

The State of Dapr 2024 is here - Share & Learn from your Peers | Take the Survey



products

developers

blog

resources

pricing

about

BOOK A
DEMO

GET
CONDUCTOR
FREE

< ALL VIDEOS

Dapr Day: Processing One Million Data Points Daily with Dapr

Siri Varma Vegiraju, Software Engineer at Microsoft talks about his experiences processing massive data throughput at Azure scale working on production workloads for both Microsoft and cloud customers around the globe.

FEEDBACK

sign up for email updates

your email*

SUBSCRIBE

Dapr Day Oct 2024 - Processing one million data points...



Scaling Cloud Data Processing with Dapr Workflows: A Real-World Implementation

At Dapr Day 2024, we get an inside look at how a team transformed their cloud data processing pipeline using Dapr workflows. Let's dive into their journey and key learnings.

October 23, 2024



John
Allwright



other videos

Understanding Dapr Workflows [11:53]

The presentation begins with a clear breakdown of Dapr workflow components:

- Workflow SDK for application integration
- Dapr sidecar for communication
- State store for workflow persistence

"Each workflow is divided into workflows and activities," our presenter explains, introducing us to Dapr's event sourcing approach to state management.

The Power of Event Sourcing [12:32]

Instead of traditional snapshots, Dapr maintains an append-only history log. The magic happens at each 'await':

- State gets offloaded to the store
- History rebuilds the world state
- Processing resumes seamlessly

Real-World Implementation [14:04]

The team's aggregation workflow showcases practical application:

Parent Workflow:

- Processes partition data
- Handles file counting
- Manages previous state retrieval



Catalyst Deep Dive, Including Outbox Pattern Demo



Dapr Day - 5 Year Celebration



Harnessing Crossplane and Dapr for DevOps: FICO's Platform Engineering Journey to Increase Velocity

Child Workflows:

- Handle VM-level aggregation
- Process 4,000-5,000 VMs independently
- Maintain clean state histories

Code Deep Dive [18:29]

The implementation reveals elegant simplicity:

```
# Parent workflow handles partition processing# Child workflows  
manage VM-specific operations# State management happens  
automatically
```

Infrastructure Evolution [20:53]

Moving to Dapr brought significant changes:

- AKS integration via extensions
- Sidecar deployment automation
- Prometheus and Grafana monitoring
- Managed identity authentication



Key Learnings [21:43]

Three critical insights emerged:

1. "Smaller workflows are better"
 - Event sourcing overhead considerations

- Easier state reconstruction
- Better manageability

2. "Understanding state store limitations"

- Cosmos DB 5MB request limit discovery
- Easy migration paths thanks to Dapr's abstraction
- Flexible state store switching

3. Activity Design Principles [23:05]

- Service invocations through activities
- Input-based optimization
- Automatic state management

Looking Forward [23:43]

The team's roadmap includes:

- Pub/sub building block integration
- Service invocation API adoption
- Enhanced retry mechanisms
- Access policy improvements



The Bottom Line [25:06]

"With all the state store management capabilities, we saved months of effort," the presenter concludes. By leveraging Dapr's workflow capabilities, they achieved:

- Reduced development time
- Built-in observability
- Greater focus on business value
- Simplified state management

Implementing cloud-scale data processing? Consider how Dapr workflows might streamline your architecture. Share your experiences or questions in the comments below.

What challenges in your distributed systems could Dapr workflows solve? Let's discuss!

[Note: The presentation includes detailed technical implementation details and real-world lessons learned from production use.]



Diagrid newsletter

signup for the latest dapr & Diagrid news

First Name

Last name

Email*

Diagrid needs the contact information you provide to us to contact you about our products and services. You may unsubscribe from these communications at anytime. For information on how to unsubscribe, as well as our privacy practices and commitment to protecting your privacy, check out our [Privacy Policy](#).



SUBSCRIBE



products

Catalyst

Conductor

enterprise
support for open
source dapr

resources

documentation

blog

Diagrid
community
discord

talks and
webinars

SOC 2 type II

dapr project

what is dapr?

documentation

case studies

dapr community
discord

about us & support

company &
mission

support portal

service status

careers

contact us



SOC 2 Type II Certified

© 2024 Diagrid. All Rights Reserved.

[Terms of Use](#)

[Privacy Policy](#)

[Terms of Service](#)