic

Azure Release Pipelines



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Microsoft Azure DevOps

More

<https://azuredevops.skaylink.lt>