

dapr Workshop



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▲ Agenda

Dapr
quick
101

Sample
app

Hands
on

+ *whatever questions & discussions come up* 😊

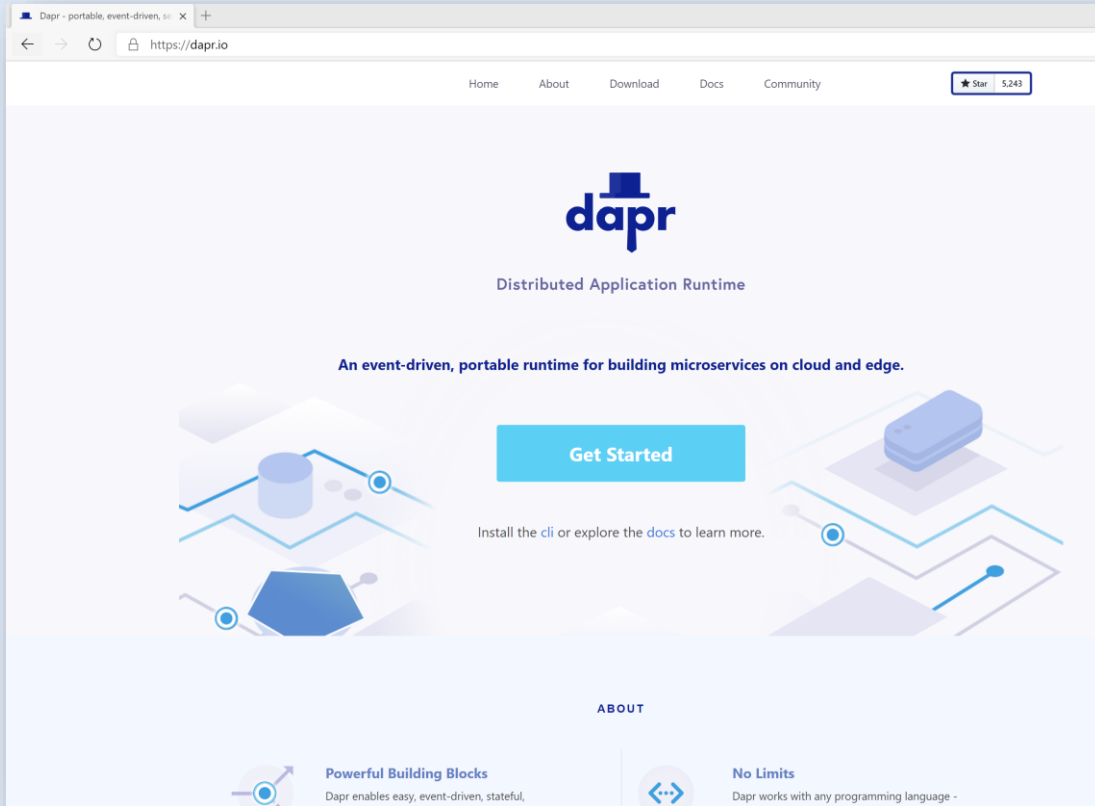


Distributed Application Runtime

Portable, event-driven, runtime for building distributed applications across cloud and edge

<https://dapr.io>

Developers can focus on building apps and not on infrastructure.



Microservice building blocks



Application code

Microservices written in

Virtual Actors



ASP.NET Core



Functions



Logic Apps



API Management



Spring Boot



Microservices written with

Any code or framework...



HTTP API

gRPC API



Service-to-service invocation



State management



Publish and subscribe



Resource bindings and triggers



Actors



Observability



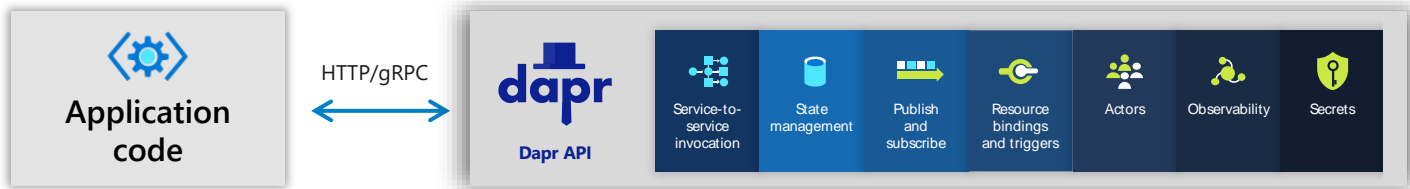
Secrets



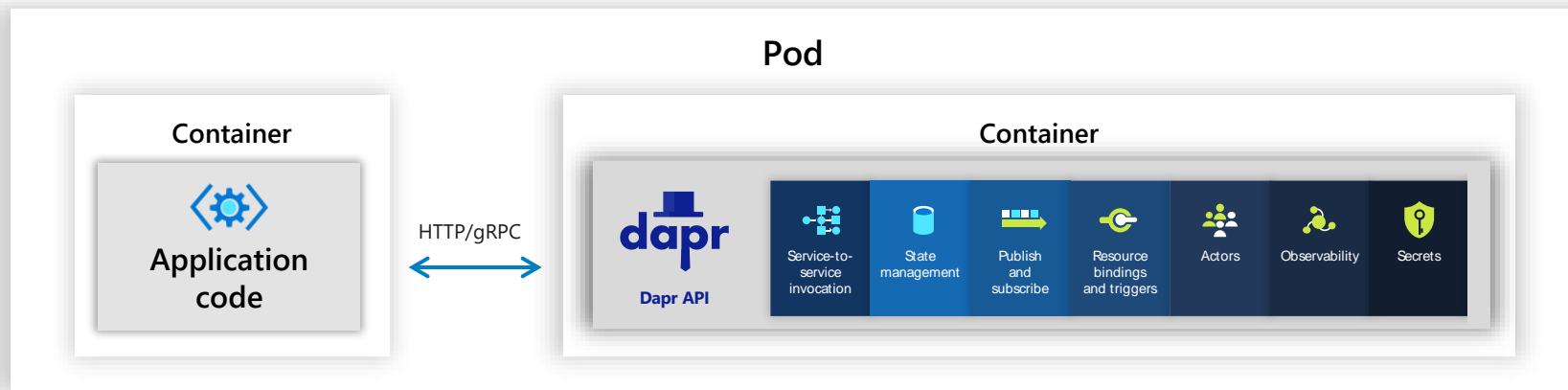
Extensible

Sidecar architecture

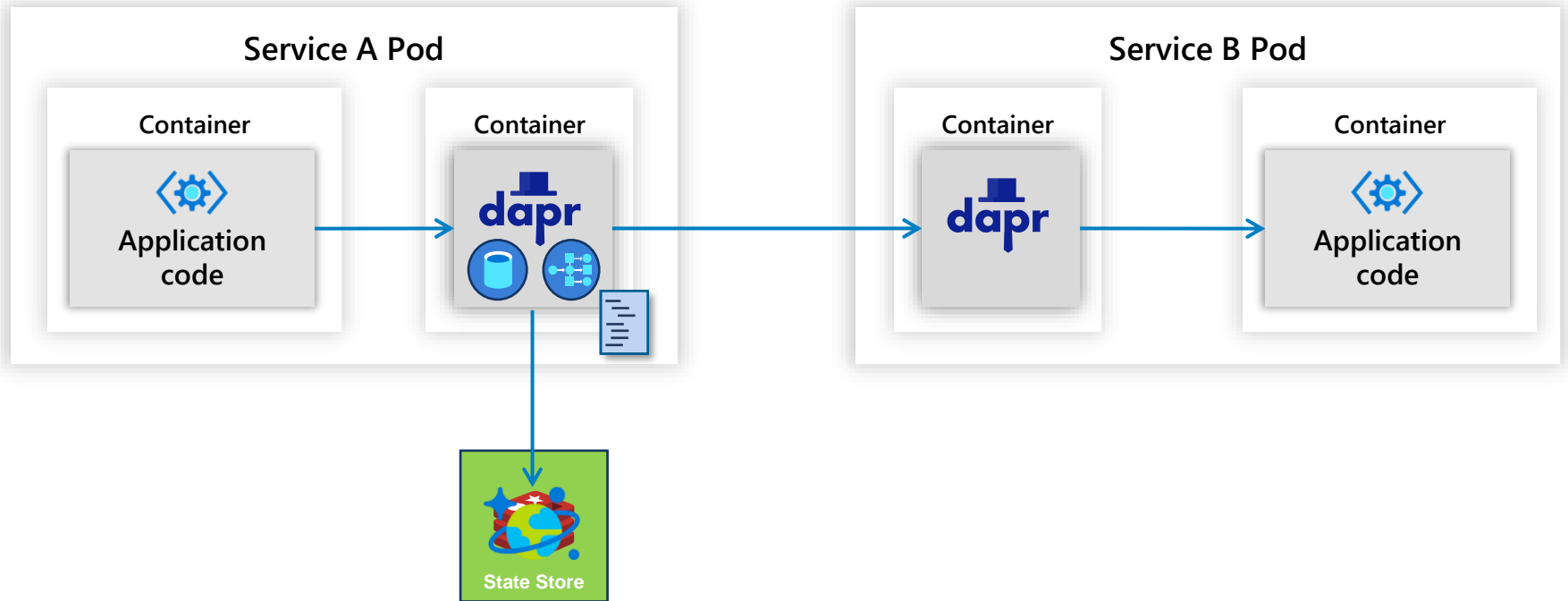
Self-hosted



Kubernetes



Example



71 Dapr Components

18 State stores

- [Aerospike](#)
- [Cassandra](#)
- [Cloudstate](#)
- [Couchbase](#)
- [etcd](#)
- [Hashicorp Consul](#)
- [Hazelcast](#)
- [Memcached](#)
- [MongoDB](#)
- [PostgreSQL](#)
- [RethinkDB](#)
- [Redis](#)
- [Zookeeper](#)
- [Azure CosmosDB](#)
- [Azure SQL Server](#)
- [Azure Table Storage](#)
- [Azure Blob Storage](#)
- [Google Cloud Firestore](#)

11 Pub/Sub

- [Redis Streams](#)
- [Apache Kafka](#)
- [AWS SNS/SQS](#)
- [Azure Events Hub](#)
- [Azure Service Bus](#)
- [GCP Pub/Sub](#)
- [Hazelcast](#)
- [MQTT](#)
- [NATS streaming](#)
- [Pulsar](#)
- [RabbitMQ](#)

8 Secret stores

- [Azure Key Vault secret store](#)
- [Azure Key Vault with Kubernetes MI](#)
- [AWS Secrets Manager](#)
- [GCP Secret Manager](#)
- [HashiCorp Vault](#)
- [Kubernetes Secrets](#)
- [Local environment variables \(for Development\)](#)

27 I/O Bindings

13 General

- [APNs](#)
- [Cron \(Scheduler\)](#)
- [HTTP](#)
- [InfluxDB](#)
- [Kafka](#)
- [Kubernetes Events](#)
- [MQTT](#)
- [PostgreSQL](#)
- [RabbitMQ](#)
- [Redis](#)
- [Twilio](#)
- [Twitter](#)
- [SendGrid](#)

7 Azure

- [Azure Blob Storage](#)
- [Azure EventHubs](#)
- [Azure CosmosDB](#)
- [Azure Service Bus Queues](#)
- [Azure SignalR](#)
- [Azure Storage Queues](#)
- [Azure Event Grid](#)

2 GCP

- [GCP Cloud Pub/Sub](#)
- [GCP Storage Bucket](#)

5 AWS

- [AWS DynamoDB](#)
- [AWS S3](#)
- [AWS SNS](#)
- [AWS SQS](#)
- [AWS Kinesis](#)

1 AliCloud

- [Blob Storage](#)

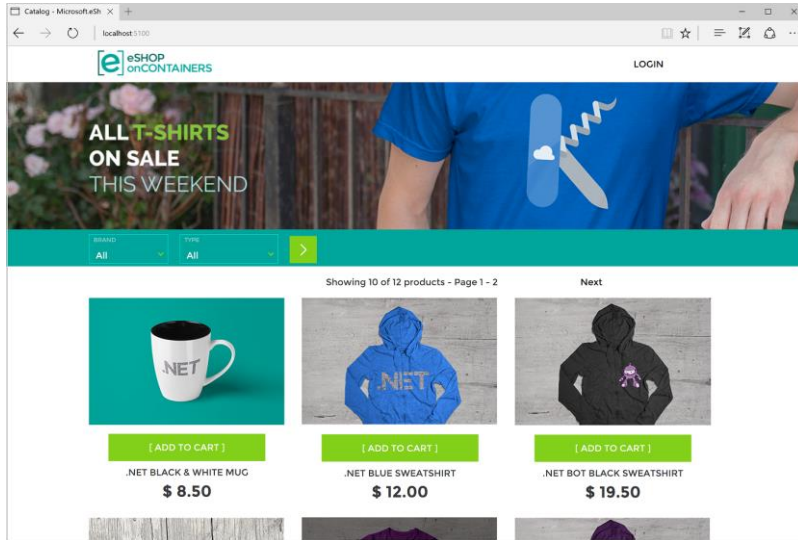
4 HTTP Middleware

- [OAuth2](#)
- [Open Policy Agent \(OPA\)](#)
- [Rate limit](#)
- [Bearer](#)

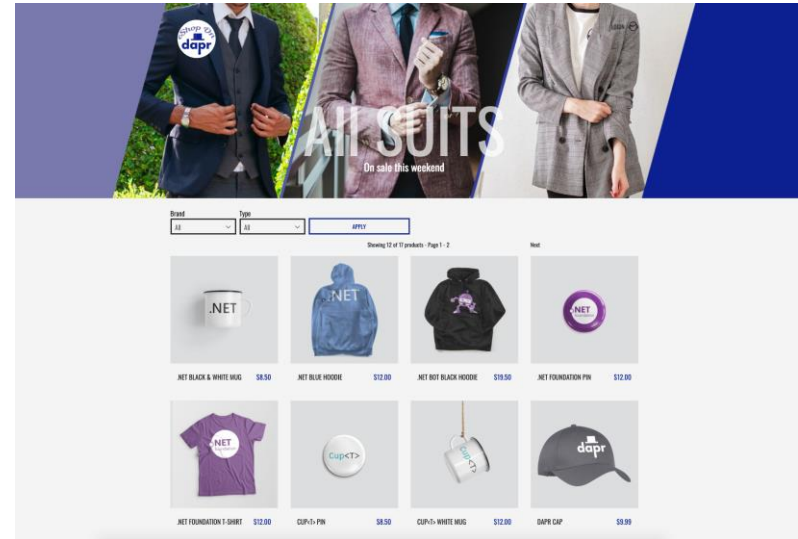
2 Name Resolution

- [Kubernetes](#)
- [Multicast DNS](#)

eShop



<https://github.com/dotnet-architecture/eShopOnContainers>



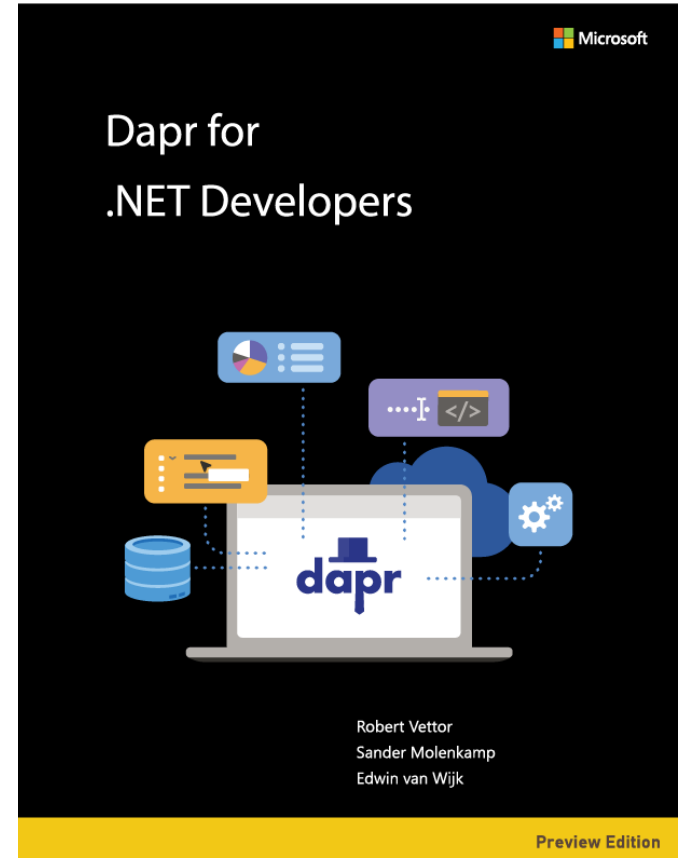
<https://github.com/dotnet-architecture/eShopOnDapr>

Online version:

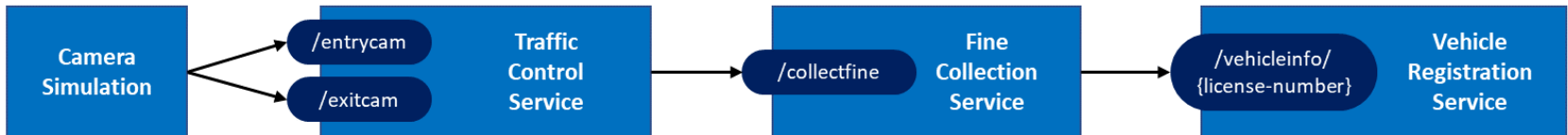
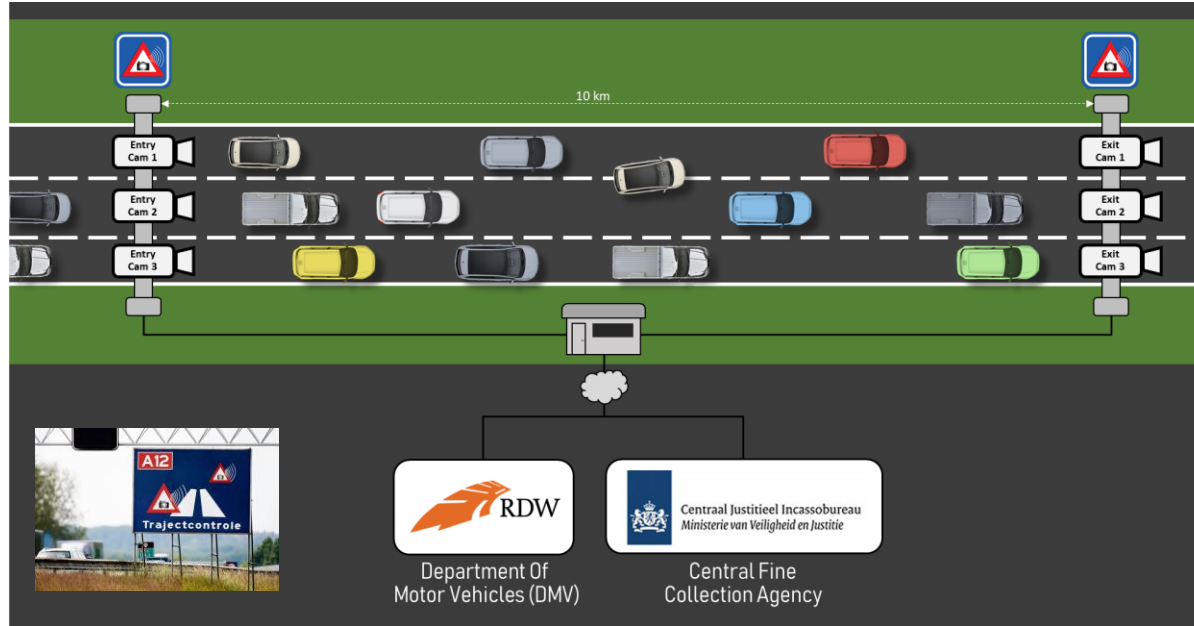
<https://docs.microsoft.com/dotnet/architecture/dapr-for-net-developers/>

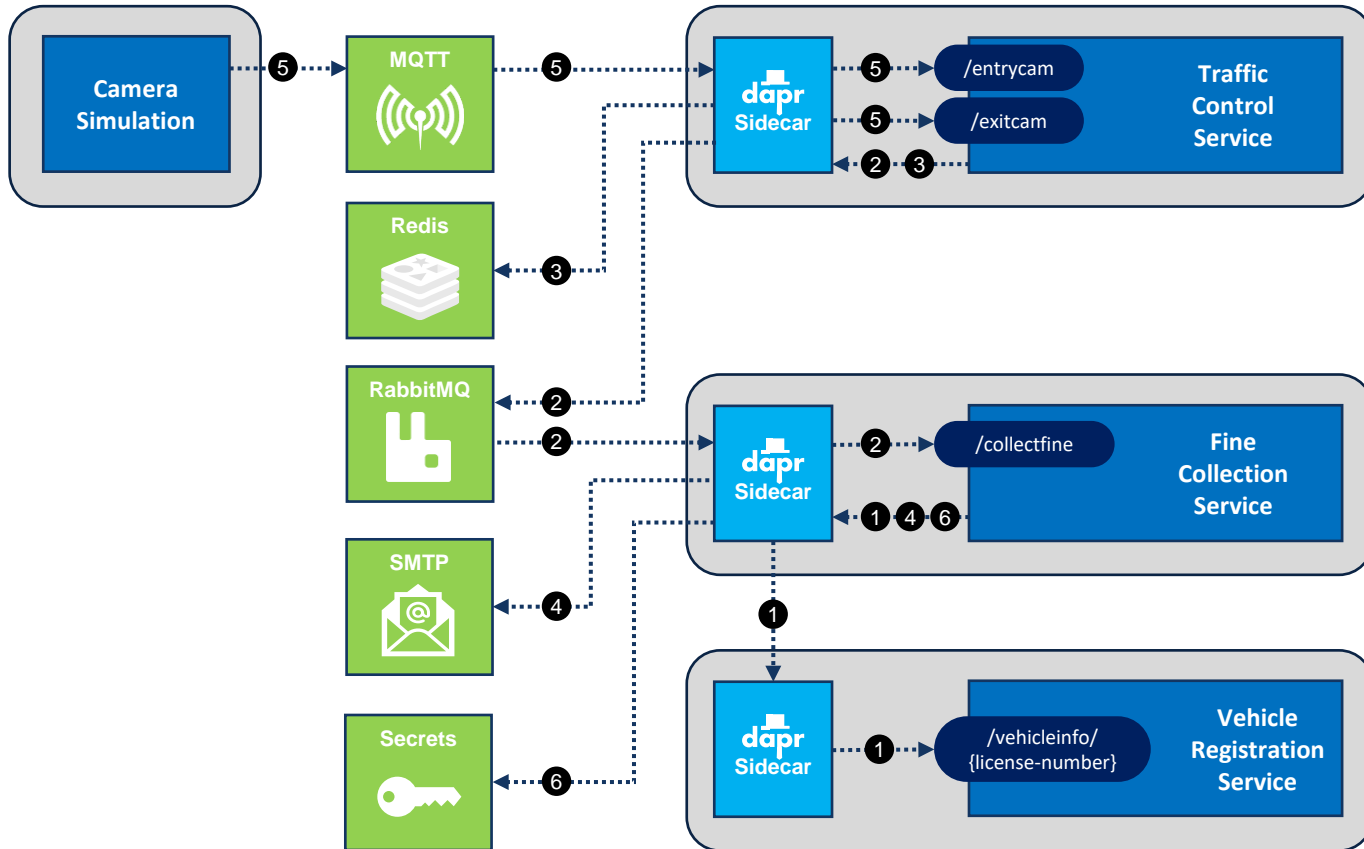
PDF version:

<https://aka.ms/dapr-ebook>



▲ Dapr Traffic-control sample





- 1 Service invocation
- 2 Publish / subscribe
- 3 State management
- 4 Output binding
- 5 Input binding
- 6 Secrets management



Traffic control



▲ Hands-on

- You are going to add Dapr to an existing app
- Building blocks included in the workshop:
 - service invocation
 - pub/sub
 - state management
 - bindings
 - secrets management
- Start with Traffic-control sample communicating over HTTP

▲ Hands-on

- 2 ways of doing the workshop:
 - DIY : reach goals by studying the Dapr documentation and figuring out yourself how to use the Dapr building blocks
 - Step-by-step : follow the step-by-step instructions
- Execute all assignments in order and don't skip any assignments!
- <https://github.com/edwinvw/dapr-workshop>



Thank you!



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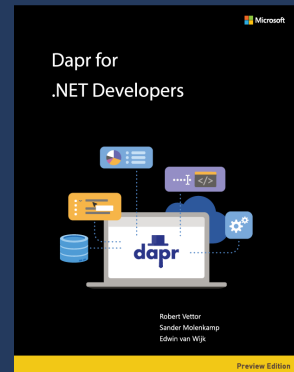
 @amolenk

Resources:

All things Dapr:

<https://dapr.io>

<https://docs.dapr.io>



Free e-book: Dapr for .NET Developers

<https://aka.ms/dapr-ebook>

eShopOnDapr reference case:

<https://github.com/dotnet-architecture/eShopOnDapr>

Dapr Traffic-control sample app:

<https://github.com/edwinvw/dapr-traffic-control>