
AWS
re:Invent

CMP209

Quickly containerize .NET & Java applications with AWS App2Container

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AWS

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Agenda

Why you should containerize your applications

What is AWS App2Container?

When should I use App2Container?

Show it



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Why you should containerize your applications



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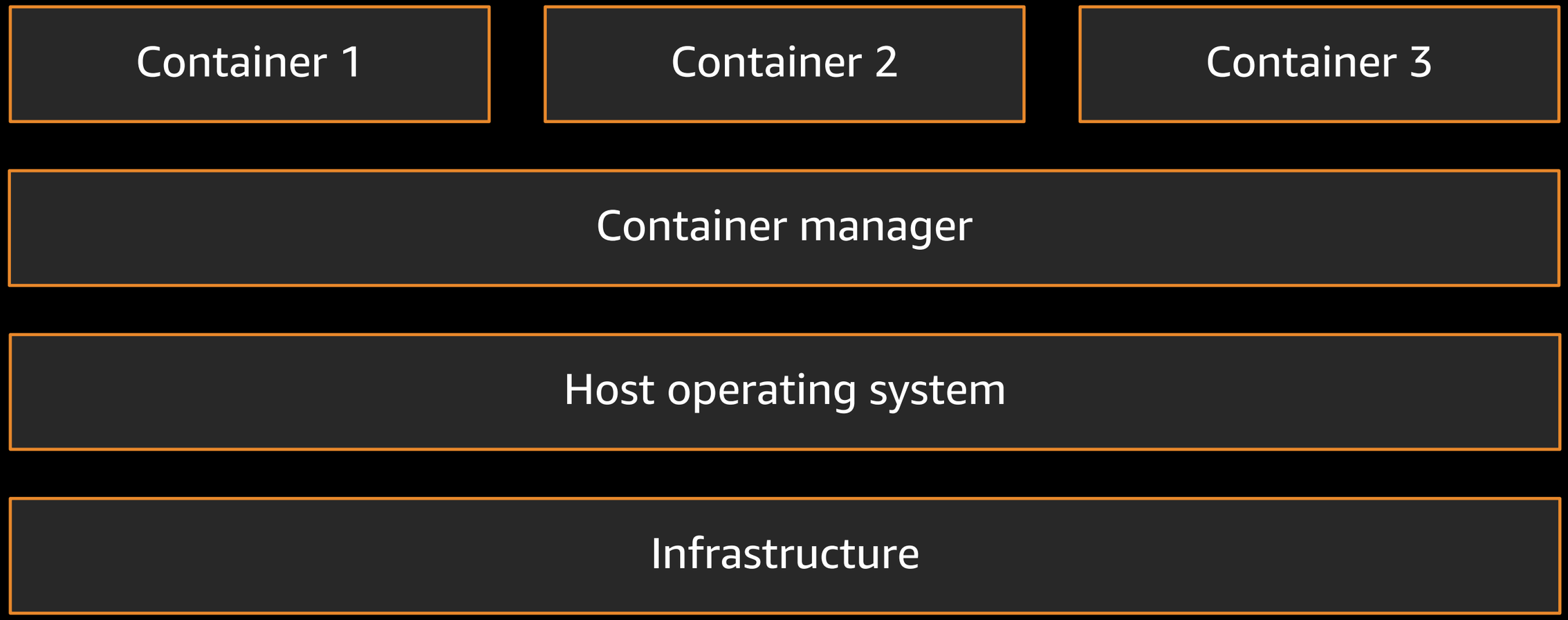
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Containers

- A container consists of an entire runtime environment: an application, plus all required libraries and other binaries, and configuration files needed to run it, bundled into one package

- Each container shares the operating system kernel, which is in a “read-only” mode, with any other containers on the server

Containers


Container 1
Container 2
Container 3
Container manager
Host operating system
Infrastructure

Why you should containerize your app



Less overhead



Run the same, regardless of server



Scalability



Support for agile development and DevOps

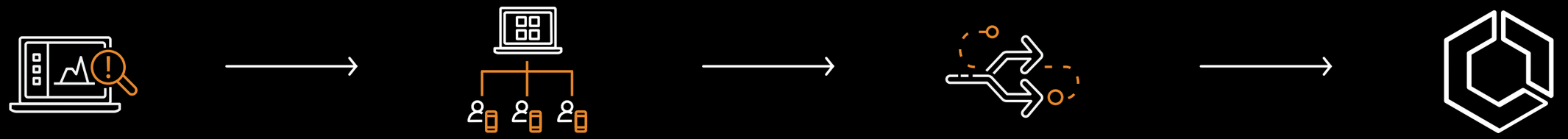
What is AWS App2Container, and when would I use it?



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AWS App2Container

- A command-line tool for modernizing .NET and Java applications into containerized applications
- Works on server running the application without needing access to source code



Discover and analyze

Create application inventory and analyze runtime dependencies

Extract and containerize

Extract application with dependencies and create a Docker image

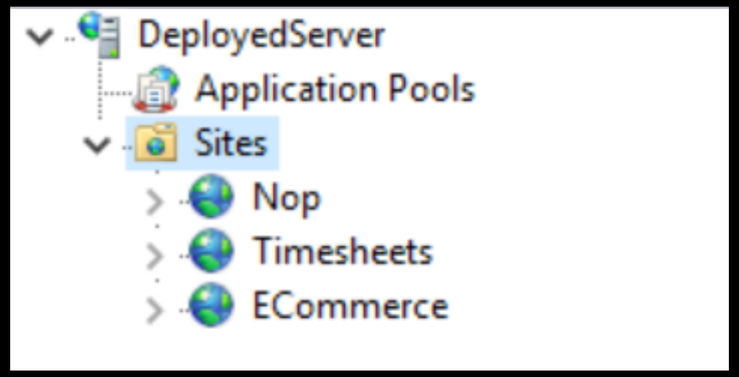
Create deployment artifacts

Generate the Amazon ECS task and Kubernetes pod definitions and create CI/CD pipelines

Deploy to AWS Cloud

Store image in Amazon ECR and deploy to Amazon ECS and Amazon EKS

AWS App2Container




```
PS C:\WINDOWS\system32> app2container inventory
{
                "iis-ecommerce-8194d001": {
                                "siteName": "ECommerce",
                                "bindings": "http/*:80:",
                                "applicationType": "iis",
                                "discoveredWebApps": []
                },
                "iis-nop-e2fc46fe": {
                                "siteName": "Nop",
                                "bindings": "http/*:80:commerce.ourcompany.com",
                                "applicationType": "iis",
                                "discoveredWebApps": []
                },
                "iis-timesheets-cc16b2df": {
                                "siteName": "Timesheets",
                                "bindings": "http/*:80:timesheets.ourcompany.com",
                                "applicationType": "iis",
                                "discoveredWebApps": []
                }
}
```

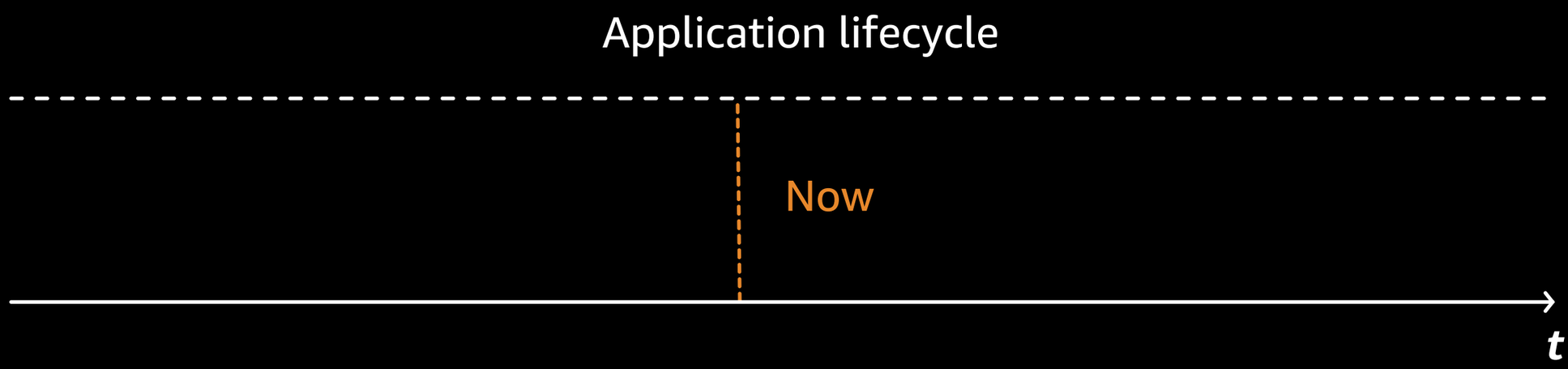
When would I use it?

You have one or more applications that:

- → Are already deployed and running on a server
- → Are regularly used but may not be actively maintained
- → May not already be in a CI/CD pipeline
- → Are not deliberately redundant or scalable

When would I use it?

Your application is already deployed and running on a server and you want to continue running it



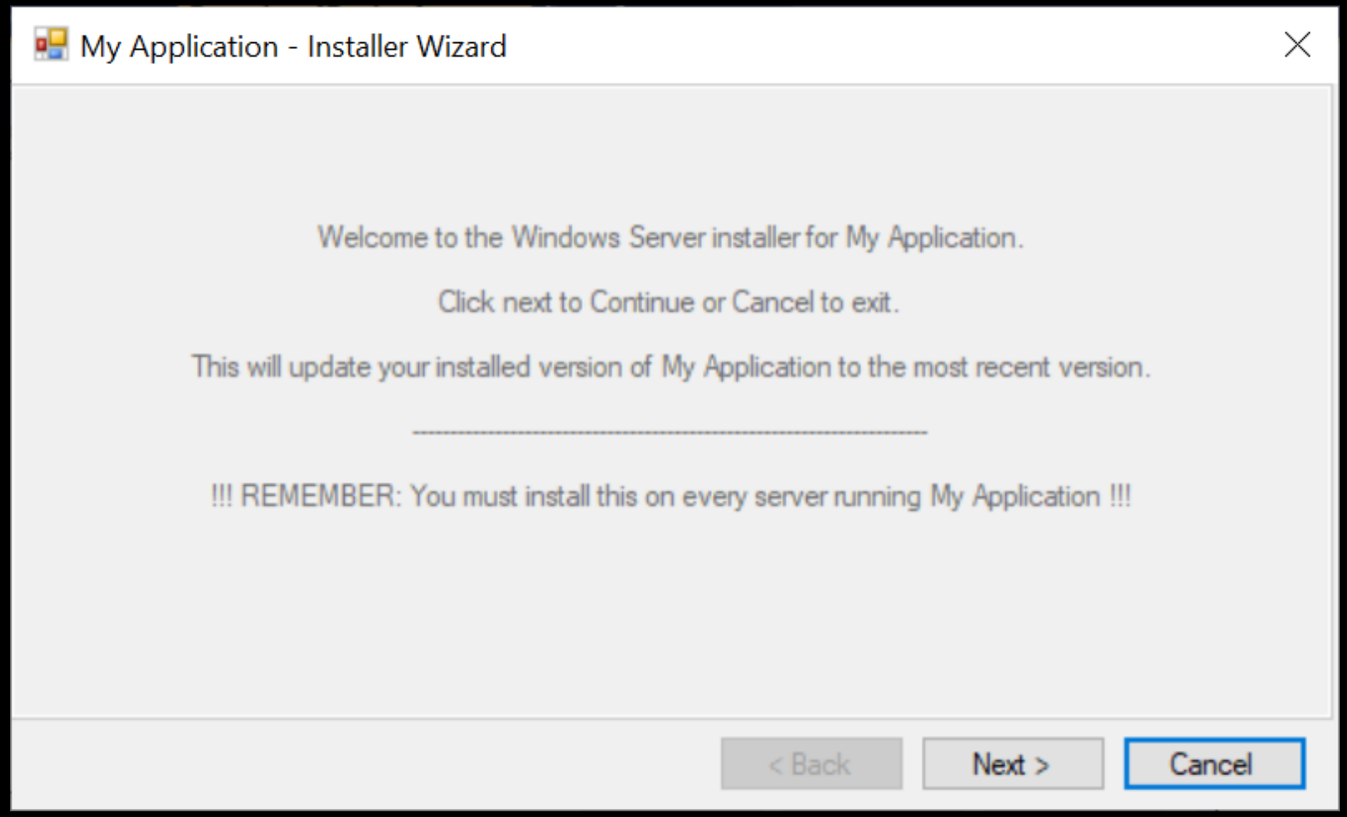
When would I use it?

Your application is regularly used but may not be actively maintained



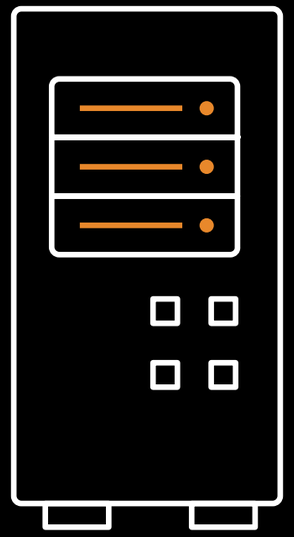
When would I use it?

Your application is not already in a CI/CD pipeline, or needs the server to be set up and configured in a specific way before it can work



When would I use it?

Your application is not deliberately redundant or scalable



Order service

Using AWS App2Container



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Getting ready for use



Determine where you are going to run the containerization process

- Server running application
- Worker machine (can also be application server)



Install the prerequisites

- AWS Tools for Windows PowerShell on both application server and worker machine
- App2Container on both application server and worker machine
- Docker engine on worker machine

App2Container process



Initialize App2Container

- Workspace directory path
- AWS profile
- Amazon S3 bucket (optional)
- Permission to collect usage metrics
- Whether to sign the images



Create an inventory of possible applications



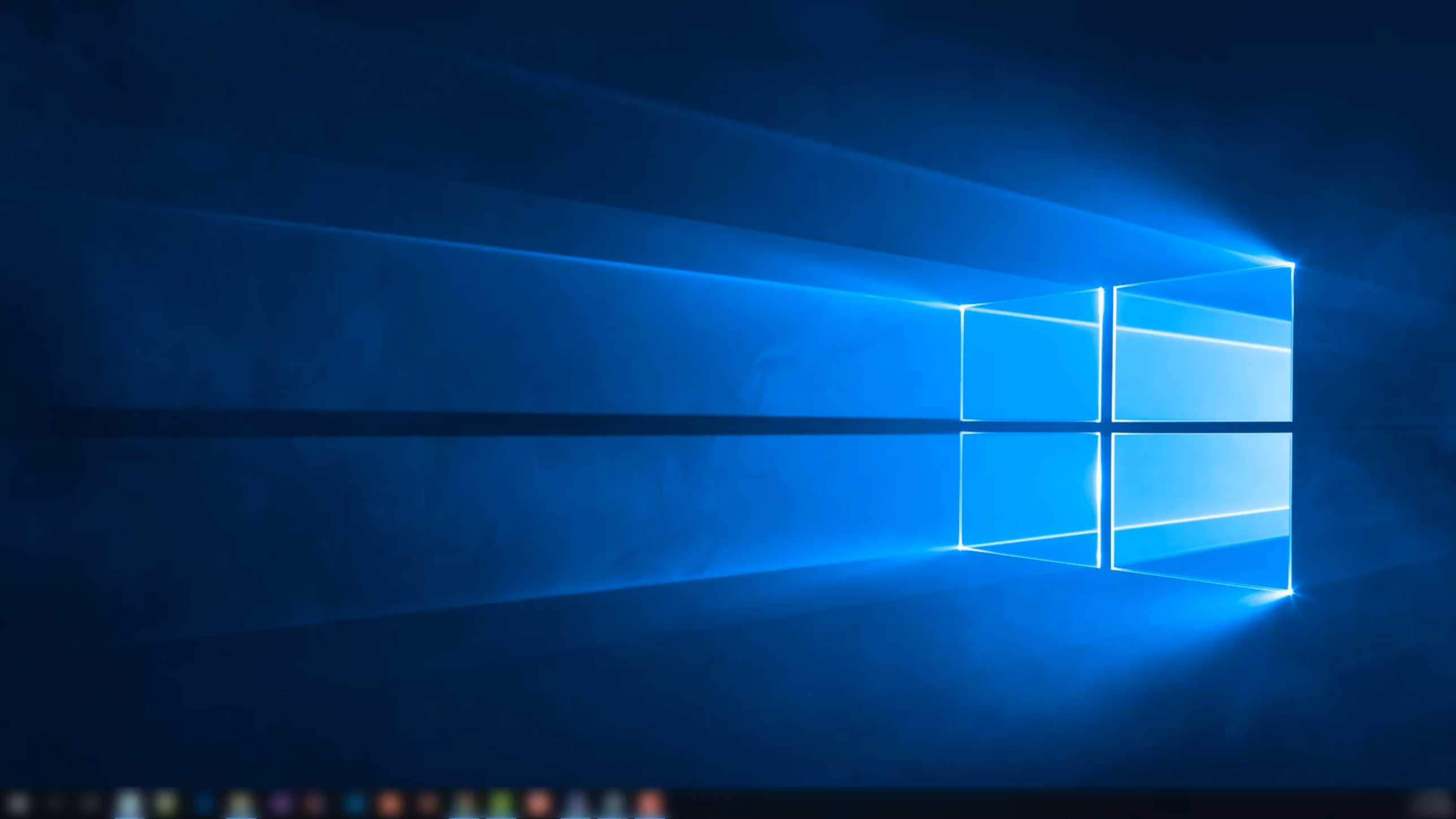
Analyze the application



Containerize the application



Generate deployment for the application





“Every new thing creates two new questions and two new opportunities.”

Jeff Bezos

Founder and CEO of Amazon

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Thank you!

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