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Docker and Your Continuous Delivery Pipeline in VSTS

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Overview

Understanding Containerized Builds

Configuring Build Agents to Build Containers

Deploying Your Containers Using The Release Pipeline

Pushing Images to Azure Container Registry or Dockerhub

Understanding Containerized Builds

Demo

Running a Build in VSTS

Setting up The Build

Use Docker Task

Use the Yaml and Docker files in the project

Use build variable to switch between files

When image is ready, you push to a registry

Use the correct tags

Match the Container Target OS

Docker images need to be created on the correct Host OS

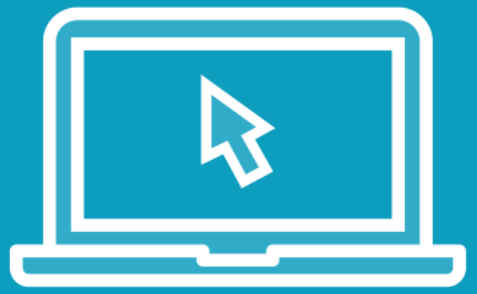
Windows on windows host

Linux on Linux Host

Alternative, set up a hosted Docker instance

Not on the build agent itself

Demo



Set Up a VSTS build for Your Containers

Understanding Tags

Tags denote a version of your container

Latest is used to denote latest published version

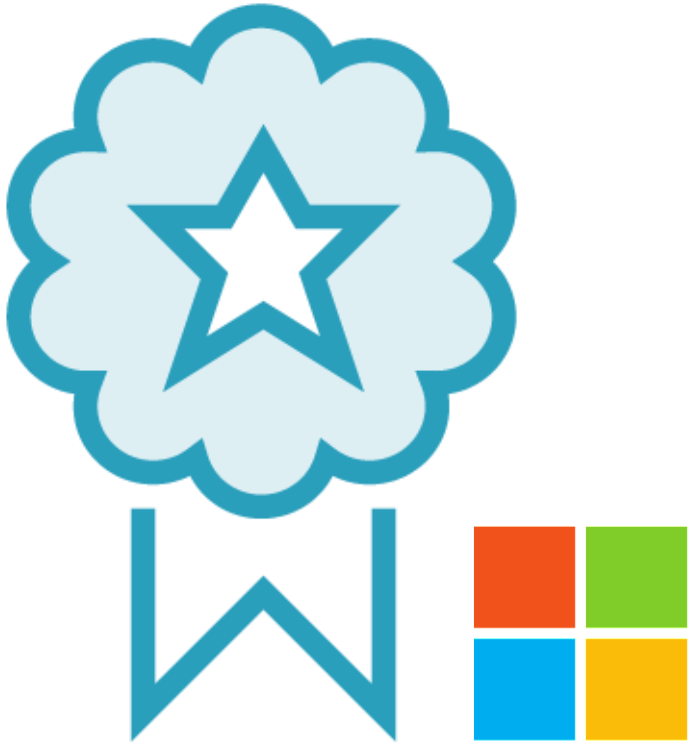
Caveat is the local cache on your machine

When newer latest is available remote, cache is still used

Need to force versions

Make tags always an ever increasing number

How Microsoft Tags Images



Microsoft uses tags also to switch between platforms

E.g. microsoft/aspnetcore

Tags:

1.1.1, latest

1.1.1-nanoserver

Configuring Build Agents to Build Containers

Hosted Builds v.s. Custom Agents

Hosted agent is fully managed by Microsoft
pay per use (build minutes)

Private agent, you own and manage
Pay per agent / month

Use Private agent when
Need access to your local network
Need software not on hosted agent

Configure Custom Agent

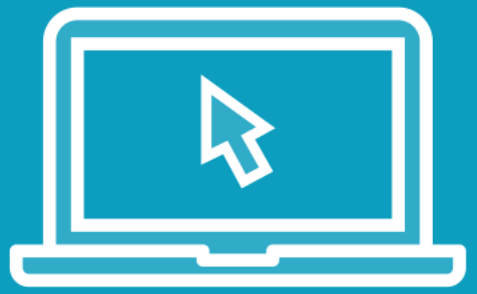
Download from VSTS portal latest version

Unzip and Configure

Use interactive agent when running UI tests

Ensure we have Docker available

Demo



Setup a Custom build Agent

Deploying Your Containers Using the Release Pipeline

What is a Release Pipeline

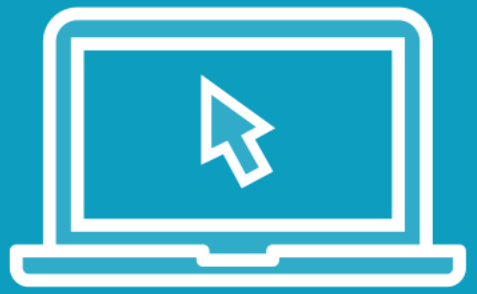
The steps to orchestrate a release

Can be configured in VSTS Release Management

Use same task like approach as in the build

Per environment a set of tasks

Demo



Deploy Your Containers to a Container Host

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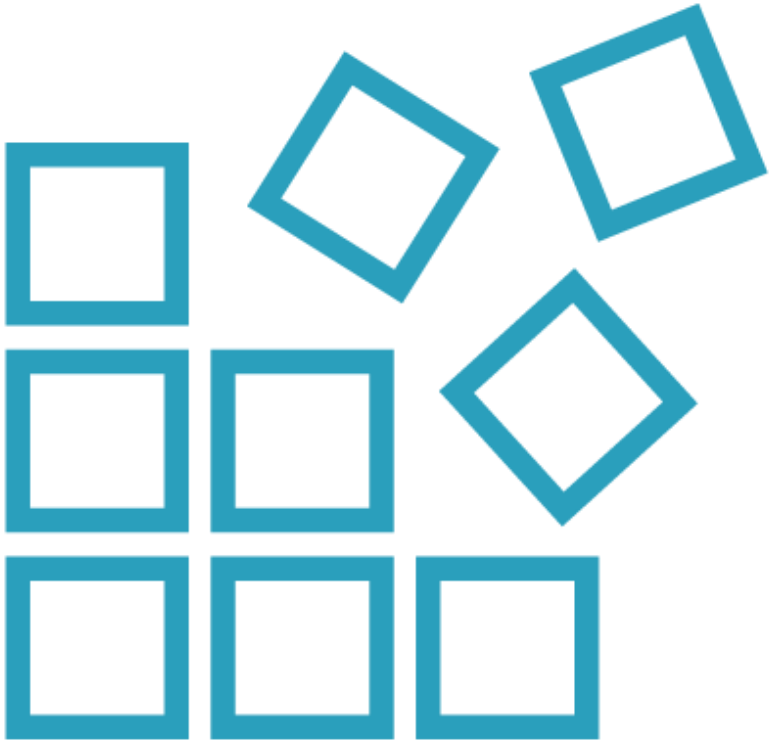
Pushing Images to Azure Container Registry or Dockerhub

Container Registries



A registry stores your container images

You pull containers from a registry

E.g. your base images come from dockerhub

You can host your own registry

You can use a Cloud Registry

AWS, Google, Azure

Pick one that is closest to your deploy target

Demo

Create and use an Azure Container Registry

Summary

- Using VSTS to Build and Deploy Your Solution
- Understanding Containerized Builds
- Configuring Build Agents to Build Containers
- Deploying Your Containers Using The Release Pipeline
- Pushing Images to Azure Container Registry or Dockerhub