Microsoft Azure

Azure Container Offers for Kubernetes Apps
Technical Overview

A Mastering the Marketplace Video
https://aka.ms/MasteringTheMarketplace

Microsoft Azure

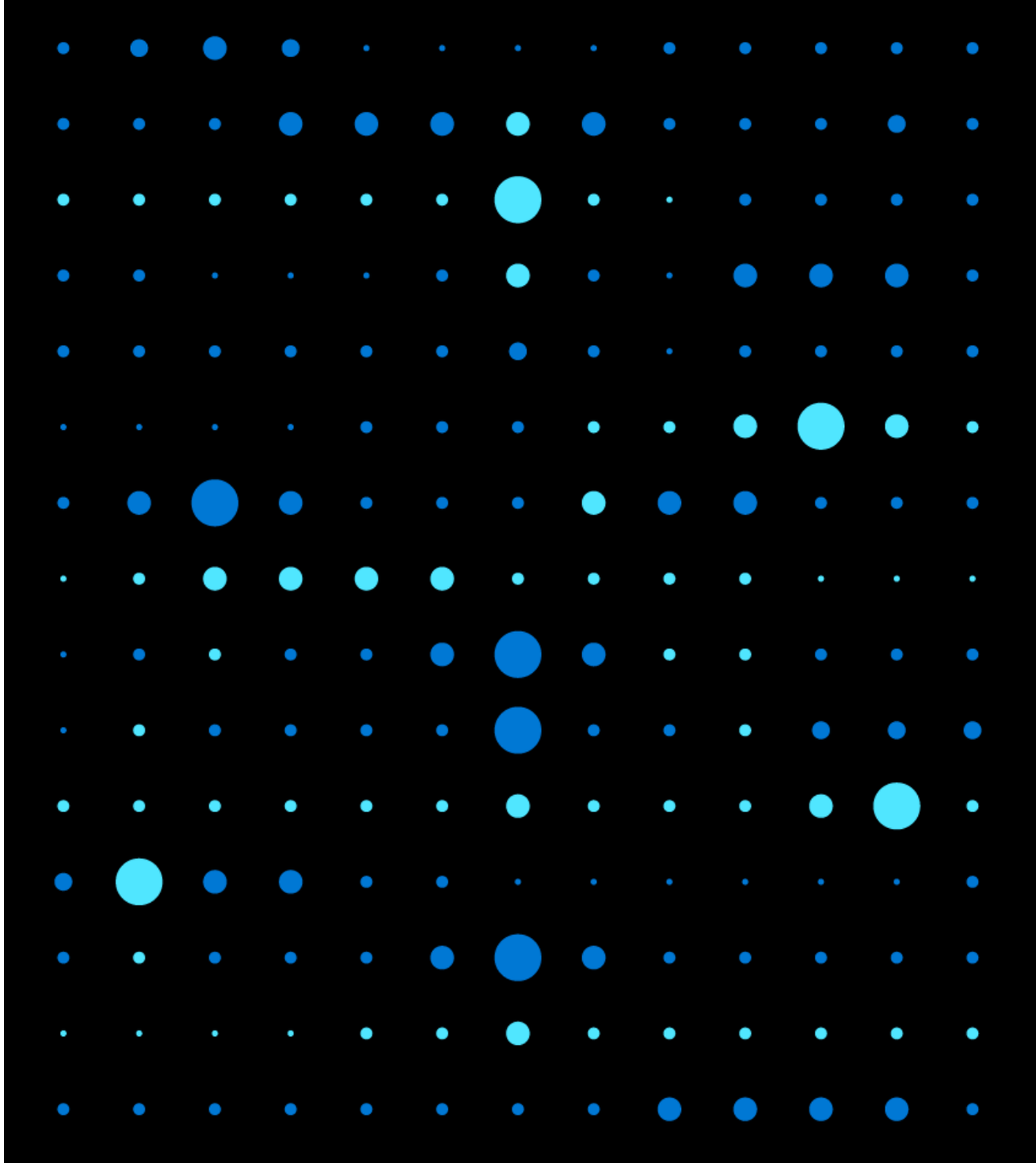
Agenda

Development lifecycle

Packaging artifacts

About CNAB bundles

Deployment model



Development lifecycle

Container offer development lifecycle

Create custom image(s)

Contains your solution

Helm chart & manifest

Solution packaging files

UX definition & ARM

For the deployment experience

Package using CNAB

Package your container(s) into CNAB bundle

Upload to ACR

Upload the CNAB to your ACR

Partner Center

Reference CNAB image in Partner Center

About CNAB bundles

Cloud Native Application Bundle (CNAB)

A simple way to install software on Kubernetes (or other runtimes)

An Open-Source package format specification for bundling and installing distributed applications

CNAB advantages

Cloud agnostic

Deliver apps across boundaries

Signed & secure

A cross-cloud and cross-platform packaging standard

Container Package App tool

Provided in the following image
mcr.microsoft.com/container-package-app

Hosts the `cpa` command-line tool
- **Azure Kubernetes CNAB Packaging Application**
- **Usage:** `cpa buildbundle`

Creates and uploads a CNAB bundle to ACR

Depends on `manifest.yaml`

Required for Microsoft commercial marketplace Container offers

Packaging the artifacts

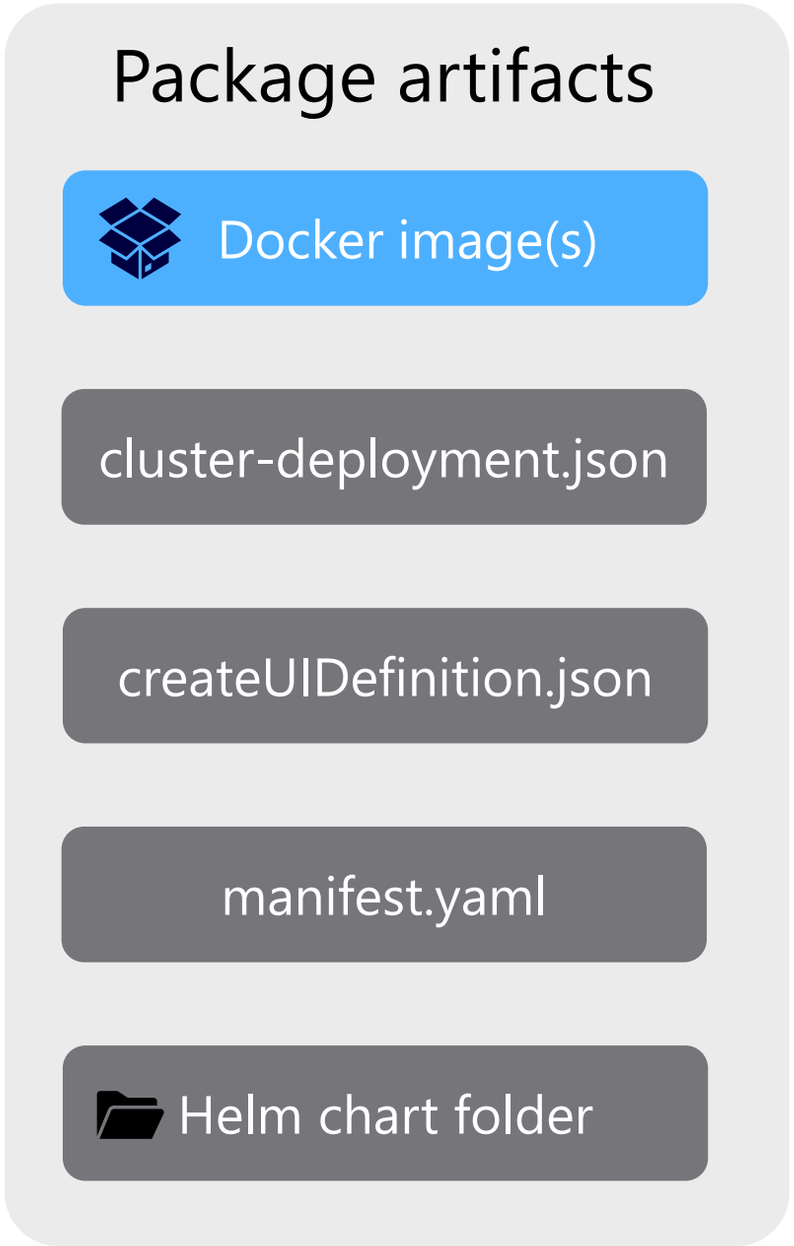
Package artifacts

- Docker image(s)
- cluster-deployment.json
- createUIDefinition.json
- manifest.yaml
- Helm chart folder

Microsoft CNAB bundler container

`mcr.microsoft.com/container-package-app`

CNAB bundle (image)



Docker images

One or more images for your solution

Holds your proprietary application code

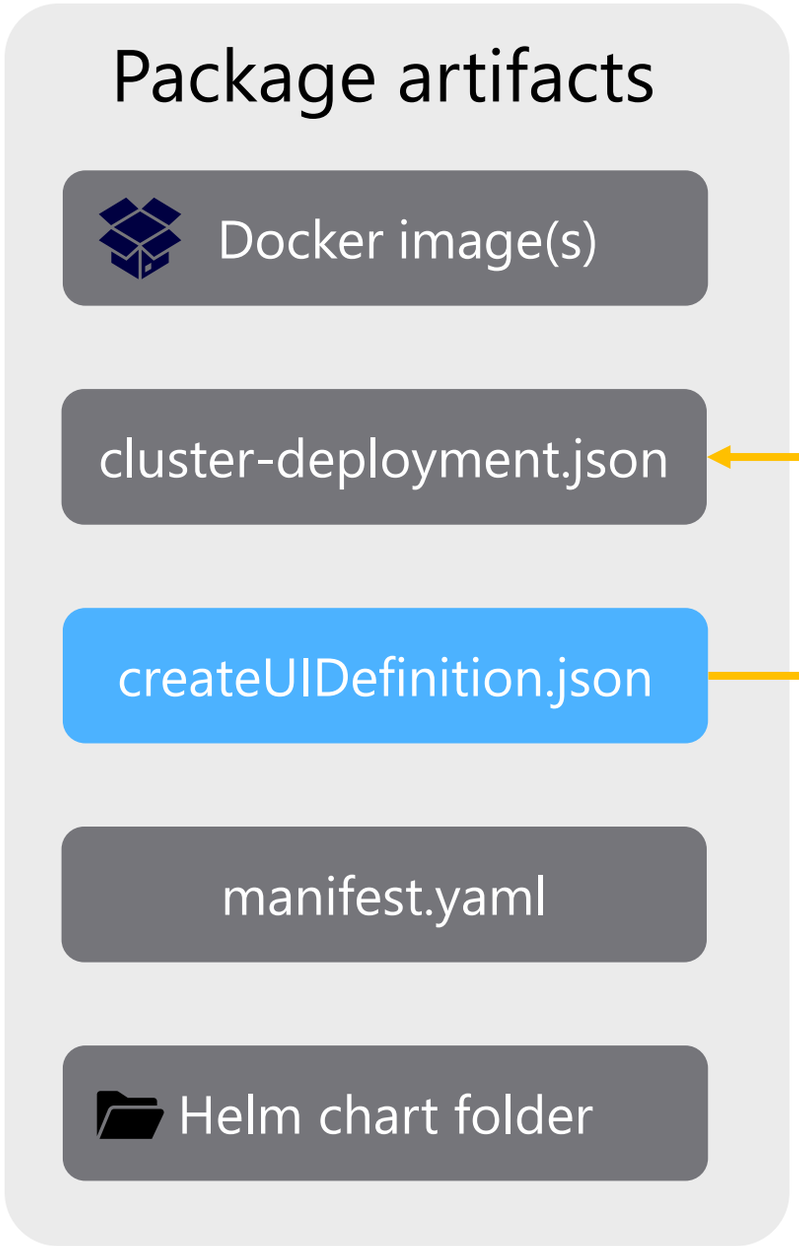
Uploaded to your own ACR

cluster-deployment.json

An ARM template

Deploy Azure resources in addition to your containers

Infrastructure as code



createUIDefinition.json

Defines the installation experience for the customer

Similar to a “wizard” for installing the offer

Choose from many components to build the experience

Provides parameters to `cluster-deployment.json`

Package artifacts


Docker image(s)

cluster-deployment.json

createUIDefinition.json

manifest.yaml


Helm chart folder

manifest.yaml

Describes the package

Points to other artifact locations

Required by the CNAB bundling tool

Uses semantic versioning to version the CNAB

Helm chart

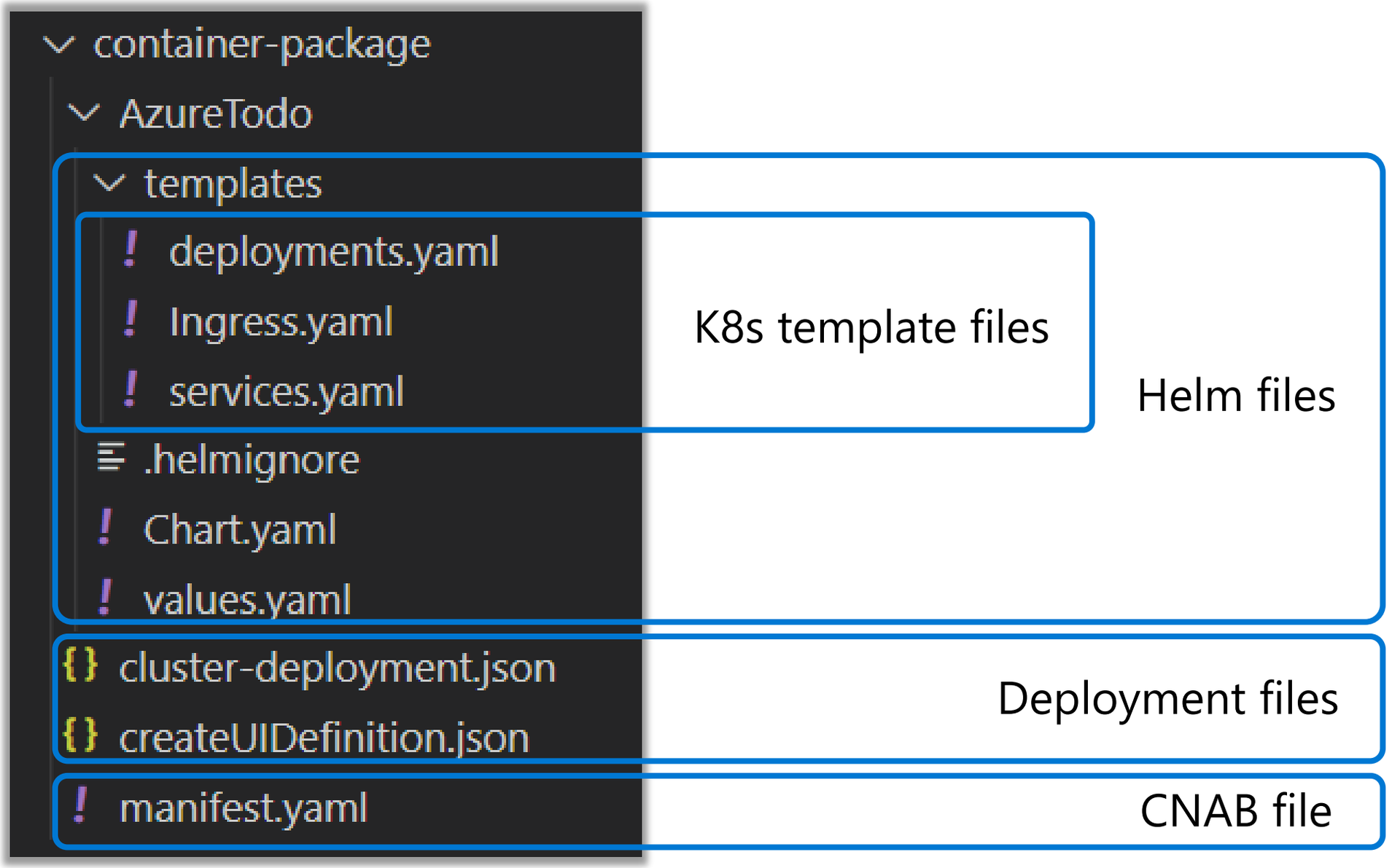
Deployment package for Kubernetes

Helm chart consists of the following

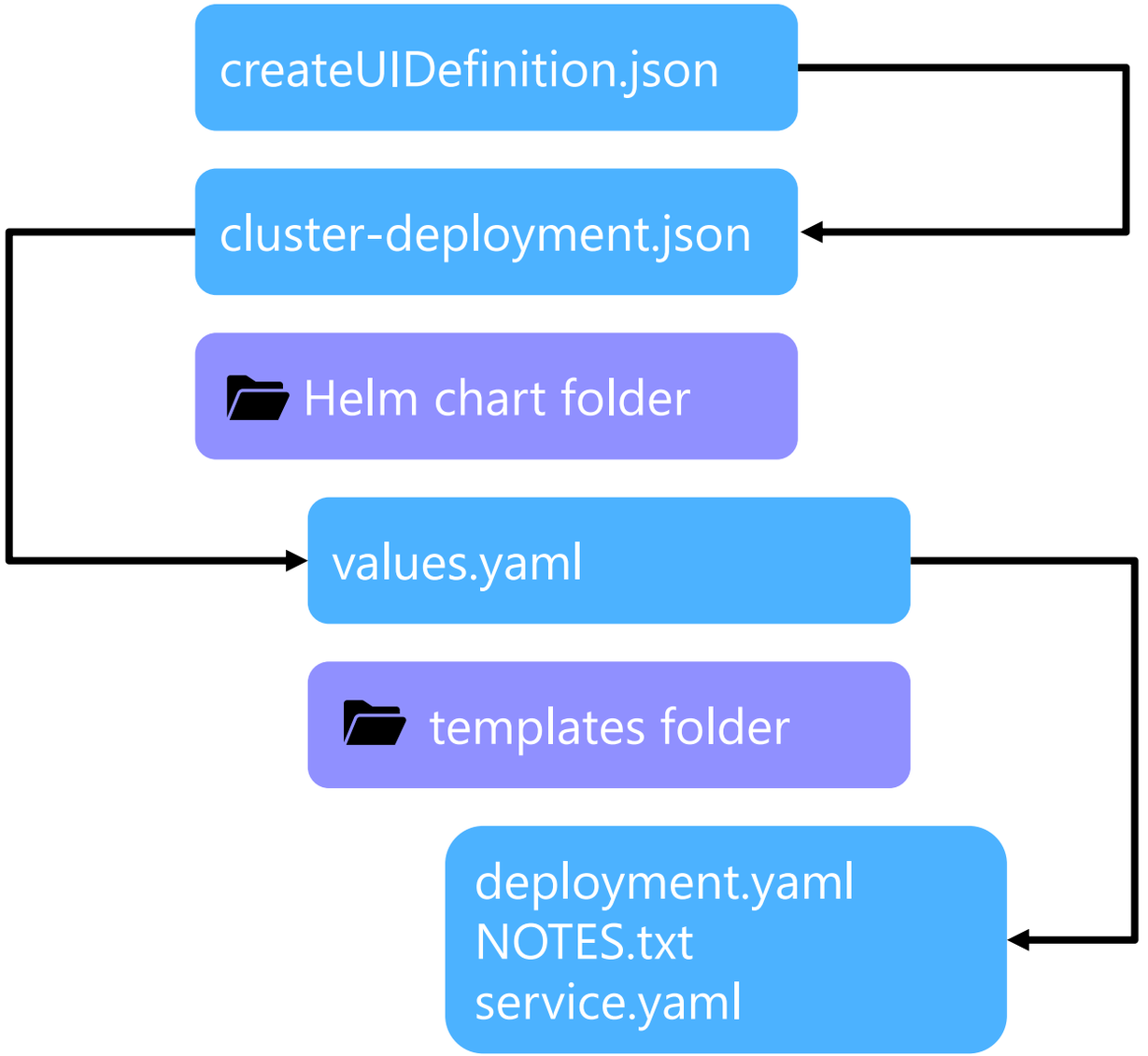
- Chart.yaml
- values.yaml
- templates folder *

* Templates folder contains K8s deployment files

An example solution

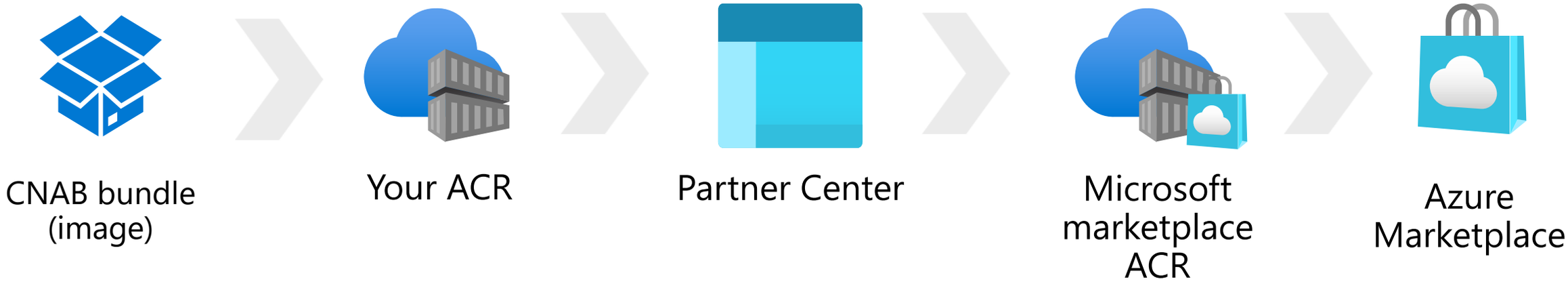


Collecting and passing values



Deployment the final product

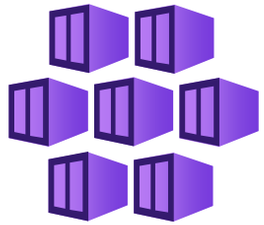
Deploying the CNAB image to the marketplace



The customer purchasing the product

Azure Marketplace

Microsoft marketplace ACR



Customer K8s cluster

(New or existing)

Microsoft Azure

Summary

Development lifecycle

CNAB bundle anatomy

Packaging files

Deployment model