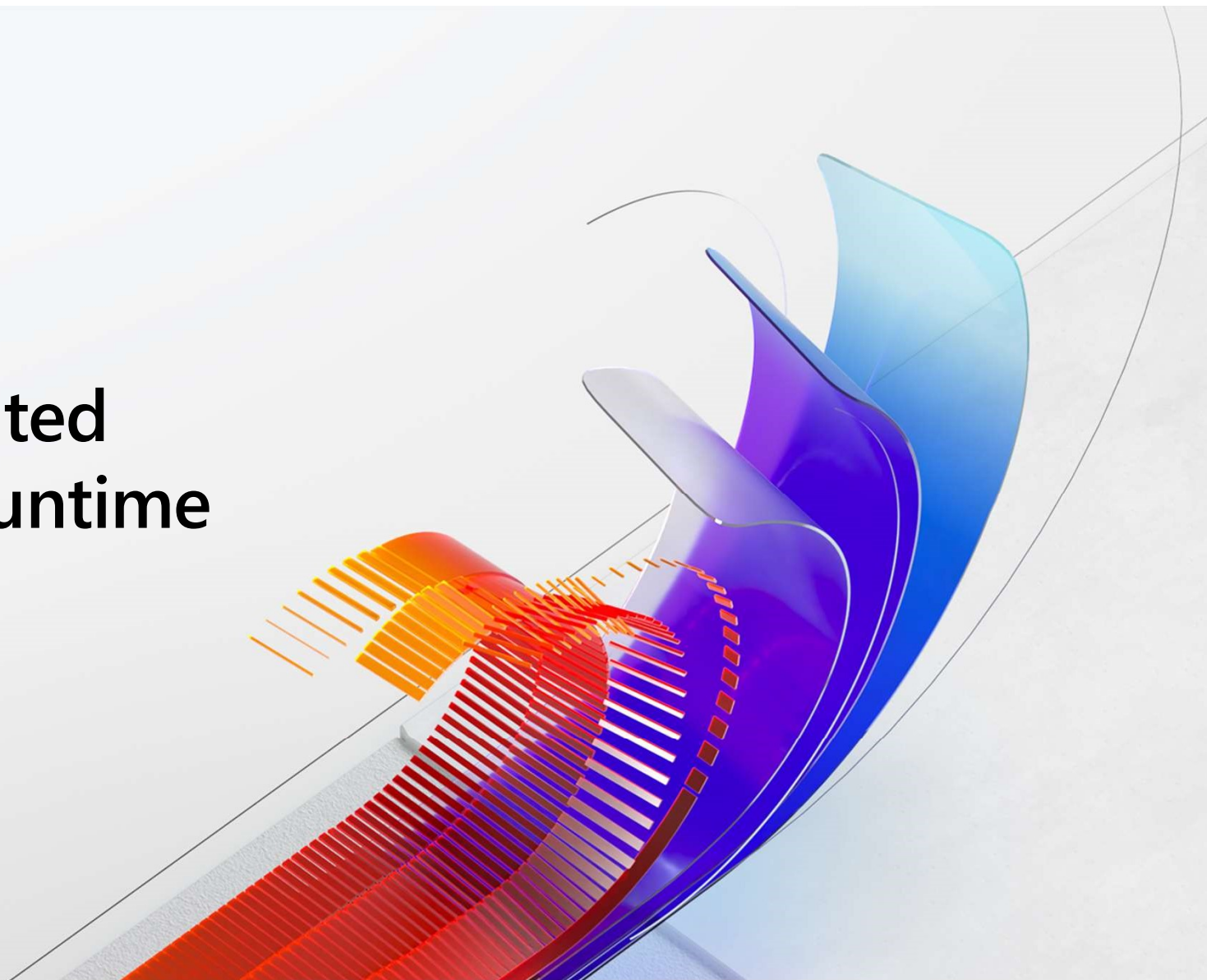




Dapr: Distributed Application Runtime

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State of Enterprise Developers

Being asked to develop resilient, scalable, microservice-based apps that interact with services



Use multiple languages and frameworks during development



Focus on building apps not infrastructure



What is holding back microservice development?



Have limited tools and programming model runtimes to build distributed applications



Programming model runtimes have narrow language support and tightly controlled feature sets



Runtimes only target specific infrastructure platforms with limited code portability across clouds and edge

Dapr Goals



Best-practices building blocks



Any language or framework



Consistent, portable, open APIs



Adopt standards



Extensible and pluggable components



Platform agnostic cloud + edge



Community driven vendor neutral



Dapr is a portable, event-driven runtime that
makes it easy for developers to build
resilient, microservice applications that run
on the cloud and edge

Microservice building blocks



Standard APIs accessed over http/gRPC protocols from user service code

<http://localhost:3500/v1.0/invoke/cart/method/neworder>

<http://localhost:3500/v1.0/state/inventory/item67>



Runs as local "side car library" dynamically loaded at runtime for each service



Application code

Microservices written in

Any code or framework...



HTTP API

gRPC API



Service-to-service invocation



State management



Publish and subscribe



Resource bindings and triggers



Actors



Observability

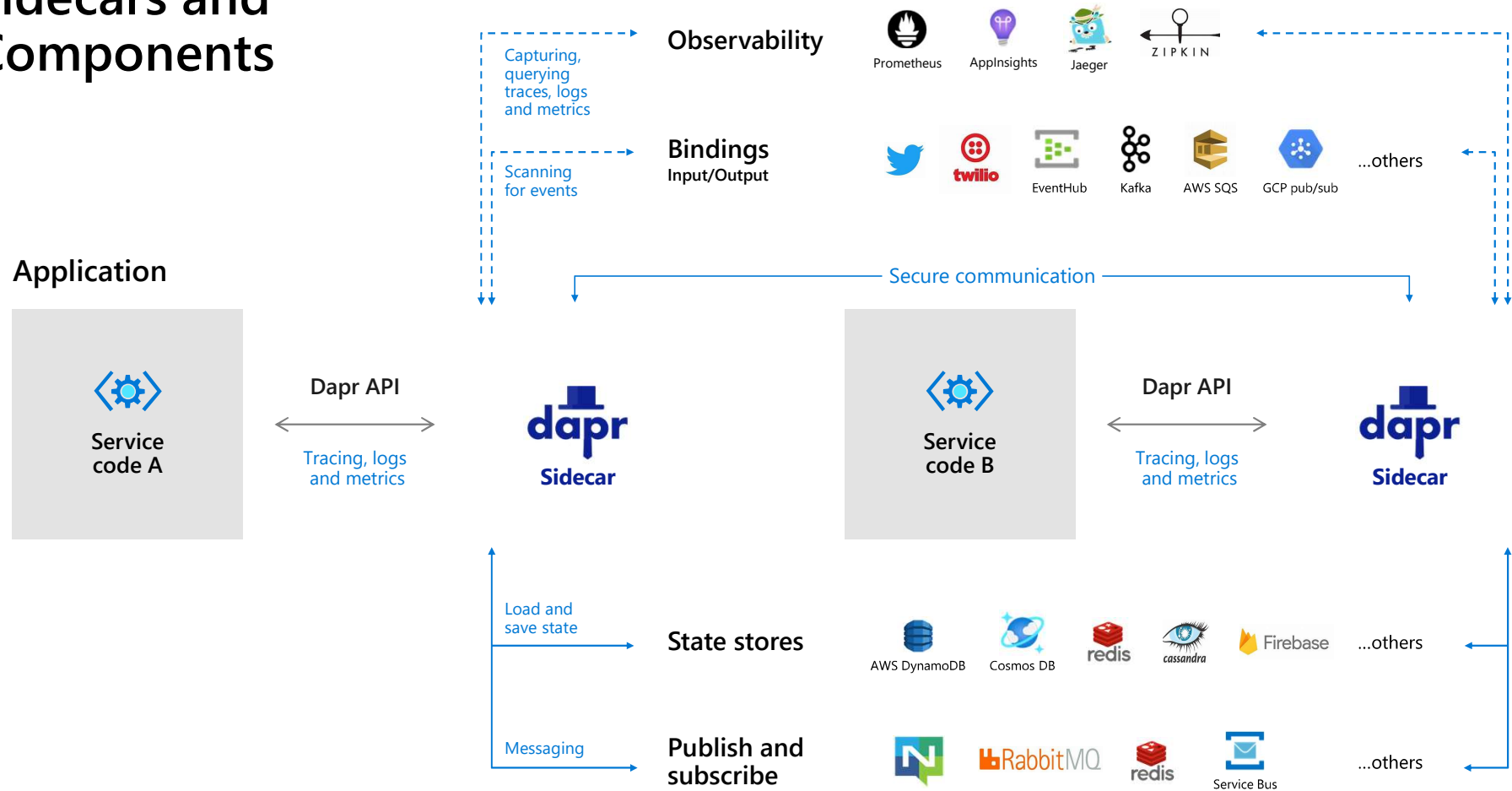


Secrets



Extensible

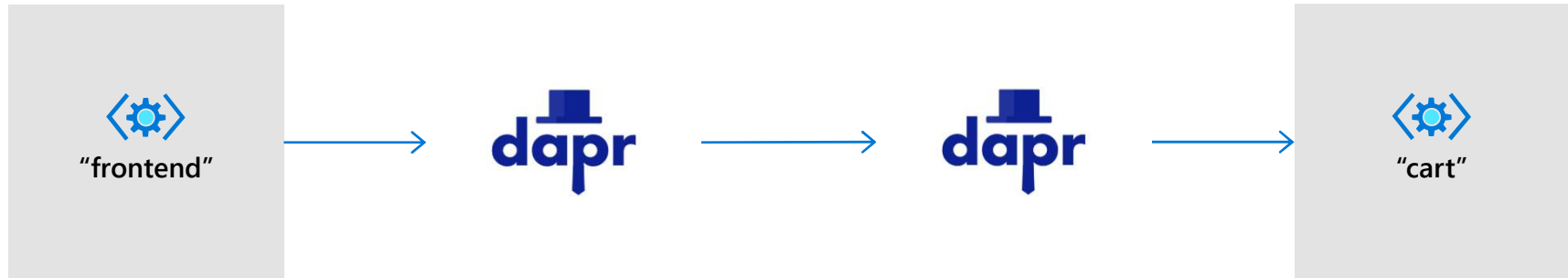
Sidecars and Components





Microservice building blocks

Service invocation



Post

<http://localhost:3500/v1.0/invoke/cart/method/checkout>

```
{
  "user": "johndoe",
  "cart": "0001"
}
```

Post

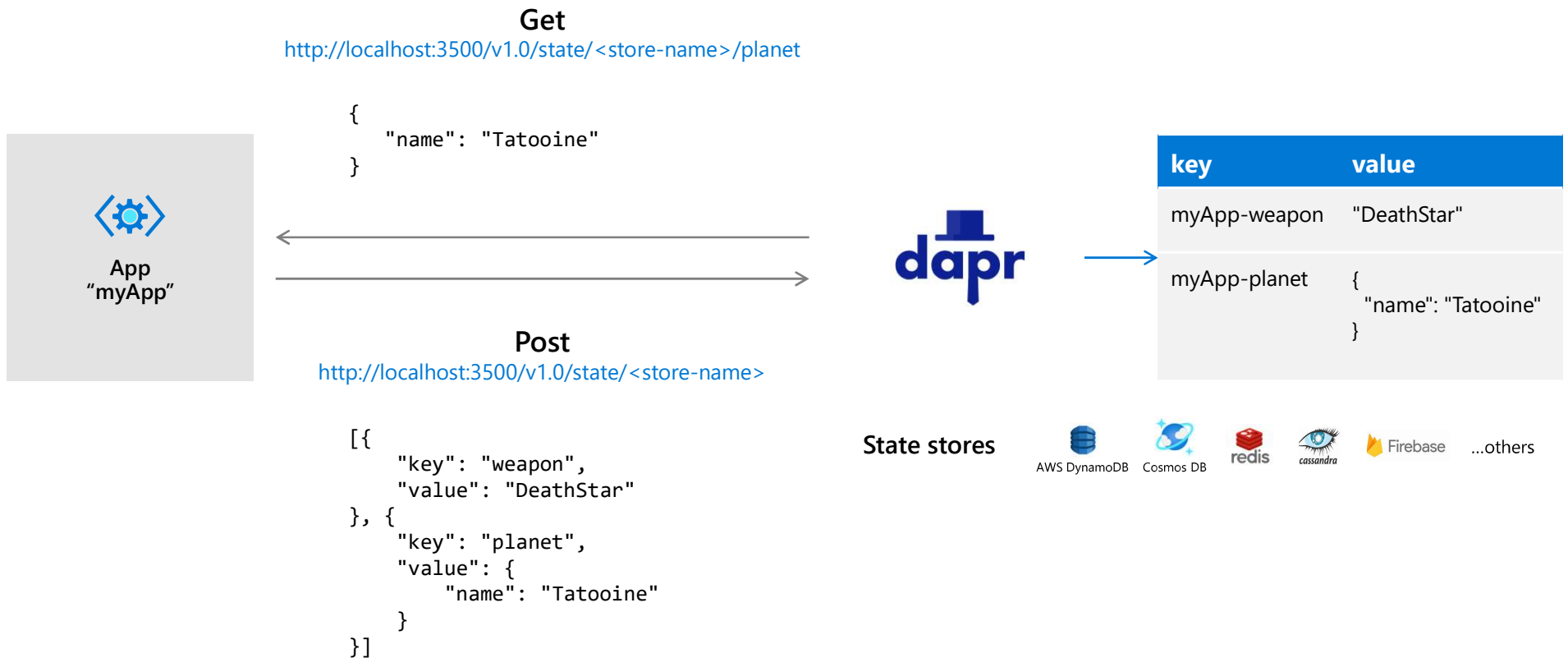
<http://10.0.0.2:8000/checkout>

```
{
  "user": "johndoe",
  "cart": "0001"
}
```




Microservice building blocks

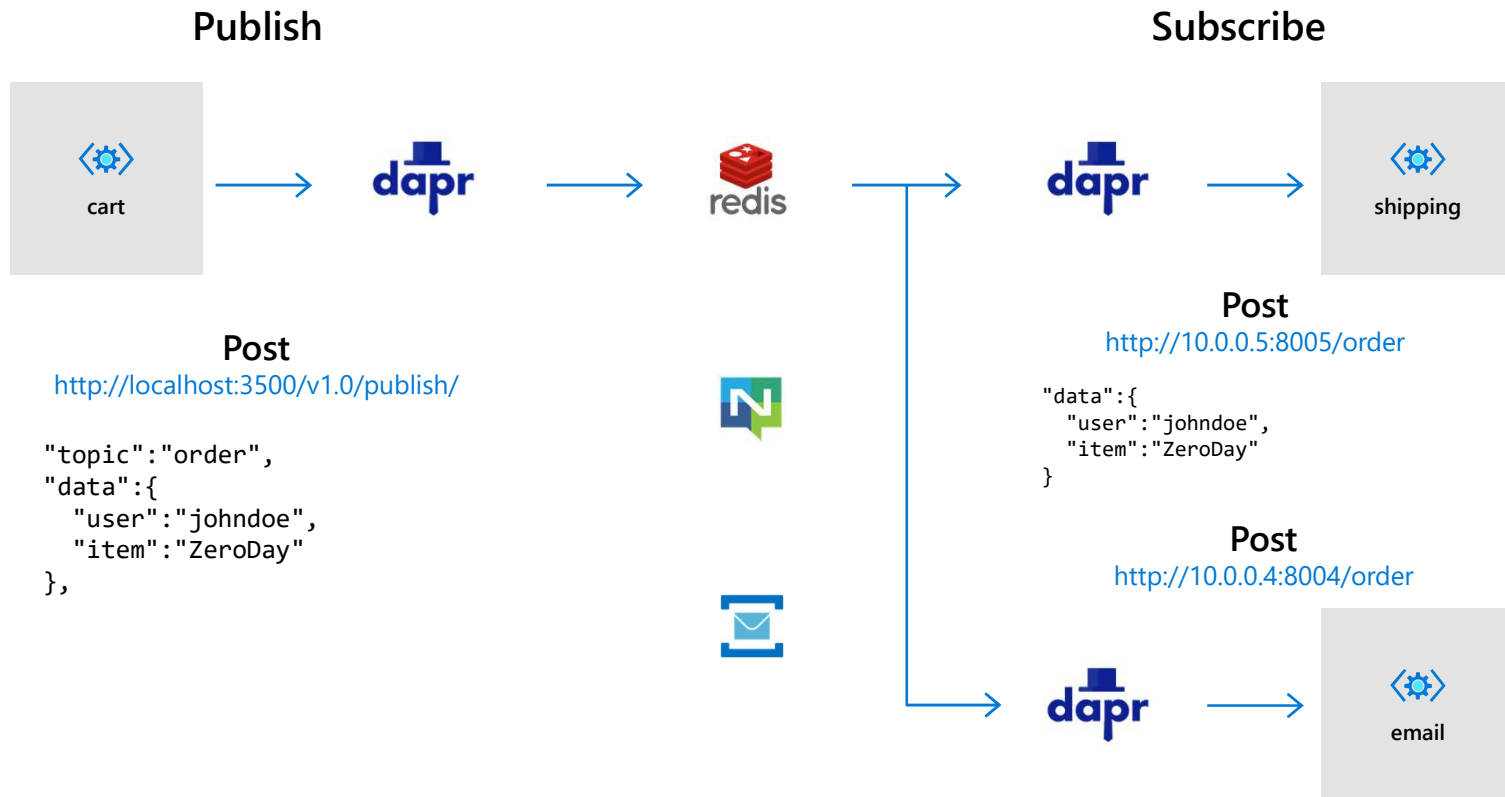
State management: key/value





Microservice building blocks

Publish and Subscribe



DEMO



Distributed Calculator with Microservices

Join the community



github.com/dapr

aka.ms/dapr-community

[@daprdev](https://twitter.com/daprdev)

The image is a composite of two screenshots. The top screenshot shows the GitHub repository page for 'Dapr'. The repository description is 'Distributed Application Runtime. An event-driven, portable runtime for building microservices on cloud and edge.' It has 22 repositories pinned, including 'dapr', 'docs', 'cli', 'components-contrib', and 'samples'. The bottom screenshot shows the 'Getting Started' section of the 'dapr/docs' README. It includes a table of links to other documents like 'cluster', 'README.md', and 'environment-setup.md'. Below the table, the 'Getting Started' section begins with the text: 'Dapr is a portable, event-driven runtime that makes it easy for enterprise developers to build resilient, microservice stateless and stateful applications that run on the cloud and edge and embraces the diversity of languages and developer frameworks.' The 'Core Concepts' section is also visible. In the bottom right corner, there is a small video inset showing a man in a blue t-shirt with the 'dapr' logo on it, speaking.

