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Invincible SRE Workflows with Temporal

Apr 08, 2025: SRE KL User Group

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Code: *https://github.com/cheelim1/go-temporal-sre*

Disclaimer: *Talks is opinion of speaker; does not reflect position of employer.*

Agenda

What is Temporal?

Getting Rid of Cron Forever for long-running jobs

Granting Superpowers to your humble scripts

Just In Time (JIT) Access Demo

Alternatives to Temporal

Q&A

01
What is Temporal

What is Temporal

Durable Execution Platform: An abstraction for building simple, sophisticated, resilient applications

Code like it never fails

Write your business logic as code. Create Workflows that guarantee execution; idempotency guaranteed. Code Activities to handle and retry failure-prone logic. Support patterns: Event-Driven, Saga, Batch, Schedules, State-Machines

Testing + Observability

Comprehensive testsuites; including time travel (workflows that takes days, months, years). Event Replays and audit logs with minimal effort. Metrics, tracing, logging available including search to troubleshoot and scaling.

Cross-Platform Support

Write business logic using native SDKs (major languages, communities). Inter-communicate + mix-match as needed. Strong access boundaries within namespace. Teams can securely communicate across namespaces via Nexus

Open Source + Commercial Managed

Full local-dev capabilities in OSS. Fully self-host with own controlled Cassandra cluster. Leverage Managed Temporal Cloud for 200ms SLA; scaling to millions++ of workflows and support

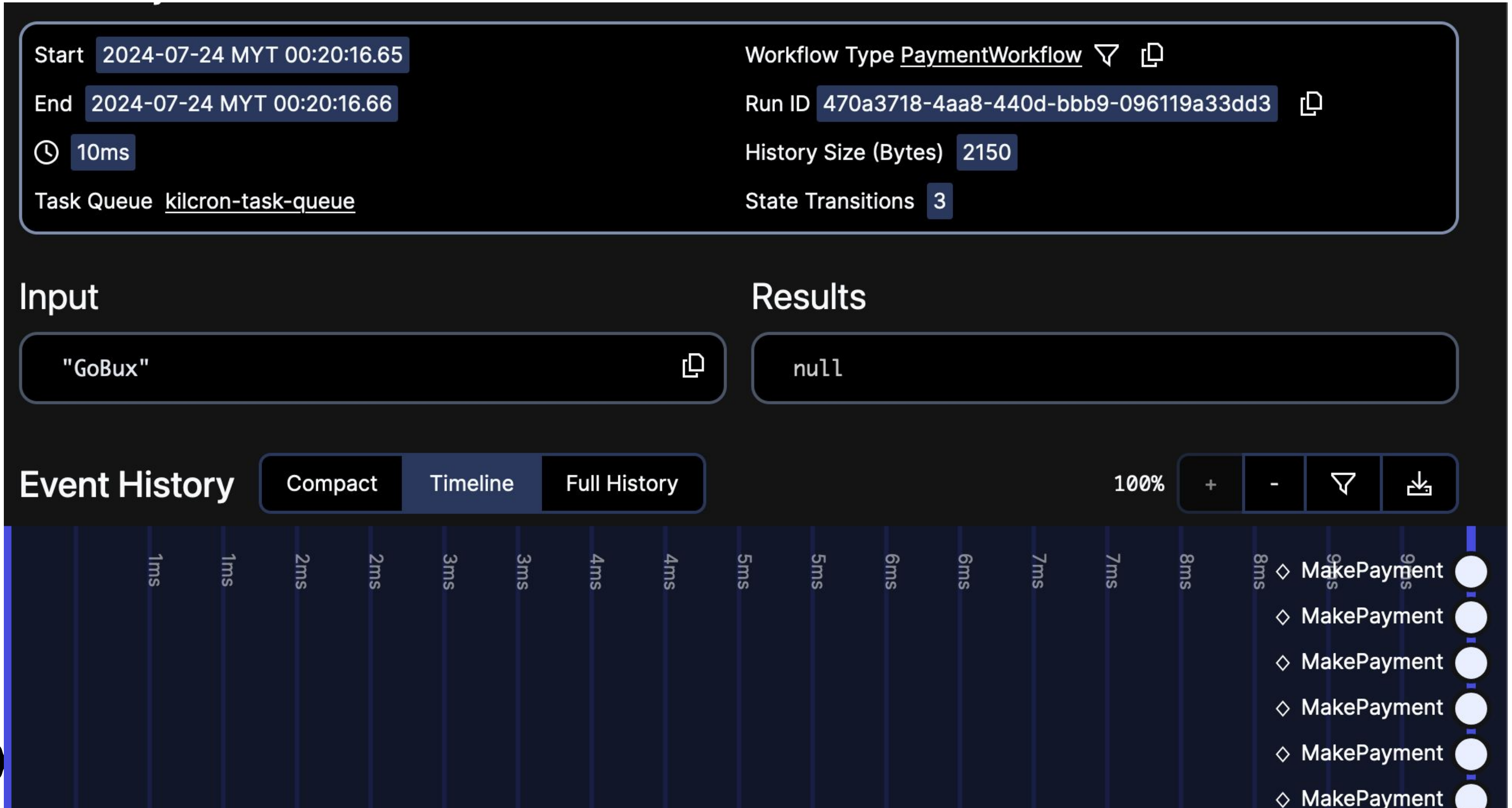
02
Trouble with Cron

Problems with Cron

- **Scene:** Startup getting traction
- Any long running day-to-day process: (e.g reports, payments, data processing)
- **Don’t:** Extend your web server timeout!
- Cron to the rescue!!
- Now got more problems; backfill failures

Cron - Wishful Thinking

- Cron jobs start immediately; no latency, no failure!



Start 2024-07-24 MYT 00:20:16.65
End 2024-07-24 MYT 00:20:16.66
10ms
Task Queue kilcron-task-queue

Workflow Type PaymentWorkflow
Run ID 470a3718-4aa8-440d-bbb9-096119a33dd3
History Size (Bytes) 2150
State Transitions 3

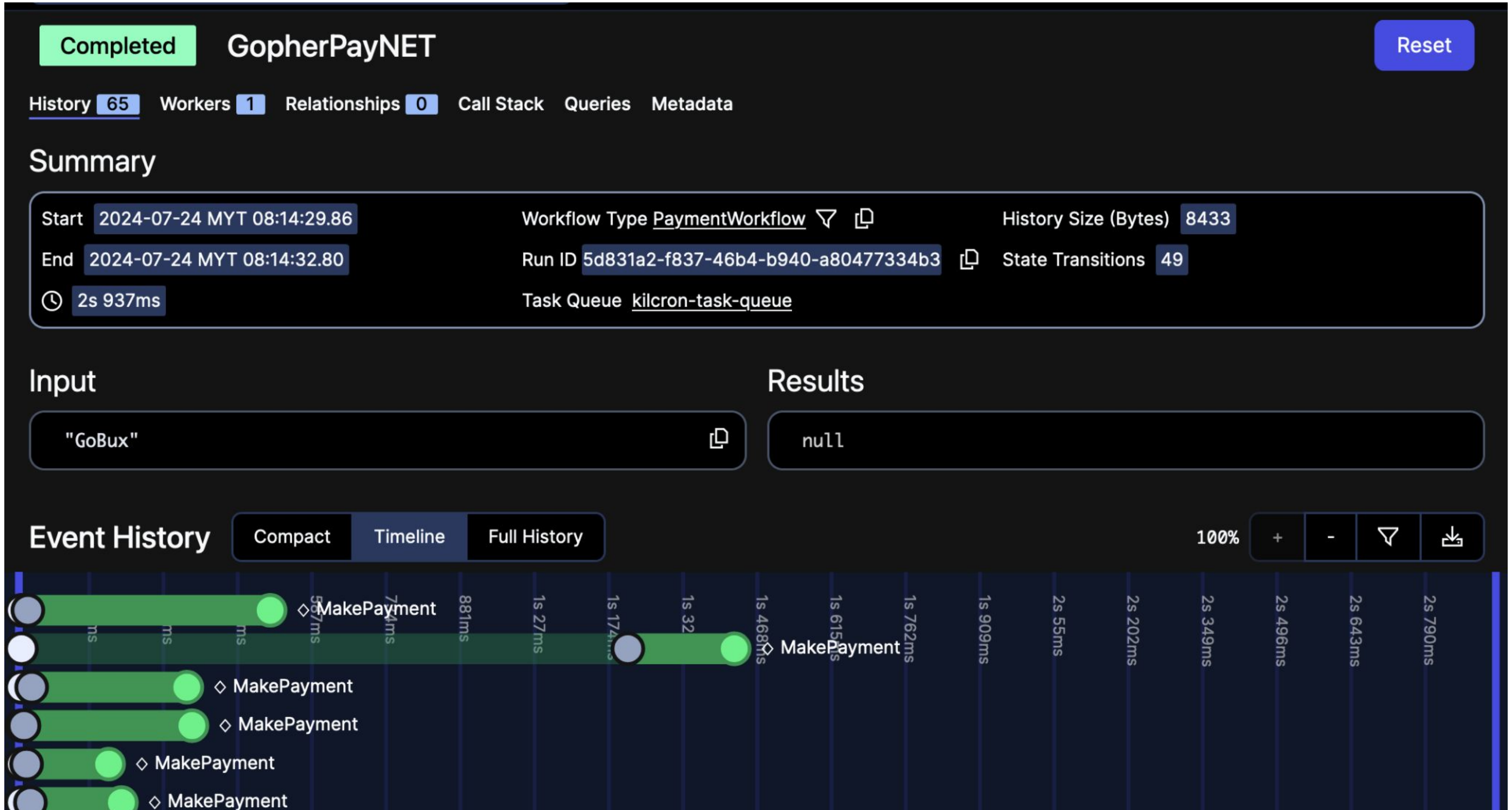
Input
```
"GoBux"
```

Results
```
null
```

Event History

Cron - Closer to Reality

- Cron jobs have variable latency; no failure!



Completed GopherPayNET Reset

History 65 Workers 1 Relationships 0 Call Stack Queries Metadata

Summary

Start 2024-07-24 MYT 08:14:29.86
End 2024-07-24 MYT 08:14:32.80
2s 937ms

Workflow Type PaymentWorkflow
Run ID 5d831a2-f837-46b4-b940-a80477334b3
Task Queue kilcron-task-queue

History Size (Bytes) 8433
State Transitions 49

Input

```
"GoBux"
```

Results

```
null
```

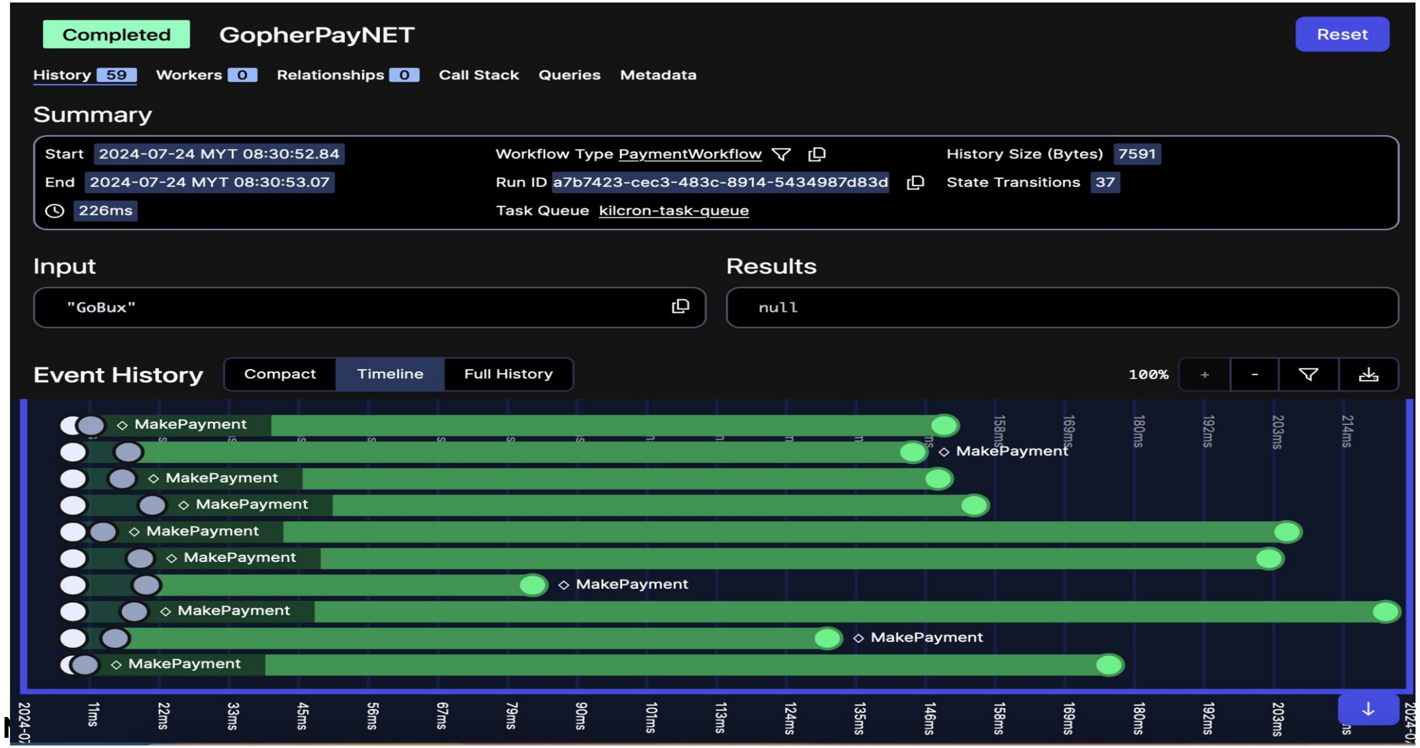
Event History

KilCron
TEMPORAL
MODERN
ANTQURTED
CRON
CRON
CRON

KilCron
TEMPORAL
MODERN
ANTQURTED
CRON
CRON
CRON

Cron - Reality / Demo

- Use Temporal Schedules instead. Can start, pause or signal
- Rethink the whole flow; break it down to smaller parts (HOW?)



Completed GopherPayNET

Reset

History 59 Workers 0 Relationships 0 Call Stack Queries Metadata

Summary

Start 2024-07-24 MYT 08:30:52.84
End 2024-07-24 MYT 08:30:53.07
226ms

Workflow Type PaymentWorkflow
Run ID a7b7423-cec3-483c-8914-5434987d83d
Task Queue kilcron-task-queue

History Size (Bytes) 7591
State Transitions 37

Input

```
"GoBux"
```

Results

```
null
```

Event History Compact Timeline Full History 100%

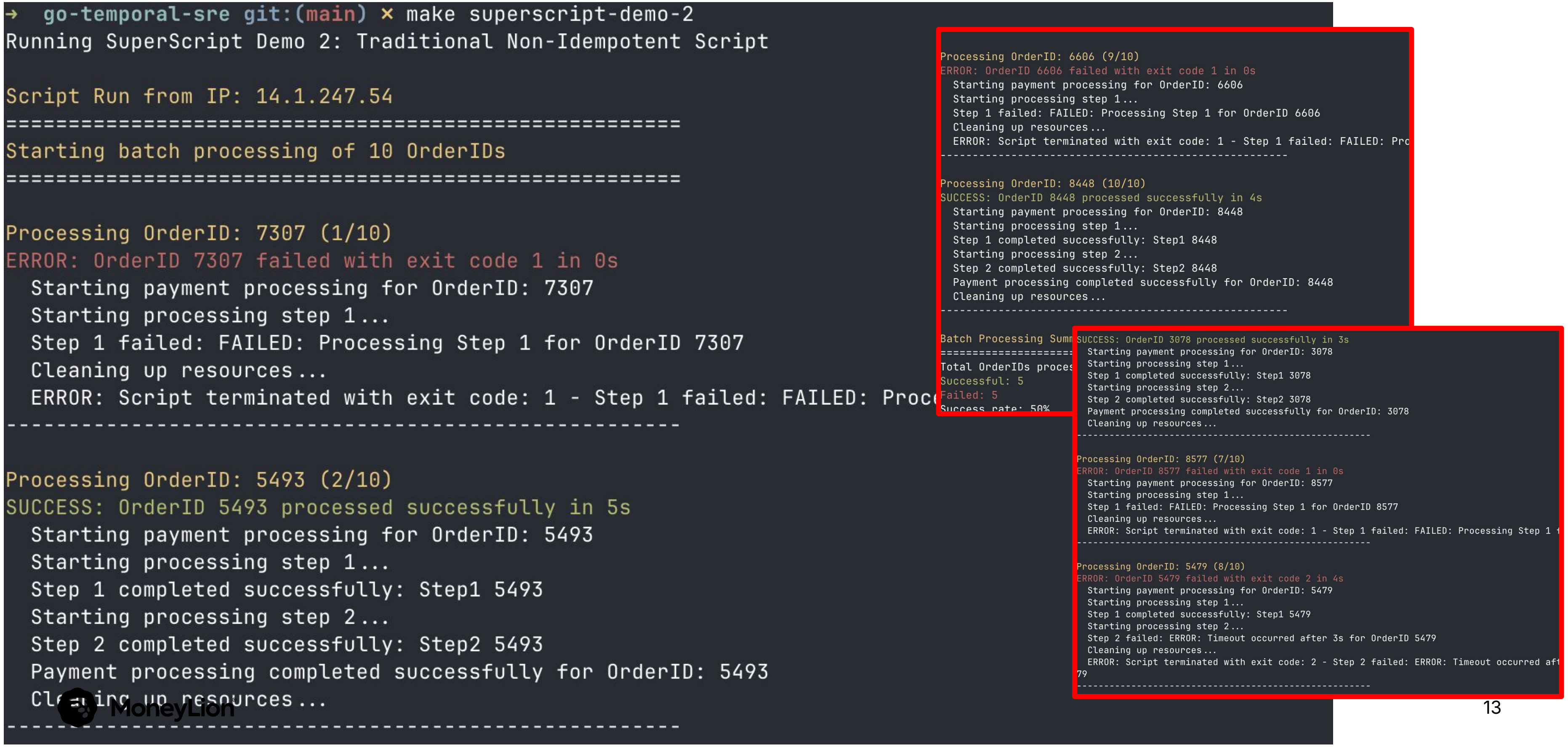
03
Granting Super Powers to your Humble Scripts

Real Life is Messy (as a SRE)

- Real life; unexpected events can happen! Not deterministic
- Bash or Python scripts used for automation are flaky
- Many dependencies out of control: DBs overloaded, network, vendors, cosmic-rays
- **Consequence:** Double billing of customers, Unnecessary cloud resources activated, Database upgrade left in unrecoverable state
- **Solution:** Idempotency allows safe retries. An operation that can be applied multiple times without changing the result
- Temporal to the rescue! (of course)

Traditional non-Idempotent

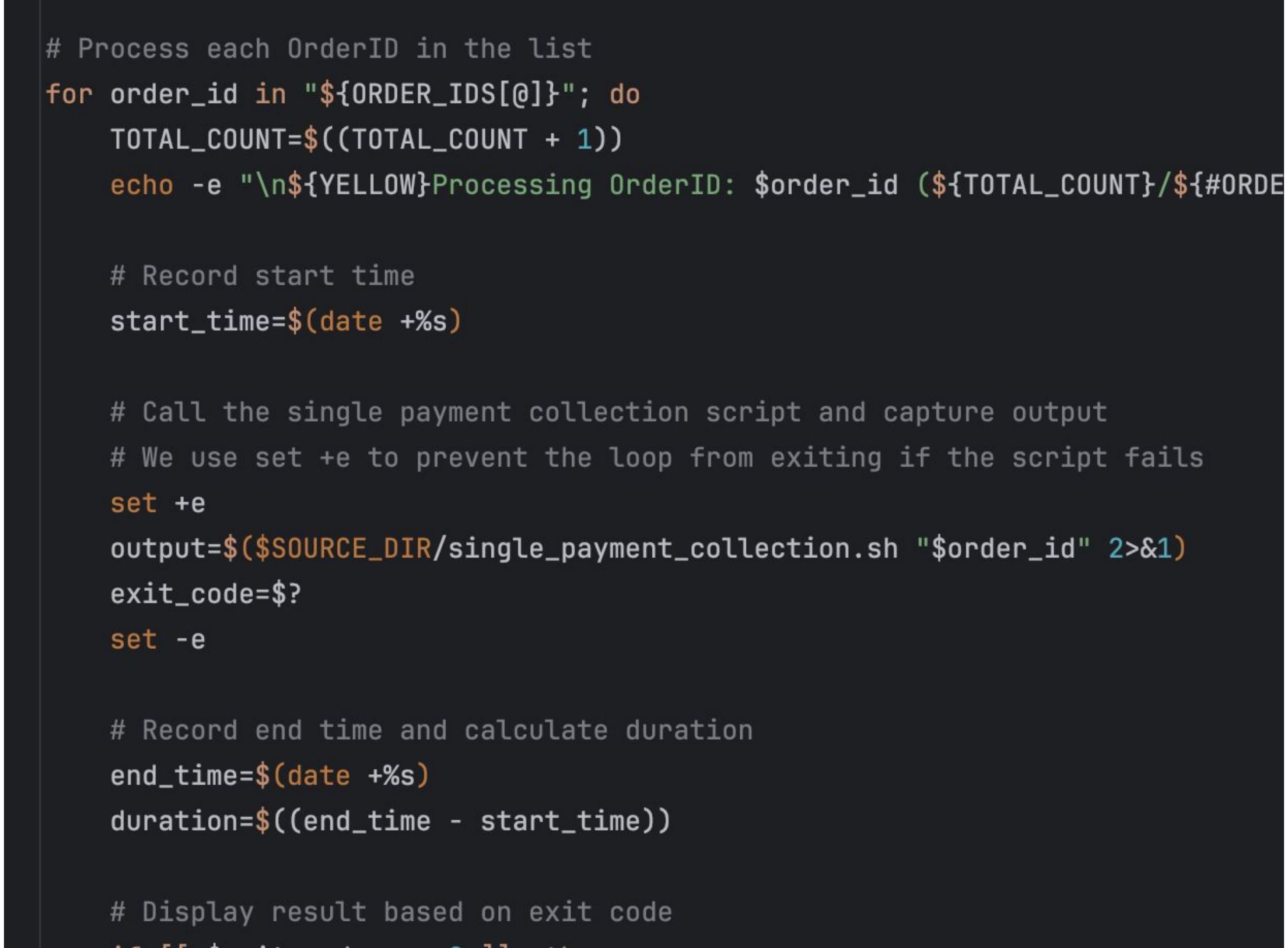
- Each time the script runs it is different! Not deterministic



```
➜  go-temporal-sre git:(main) ✗ make superscript-demo-2
Running SuperScript Demo 2: Traditional Non-Idempotent Script

Script Run from IP: 14.1.247.54
======================================================
Starting batch processing of 10 OrderIDs
======================================================

Processing OrderID: 7307 (1/10)
ERROR: OrderID 7307 failed with exit code 1 in 0s
  Starting payment processing for OrderID: 7307
  Starting processing step 1...
  Step 1 failed: FAILED: Processing Step 1 for OrderID 7307
  Cleaning up resources...
  ERROR: Script terminated with exit code: 1 - Step 1 failed: FAILED: Proce
------------------------------------------------------

Processing OrderID: 5493 (2/10)
SUCCESS: OrderID 5493 processed successfully in 5s
  Starting payment processing for OrderID: 5493
  Starting processing step 1...
  Step 1 completed successfully: Step1 5493
  Starting processing step 2...
  Step 2 completed successfully: Step2 5493
  Payment processing completed successfully for OrderID: 5493
  Cleaning up resources...
------------------------------------------------------
```

```
Processing OrderID: 6606 (9/10)
ERROR: OrderID 6606 failed with exit code 1 in 0s
  Starting payment processing for OrderID: 6606
  Starting processing step 1...
  Step 1 failed: FAILED: Processing Step 1 for OrderID 6606
  Cleaning up resources...
  ERROR: Script terminated with exit code: 1 - Step 1 failed: FAILED: Pro
------------------------------------------------------

Processing OrderID: 8448 (10/10)
SUCCESS: OrderID 8448 processed successfully in 4s
  Starting payment processing for OrderID: 8448
  Starting processing step 1...
  Step 1 completed successfully: Step1 8448
  Starting processing step 2...
  Step 2 completed successfully: Step2 8448
  Payment processing completed successfully for OrderID: 8448
  Cleaning up resources...
------------------------------------------------------

Batch Processing Summ
=====================
Total OrderIDs proces
Successful: 5
Failed: 5
Success rate: 50%
```

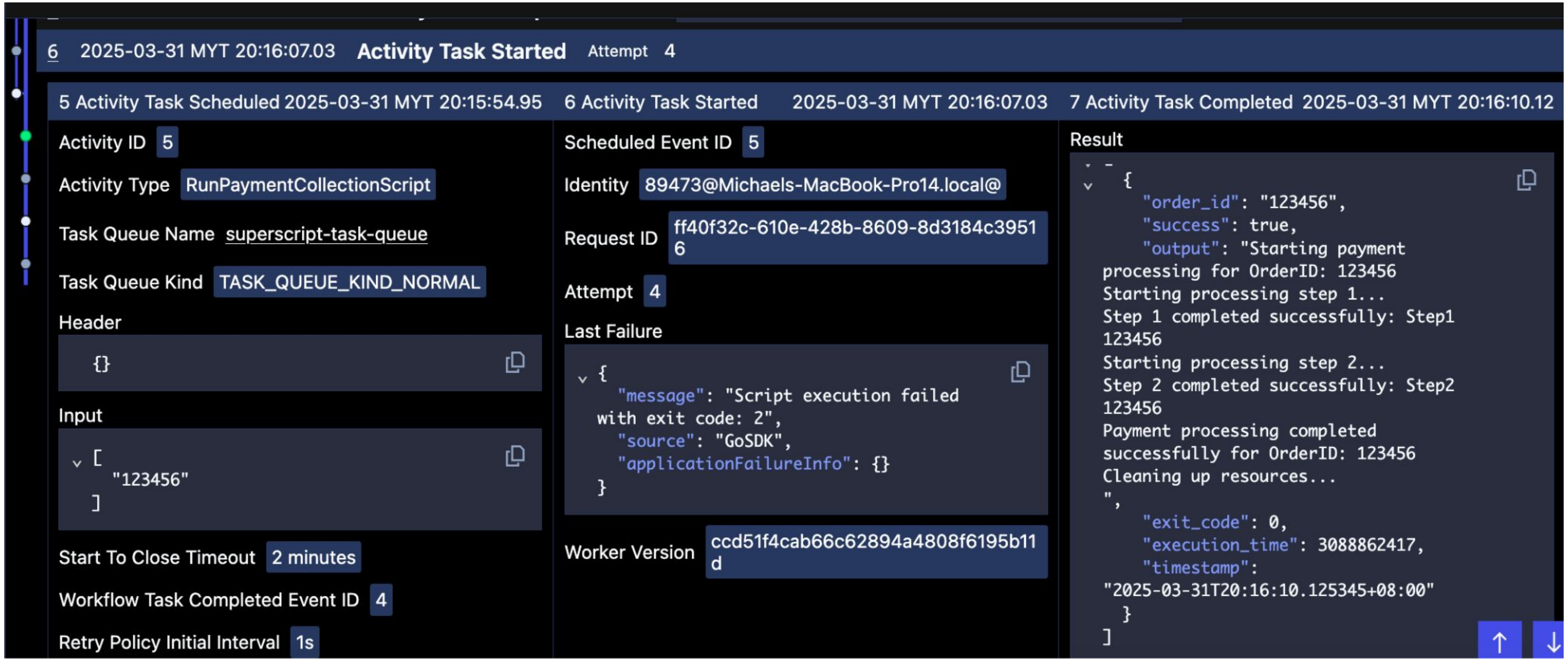
```
SUCCESS: OrderID 3078 processed successfully in 3s
  Starting payment processing for OrderID: 3078
  Starting processing step 1...
  Step 1 completed successfully: Step1 3078
  Starting processing step 2...
  Step 2 completed successfully: Step2 3078
  Payment processing completed successfully for OrderID: 3078
  Cleaning up resources...
------------------------------------------------------

Processing OrderID: 8577 (7/10)
ERROR: OrderID 8577 failed with exit code 1 in 0s
  Starting payment processing for OrderID: 8577
  Starting processing step 1...
  Step 1 failed: FAILED: Processing Step 1 for OrderID 8577
  Cleaning up resources...
  ERROR: Script terminated with exit code: 1 - Step 1 failed: FAILED: Processing Step 1 f
------------------------------------------------------

Processing OrderID: 5479 (8/10)
ERROR: OrderID 5479 failed with exit code 2 in 4s
  Starting payment processing for OrderID: 5479
  Starting processing step 1...
  Step 1 completed successfully: Step1 5479
  Starting processing step 2...
  Step 2 failed: ERROR: Timeout occurred after 3s for OrderID 5479
  Cleaning up resources...
  ERROR: Script terminated with exit code: 2 - Step 2 failed: ERROR: Timeout occurred aft
79
------------------------------------------------------
```



```
# Process each OrderID in the list
for order_id in "${ORDER_IDS[@]}"; do
    TOTAL_COUNT=$((TOTAL_COUNT + 1))
    echo -e "\n${YELLOW}Processing OrderID: $order_id (${TOTAL_COUNT}/${#ORDE

    # Record start time
    start_time=$(date +%s)

    # Call the single payment collection script and capture output
    # We use set +e to prevent the loop from exiting if the script fails
    set +e
    output=$($SOURCE_DIR/single_payment_collection.sh "$order_id" 2>&1)
    exit_code=$?
    set -e

    # Record end time and calculate duration
    end_time=$(date +%s)
    duration=$((end_time - start_time))

    # Display result based on exit code
```

Single Workflow made Deterministic

- From chaos to order; now idempotent
- Ensure WorkflowID no reuse; retry for free



6 2025-03-31 MYT 20:16:07.03 **Activity Task Started** Attempt 4

5 Activity Task Scheduled 2025-03-31 MYT 20:15:54.95

Activity ID 5

Activity Type RunPaymentCollectionScript

Task Queue Name superscript-task-queue

Task Queue Kind TASK_QUEUE_KIND_NORMAL

Header

```
{}
```

Input

```
[
  "123456"
]
```

Start To Close Timeout 2 minutes

Workflow Task Completed Event ID 4

Retry Policy Initial Interval 1s

6 Activity Task Started 2025-03-31 MYT 20:16:07.03

Scheduled Event ID 5

Identity 89473@Michaels-MacBook-Pro14.local@

Request ID ff40f32c-610e-428b-8609-8d3184c39516

Attempt 4

Last Failure

```
{
  "message": "Script execution failed
with exit code: 2",
  "source": "GoSDK",
  "applicationFailureInfo": {}
}
```

Worker Version ccd51f4cab66c62894a4808f6195b11d

7 Activity Task Completed 2025-03-31 MYT 20:16:10.12

Result

```
  {
    "order_id": "123456",
    "success": true,
    "output": "Starting payment
processing for OrderID: 123456
Starting processing step 1...
Step 1 completed successfully: Step1
123456
Starting processing step 2...
Step 2 completed successfully: Step2
123456
Payment processing completed
successfully for OrderID: 123456
Cleaning up resources...
",
    "exit_code": 0,
    "execution_time": 3088862417,
    "timestamp":
"2025-03-31T20:16:10.125345+08:00"
  }
]
```

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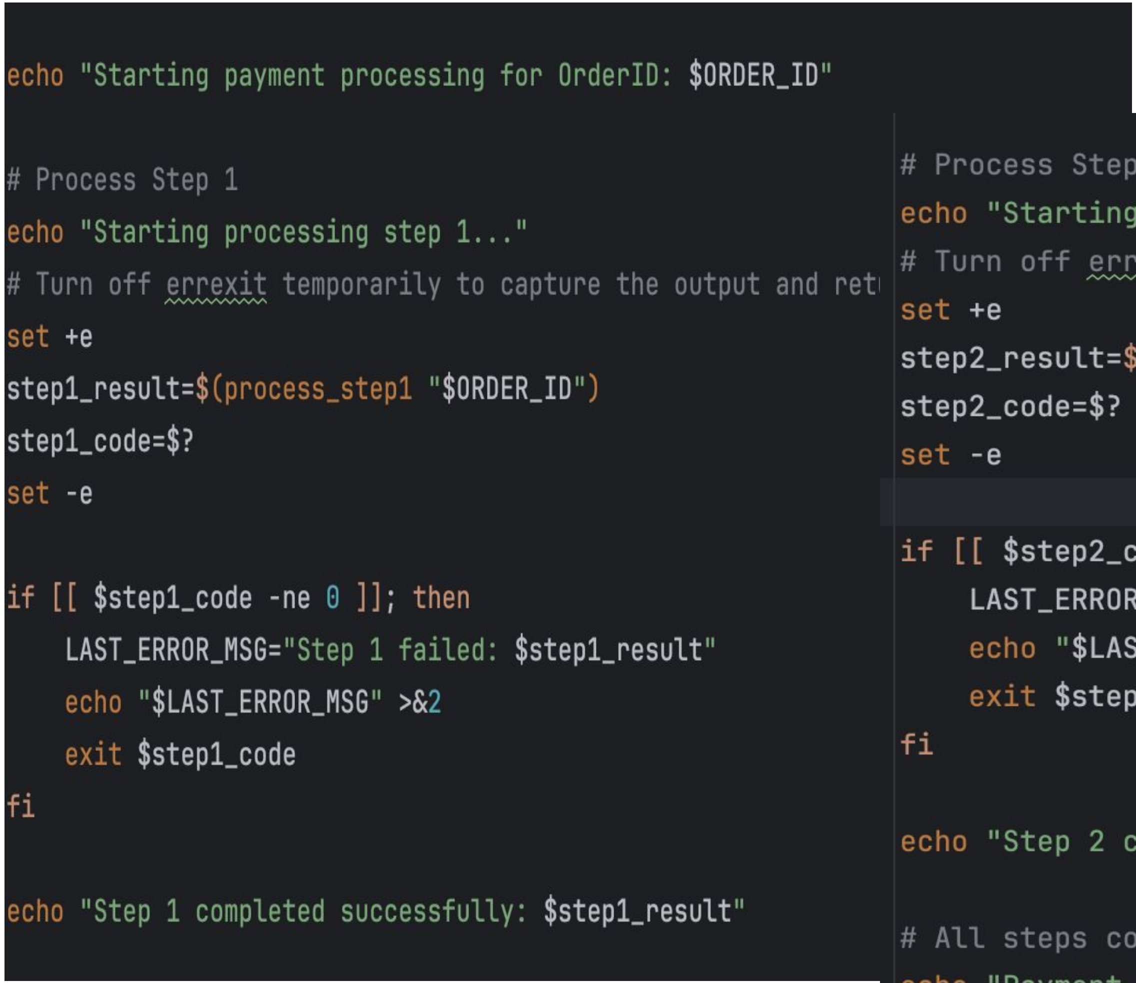
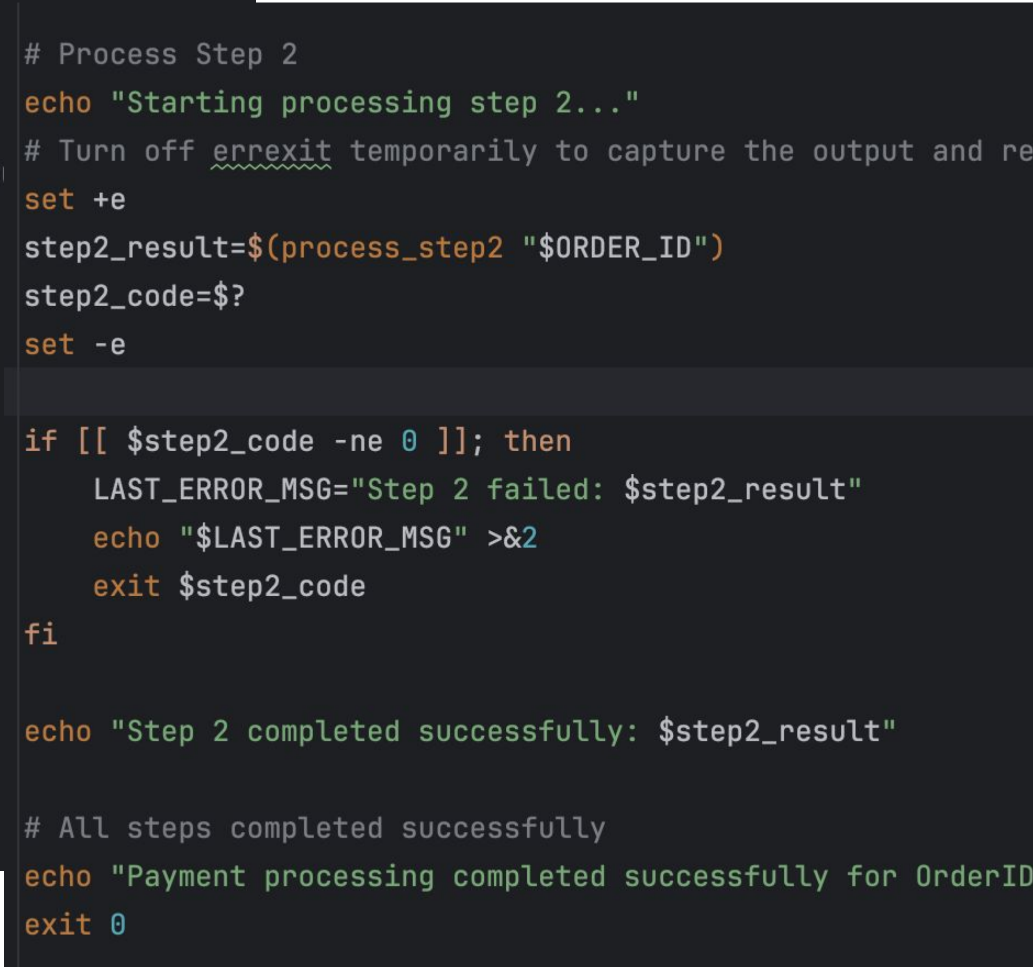


```
echo "Starting payment processing for OrderID: $ORDER_ID"

# Process Step 1
echo "Starting processing step 1..."
# Turn off errexit temporarily to capture the output and ret
set +e
step1_result=$(process_step1 "$ORDER_ID")
step1_code=$?
set -e

if [[ $step1_code -ne 0 ]]; then
    LAST_ERROR_MSG="Step 1 failed: $step1_result"
    echo "$LAST_ERROR_MSG" >&2
    exit $step1_code
fi

echo "Step 1 completed successfully: $step1_result"
```



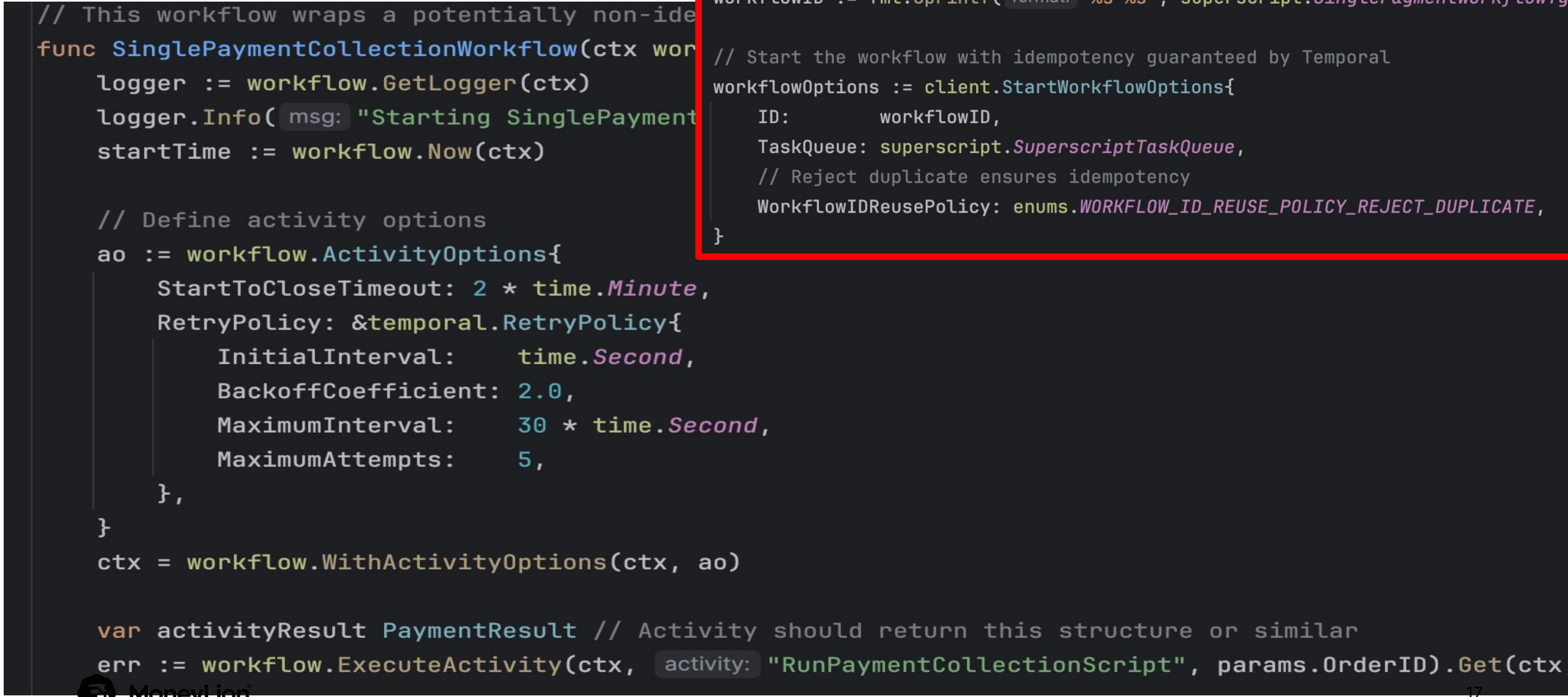
```
# Process Step 2
echo "Starting processing step 2..."
# Turn off errexit temporarily to capture the output and re
set +e
step2_result=$(process_step2 "$ORDER_ID")
step2_code=$?
set -e

if [[ $step2_code -ne 0 ]]; then
    LAST_ERROR_MSG="Step 2 failed: $step2_result"
    echo "$LAST_ERROR_MSG" >&2
    exit $step2_code
fi

echo "Step 2 completed successfully: $step2_result"

# All steps completed successfully
echo "Payment processing completed successfully for OrderID
exit 0
```

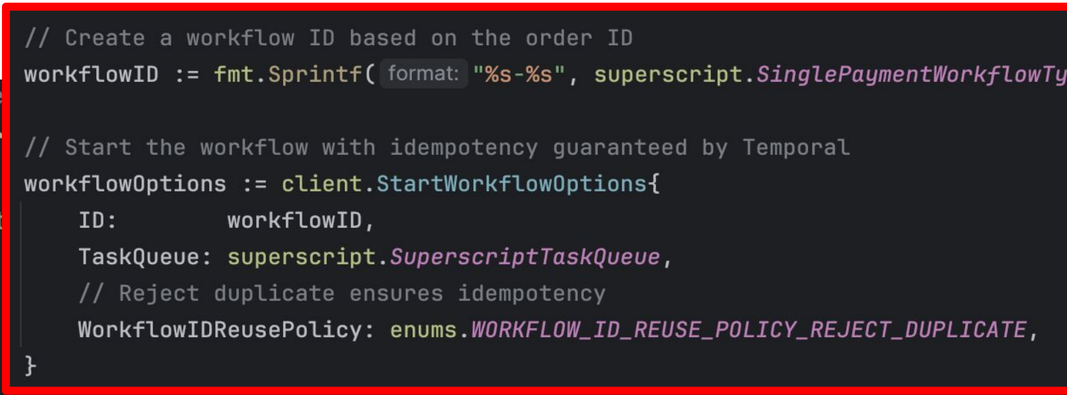
- Reuse Policy: **WORKFLOW_ID_REUSE_POLICY_REJECT_DUPLICATE**
- ActivityOptions to Retry



```
// This workflow wraps a potentially non-ide
func SinglePaymentCollectionWorkflow(ctx wor
    logger := workflow.GetLogger(ctx)
    logger.Info( msg: "Starting SinglePayment
    startTime := workflow.Now(ctx)

    // Define activity options
    ao := workflow.ActivityOptions{
        StartToCloseTimeout: 2 * time.Minute,
        RetryPolicy: &temporal.RetryPolicy{
            InitialInterval:    time.Second,
            BackoffCoefficient: 2.0,
            MaximumInterval:    30 * time.Second,
            MaximumAttempts:    5,
        },
    }
    ctx = workflow.WithActivityOptions(ctx, ao)

    var activityResult PaymentResult // Activity should return this structure or similar
    err := workflow.ExecuteActivity(ctx, activity: "RunPaymentCollectionScript", params.OrderID).Get(ctx
```



```
// Create a workflow ID based on the order ID
workflowID := fmt.Sprintf( format: "%s-%s", superscript.SinglePaymentWorkflowTy

// Start the workflow with idempotency guaranteed by Temporal
workflowOptions := client.StartWorkflowOptions{
    ID:         workflowID,
    TaskQueue: superscript.SuperscriptTaskQueue,
    // Reject duplicate ensures idempotency
    WorkflowIDReusePolicy: enums.WORKFLOW_ID_REUSE_POLICY_REJECT_DUPLICATE,
}
```

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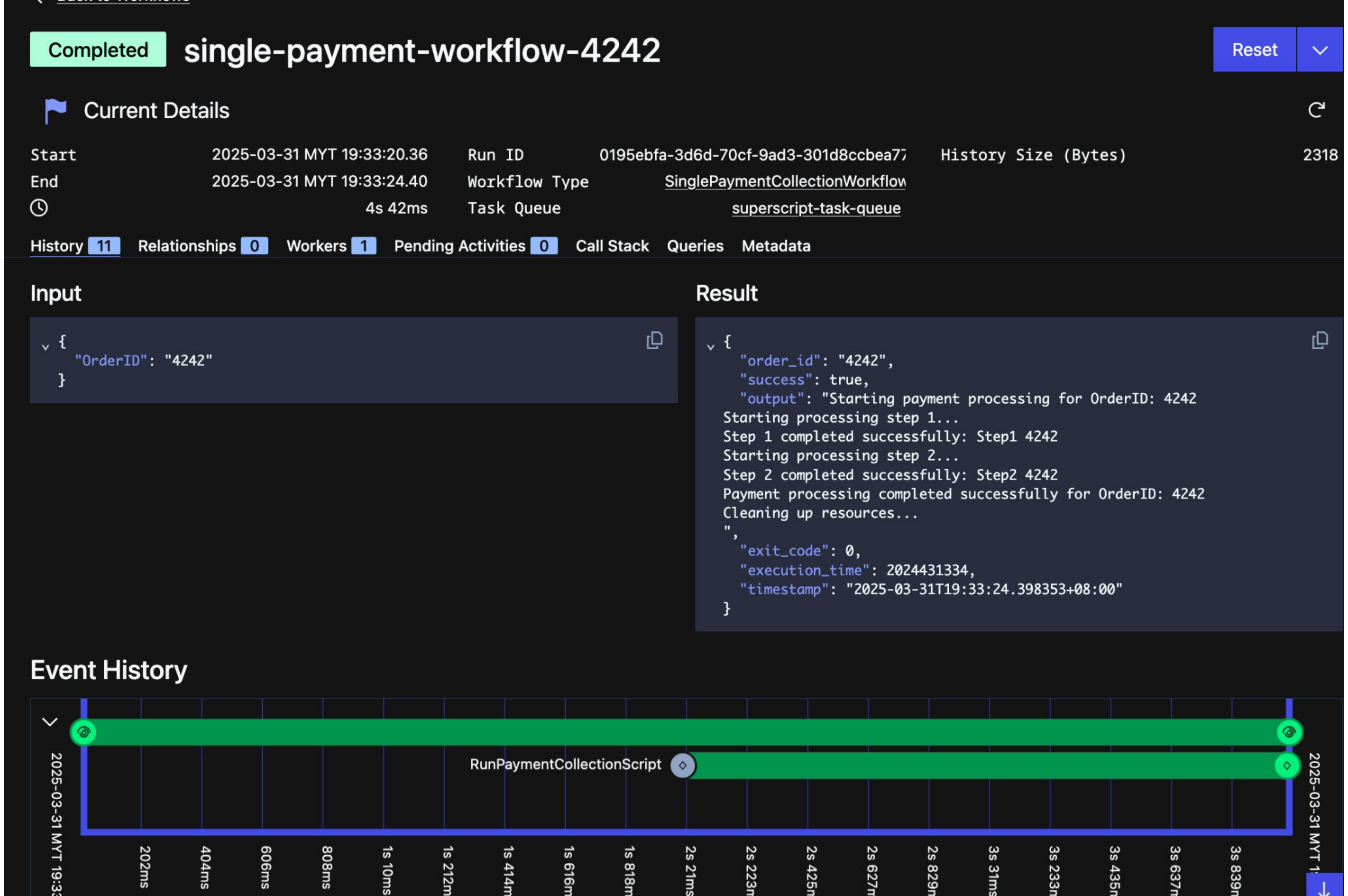


Completed single-payment-workflow-4242

Reset

Current Details

Start	2025-03-31 MYT 19:33:20.36	Run ID	0195ebfa-3d6d-70cf-9ad3-301d8ccbea77	History Size (Bytes)	2318
End	2025-03-31 MYT 19:33:24.40	Workflow Type	SinglePaymentCollectionWorkflow		
	4s 42ms	Task Queue	superscript-task-queue		

History 11 Relationships 0 Workers 1 Pending Activities 0 Call Stack Queries Metadata

Input

```
{
  "OrderID": "4242"
}
```

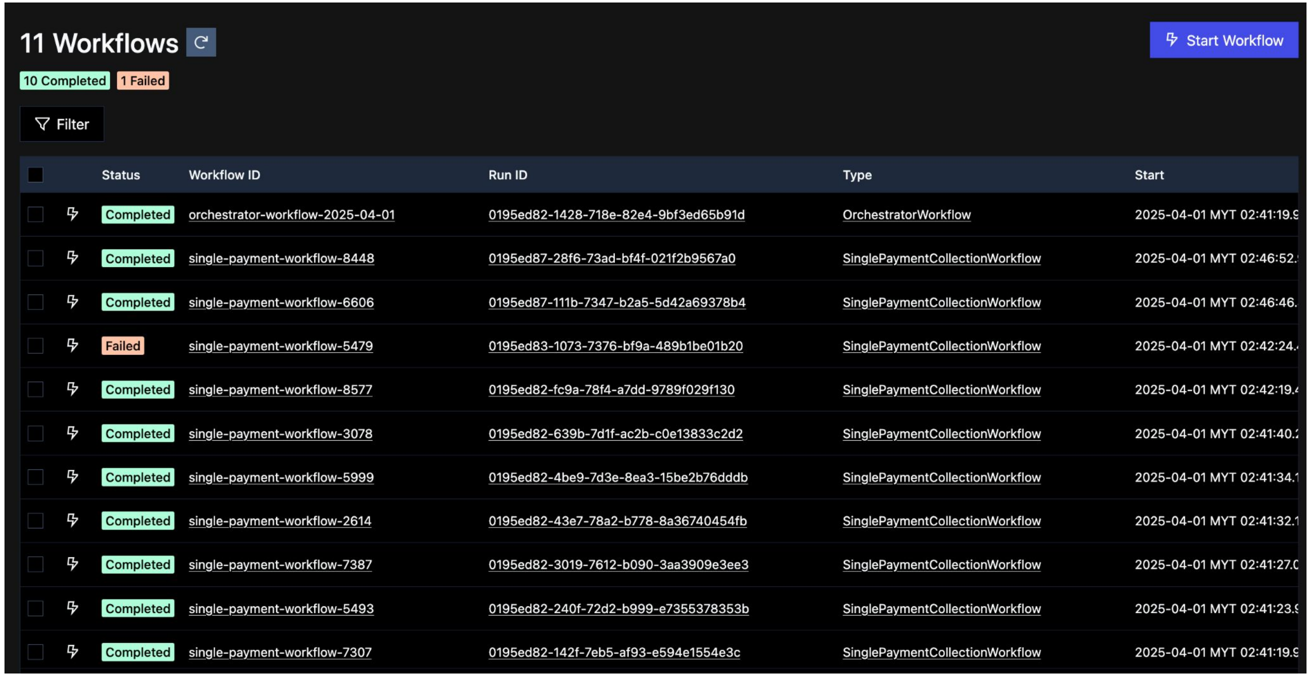
Result

```
{
  "order_id": "4242",
  "success": true,
  "output": "Starting payment processing for OrderID: 4242
Starting processing step 1...
Step 1 completed successfully: Step1 4242
Starting processing step 2...
Step 2 completed successfully: Step2 4242
Payment processing completed successfully for OrderID: 4242
Cleaning up resources...
",
  "exit_code": 0,
  "execution_time": 2024431334,
  "timestamp": "2025-03-31T19:33:24.398353+08:00"
}
```

Event History

Superscript Demo

- Real world is messy; but now under control - idempotent + auto-retry
- It may take time but run to completion successfully



11 Workflows

10 Completed 1 Failed

Status	Workflow ID	Run ID	Type	Start
Completed	orchestrator-workflow-2025-04-01	0195ed82-1428-718e-82e4-9bf3ed65b91d	OrchestratorWorkflow	2025-04-01 MYT 02:41:19.9
Completed	single-payment-workflow-8448	0195ed87-28f6-73ad-bf4f-021f2b9567a0	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:46:52.
Completed	single-payment-workflow-6606	0195ed87-111b-7347-b2a5-5d42a69378b4	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:46:46.
Failed	single-payment-workflow-5479	0195ed83-1073-7376-bf9a-489b1be01b20	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:42:24.
Completed	single-payment-workflow-8577	0195ed82-fc9a-78f4-a7dd-9789f029f130	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:42:19.
Completed	single-payment-workflow-3078	0195ed82-639b-7d1f-ac2b-c0e13833c2d2	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:41:40.
Completed	single-payment-workflow-5999	0195ed82-4be9-7d3e-8ea3-15be2b76dddb	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:41:34.1
Completed	single-payment-workflow-2614	0195ed82-43e7-78a2-b778-8a36740454fb	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:41:32.1
Completed	single-payment-workflow-7387	0195ed82-3019-7612-b090-3aa3909e3ee3	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:41:27.0
Completed	single-payment-workflow-5493	0195ed82-240f-72d2-b999-e7355378353b	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:41:23.9
Completed	single-payment-workflow-7307	0195ed82-142f-7eb5-af93-e594e1554e3c	SinglePaymentCollectionWorkflow	2025-04-01 MYT 02:41:19.9

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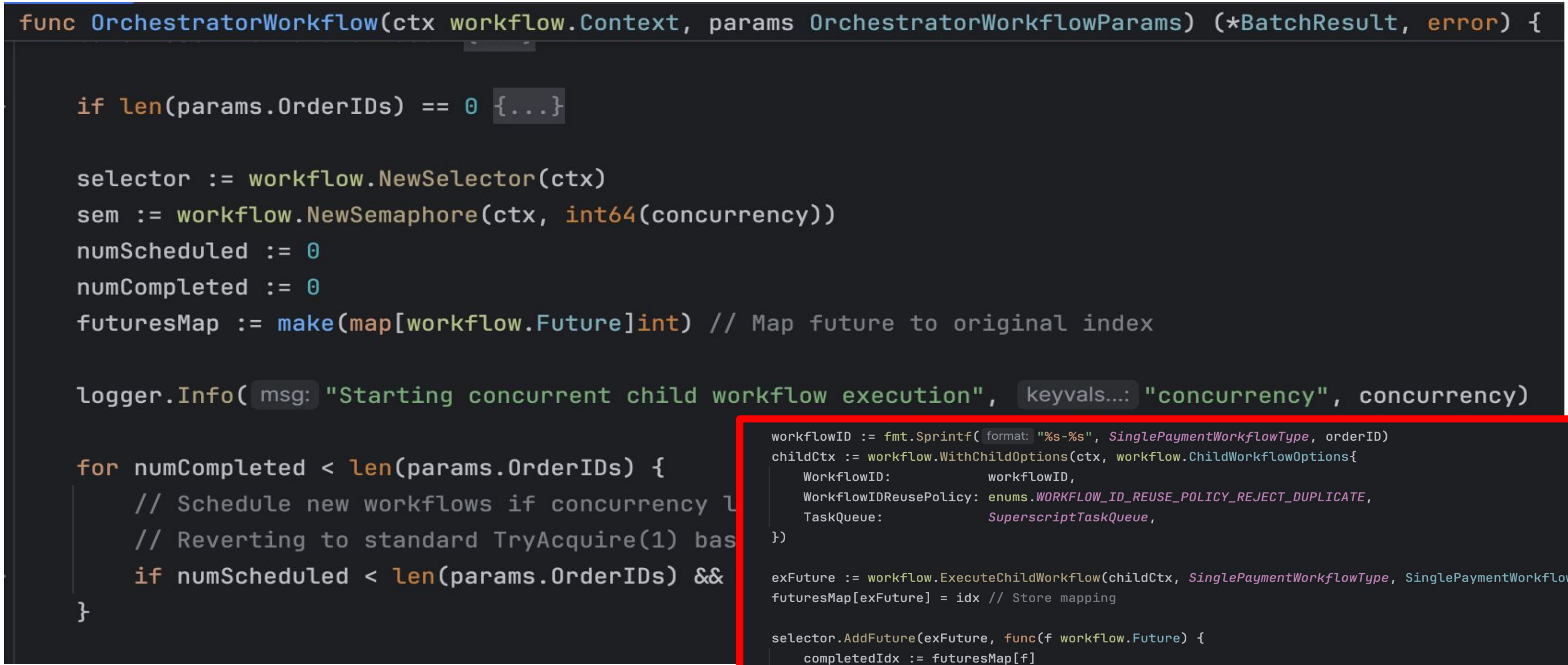
Superscript - Code / Flow

- Straight-forward, composable; calls earlier SinglePaymentWorkflow



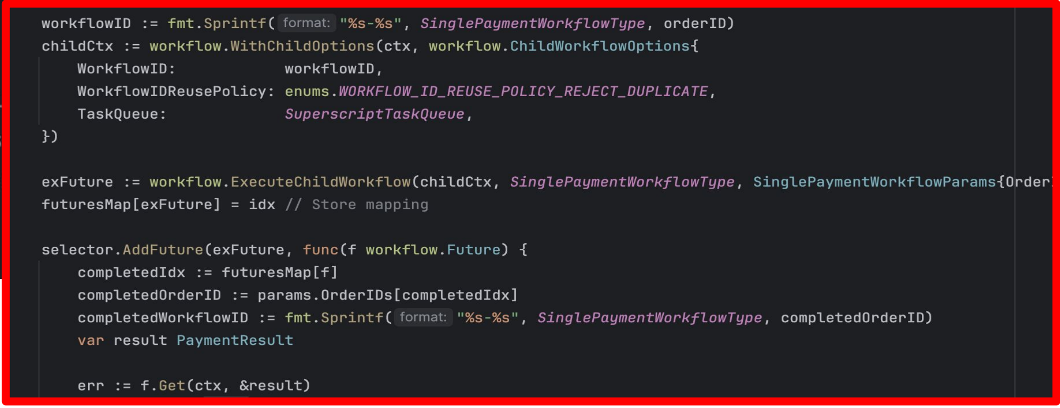
```go
func OrchestratorWorkflow(ctx workflow.Context, params OrchestratorWorkflowParams) (*BatchResult, error) {

    if len(params.OrderIDs) == 0 {...}

    selector := workflow.NewSelector(ctx)
    sem := workflow.NewSemaphore(ctx, int64(concurrency))
    numScheduled := 0
    numCompleted := 0
    futuresMap := make(map[workflow.Future]int) // Map future to original index

    logger.Info( msg: "Starting concurrent child workflow execution", keyvals...: "concurrency", concurrency)

    for numCompleted < len(params.OrderIDs) {
        // Schedule new workflows if concurrency l
        // Reverting to standard TryAcquire(1) bas
        if numScheduled < len(params.OrderIDs) &&
    }
```



```go
workflowID := fmt.Sprintf( format: "%s-%s", SinglePaymentWorkflowType, orderID)
childCtx := workflow.WithChildOptions(ctx, workflow.ChildWorkflowOptions{
    WorkflowID:             workflowID,
    WorkflowIDReusePolicy: enums.WORKFLOW_ID_REUSE_POLICY_REJECT_DUPLICATE,
    TaskQueue:              SuperscriptTaskQueue,
})

exFuture := workflow.ExecuteChildWorkflow(childCtx, SinglePaymentWorkflowType, SinglePaymentWorkflowParams{Order
futuresMap[exFuture] = idx // Store mapping

selector.AddFuture(exFuture, func(f workflow.Future) {
    completedIdx := futuresMap[f]
    completedOrderID := params.OrderIDs[completedIdx]
    completedWorkflowID := fmt.Sprintf( format: "%s-%s", SinglePaymentWorkflowType, completedOrderID)
    var result PaymentResult

    err := f.Get(ctx, &result)
```

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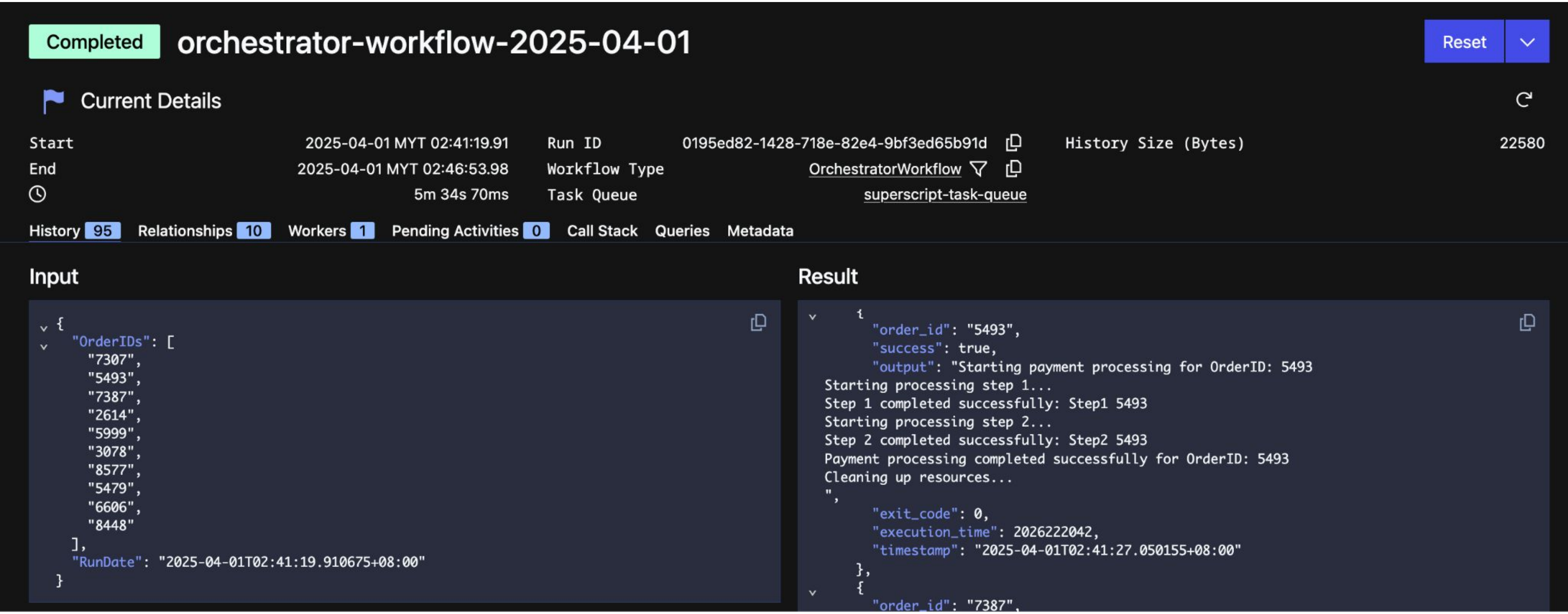


orchestrator-workflow-2025-04-01

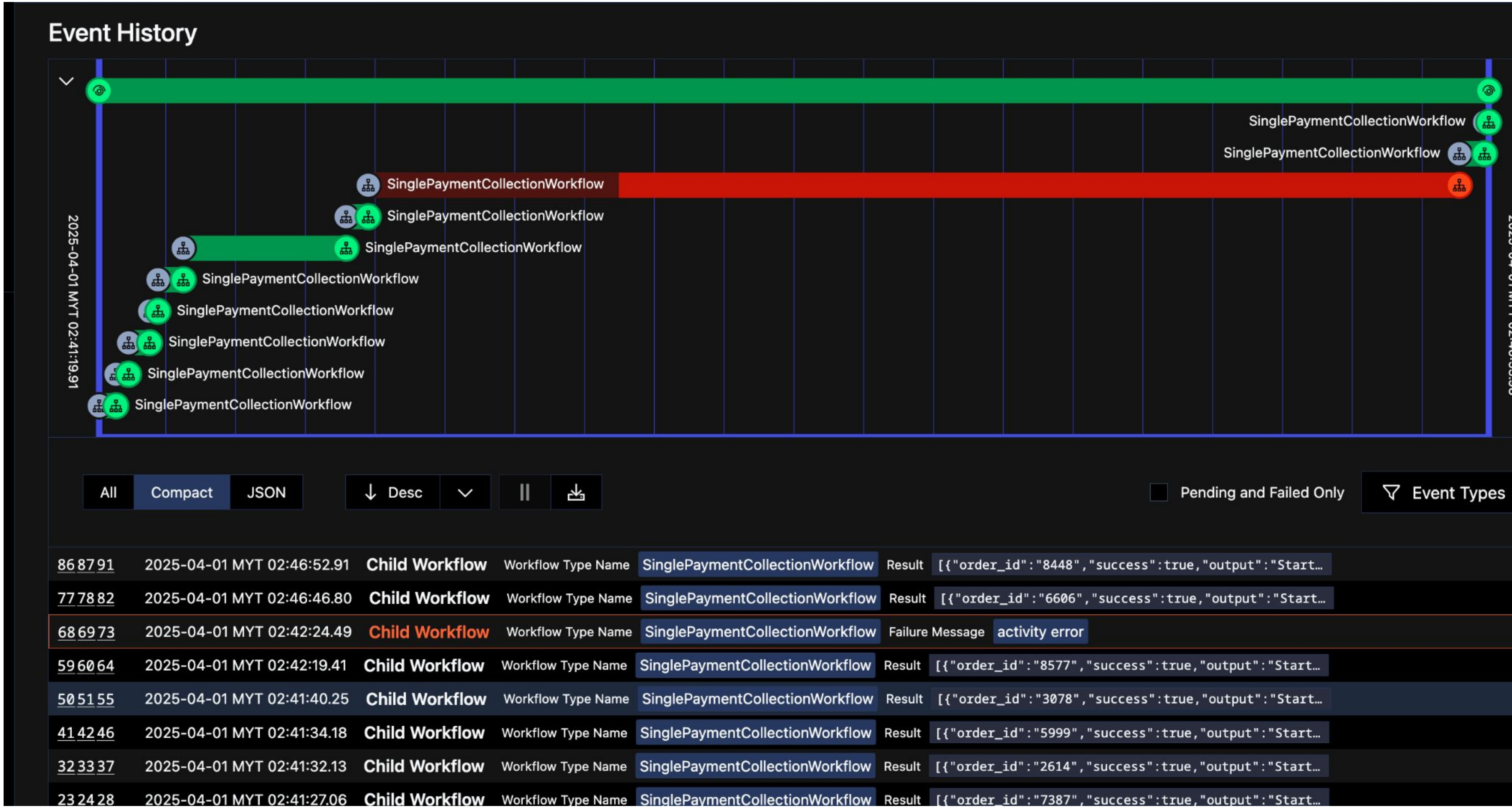
```
Start        2025-04-01 MYT 02:41:19.91   Run ID          0195ed82-1428-718e-82e4-9bf3ed65b91d   History Size (Bytes)   22580
End          2025-04-01 MYT 02:46:53.98   Workflow Type   OrchestratorWorkflow
             5m 34s 70ms                  Task Queue      superscript-task-queue
```

Input

```
{
  "OrderIDs": [
    "7307",
    "5493",
    "7387",
    "2614",
    "5999",
    "3078",
    "8577",
    "5479",
    "6606",
    "8448"
  ],
  "RunDate": "2025-04-01T02:41:19.910675+08:00"
}
```

Result

```
    {
      "order_id": "5493",
      "success": true,
      "output": "Starting payment processing for OrderID: 5493
Starting processing step 1...
Step 1 completed successfully: Step1 5493
Starting processing step 2...
Step 2 completed successfully: Step2 5493
Payment processing completed successfully for OrderID: 5493
Cleaning up resources...
",
      "exit_code": 0,
      "execution_time": 2026222042,
      "timestamp": "2025-04-01T02:41:27.050155+08:00"
    },
    {
      "order_id": "7387",
```


2025-04-01 MYT 02:41:19.91
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
SinglePaymentCollectionWorkflow
All
Compact
JSON
Desc
Pending and Failed Only
Event Types

Event History

86 87 91	2025-04-01 MYT 02:46:52.91	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"8448","success":true,"output":"Start…
77 78 82	2025-04-01 MYT 02:46:46.80	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"6606","success":true,"output":"Start…
68 69 73	2025-04-01 MYT 02:42:24.49	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Failure Message	activity error
59 60 64	2025-04-01 MYT 02:42:19.41	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"8577","success":true,"output":"Start…
50 51 55	2025-04-01 MYT 02:41:40.25	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"3078","success":true,"output":"Start…
41 42 46	2025-04-01 MYT 02:41:34.18	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"5999","success":true,"output":"Start…
32 33 37	2025-04-01 MYT 02:41:32.13	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"2614","success":true,"output":"Start…
23 24 28	2025-04-01 MYT 02:41:27.06	**Child Workflow**	Workflow Type Name	SinglePaymentCollectionWorkflow	Result	[{"order_id":"7387","success":true,"output":"Start…

04
Just In Time (JIT) Access + Demo

What is JIT?

Is it the same as break glass?

JIT vs Break glass

Use Cases of Just In Time(JIT)

Temporary AWS IAM Access

Gaining a temporary elevated role to perform a certain access on a Resource in AWS.

Temporary K8s Access

Temporary access to access k8s using IAM to perform elevated troubleshooting in the production environment cluster.

Temporary Access to approve Github Deployments

Temporary access to approve deployments when no one in the team is available to review and approve.

Temporary Database Access

Temporary access to a certain database (most likely production) to perform a certain change while being audited.

****Every JIT request must be audited & comply to the audit requirements.****

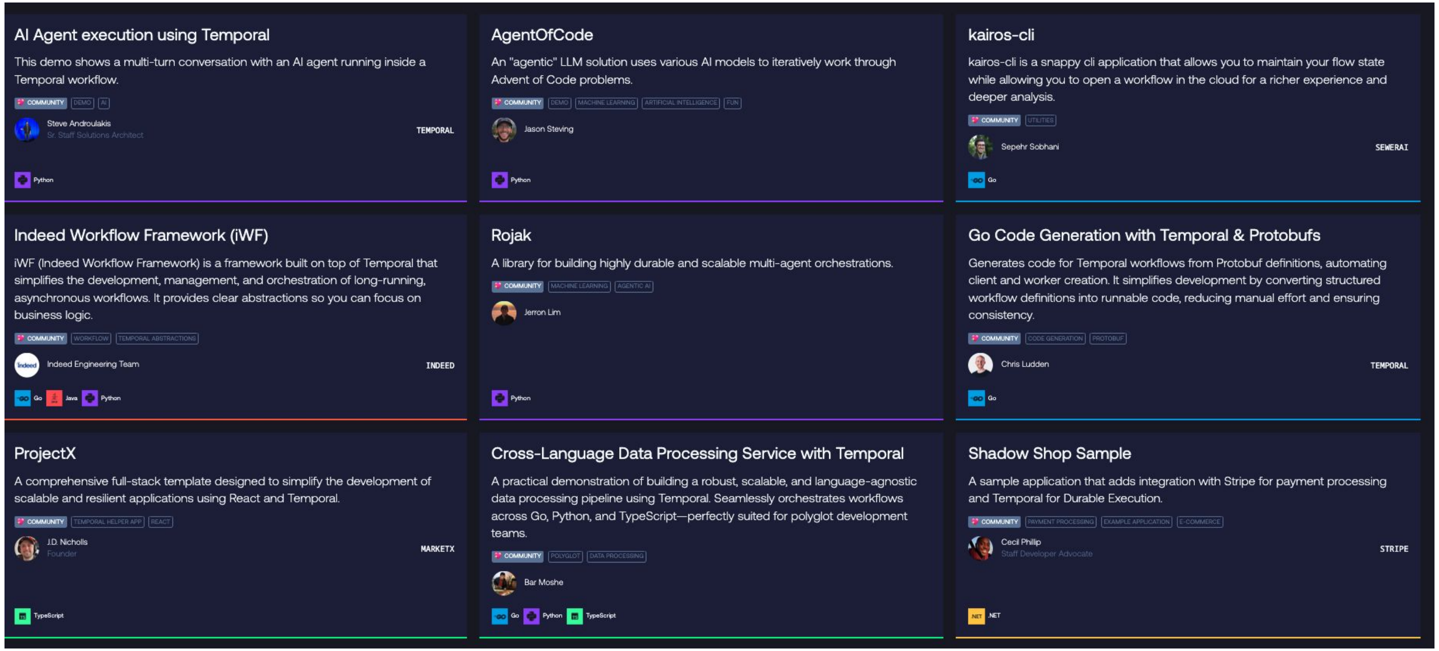
1. ***Ticket Tracked***
2. ***Required Approvers to approve requests***
3. ***Audit trail***
4. ***Access is automatically revoked after specific period of time.***

DEMO

05
Temporal Universe Expanded

Introducing: Temporal Code Exchange

Marketplace of ideas to study + learn from. Open to submission!
https://temporal.io/code-exchange



AI Agent execution using Temporal
This demo shows a multi-turn conversation with an AI agent running inside a Temporal workflow.
COMMUNITY DEMO AI
Steve Androulakis
Sr. Staff Solutions Architect
TEMPORAL
Python

AgentOfCode
An "agentic" LLM solution uses various AI models to iteratively work through Advent of Code problems.
COMMUNITY DEMO MACHINE LEARNING ARTIFICIAL INTELLIGENCE FUN
Jason Steving
Python

kairos-cli
kairos-cli is a snappy cli application that allows you to maintain your flow state while allowing you to open a workflow in the cloud for a richer experience and deeper analysis.
COMMUNITY UTILITIES
Sepehr Sobhani
SEWERAI
Go

Indeed Workflow Framework (iWF)
iWF (Indeed Workflow Framework) is a framework built on top of Temporal that simplifies the development, management, and orchestration of long-running, asynchronous workflows. It provides clear abstractions so you can focus on business logic.
COMMUNITY WORKFLOW TEMPORAL ABSTRACTIONS
Indeed Engineering Team
INDEED
Go Java Python

Rojak
A library for building highly durable and scalable multi-agent orchestrations.
COMMUNITY MACHINE LEARNING AGENTIC AI
Jerron Lim
Python

Go Code Generation with Temporal & Protobufs
Generates code for Temporal workflows from Protobuf definitions, automating client and worker creation. It simplifies development by converting structured workflow definitions into runnable code, reducing manual effort and ensuring consistency.
COMMUNITY CODE GENERATION PROTOBUF
Chris Ludden
TEMPORAL
Go

ProjectX
A comprehensive full-stack template designed to simplify the development of scalable and resilient applications using React and Temporal.
COMMUNITY TEMPORAL HELPER APP REACT
J.D. Nicholls
Founder
MARKETX
TypeScript

Cross-Language Data Processing Service with Temporal
A practical demonstration of building a robust, scalable, and language-agnostic data processing pipeline using Temporal. Seamlessly orchestrates workflows across Go, Python, and TypeScript—perfectly suited for polyglot development teams.
COMMUNITY POLYGLOT DATA PROCESSING
Bar Moshe
Go Python TypeScript

Shadow Shop Sample
A sample application that adds integration with Stripe for payment processing and Temporal for Durable Execution.
COMMUNITY PAYMENT PROCESSING EXAMPLE APPLICATION E-COMMERCE
Cecil Phillip
Staff Developer Advocate
STRIPE
.NET

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06
Alternatives to Temporal

Alternatives - Temporal

Crowded market ... who wins? Who has the best DX?

Restate (Go,Java,Python,Typescript, Rust)

https://docs.restate.dev/

DBOS (Typescript, Python)

https://www.dbos.dev/

Littlehorse (Go,Java,Python,Typescript,.NET)

https://littlehorse.io/

Golem Cloud (WASM)

https://www.golem.cloud/

Inngest (JS)

https://www.inngest.com/

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07
Q&A

Thank you

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