



BY Developers FOR Developers

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Resilient Workflow Automation in a Hybrid Cloud environment

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Agenda

- ❖ What is Workflow and Orchestration
- ❖ Resilient Workflow Definition
- ❖ Introduction to ‘Resilient workflow Automation (RWA)
- ❖ Why we need it
- ❖ How can it be solved
- ❖ Solution with SODA Orchestration
- ❖ High Level Design
- ❖ Demo
- ❖ Advantage Open Source
- ❖ Blueprint
 - *“The way to get started is to quit talking and begin doing Disney”*

- Walt

Workflows & Orchestration??

- Workflows are nothing but “*a sequence of tasks*”
- Workflow Orchestration is simply:

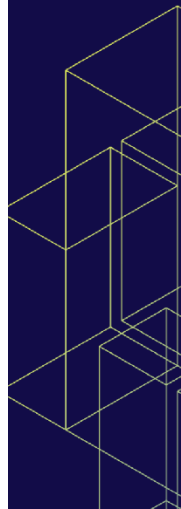
“*bundling the tasks and facilitating it for an organized flow to provide seamless service and meet the SLA*”

- Workflow definitions are **STATIC**
- Orchestration engines can be **NON -STATIC**
- An Orchestration Engine can change as per business need



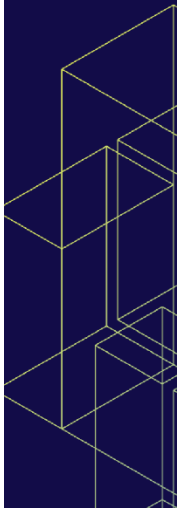
Resilient Workflow Definition

- Segregate Workflow service with the Engine
- Workflow definitions are Resilient as no need to change the definitions if Orchestration engine is replaced
- Simple Plug N Play



Introduction to RWA

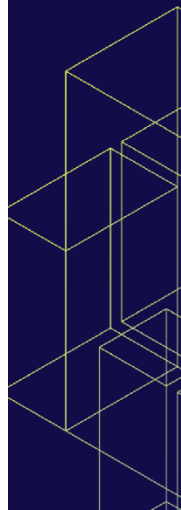
- Complex services in on -prem or cloud environment
- Need to define workflows and automate it
- Workflow orchestration is necessity
- Workflow Orchestration engine is necessary
- Segregate WF definition with WF Engine



Why we need it!!

Use case:

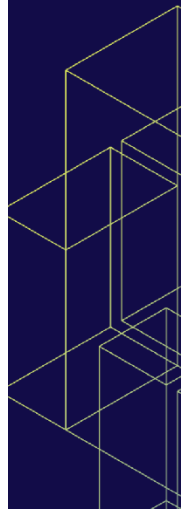
- Define Workflow *Once*, Use it *Anywhere*
- Workflow Orchestration engine agnostic
- Plug -n-Play with any engine
- Adaptive Framework



How!!

- Approach

- Framework to define Workflow definition
- Framework to instantiate instances of Workflow services
- Transparent to the underlying Orchestration Engine
- Change/migration of Orchestration engine doesn't affect the Workflow service instance
- Client is unaffected



Home

Resource overview

Profile

Profiles

Resource

Volumes / Buckets / File Share / Hosts

Dataflow

Through migration / replication capability.

Monitor

Telemetry information.

Services

Orchestration services.

Infrastructure

Regions, availability zones and storage.

Identity

Managing tenants and users

Service Catalog

Create and Manage Service Instances

Provisioning

volume provision

Number of instances : 1

Volume Service

▶ Create

☰ Instances

Migration

migration bucket

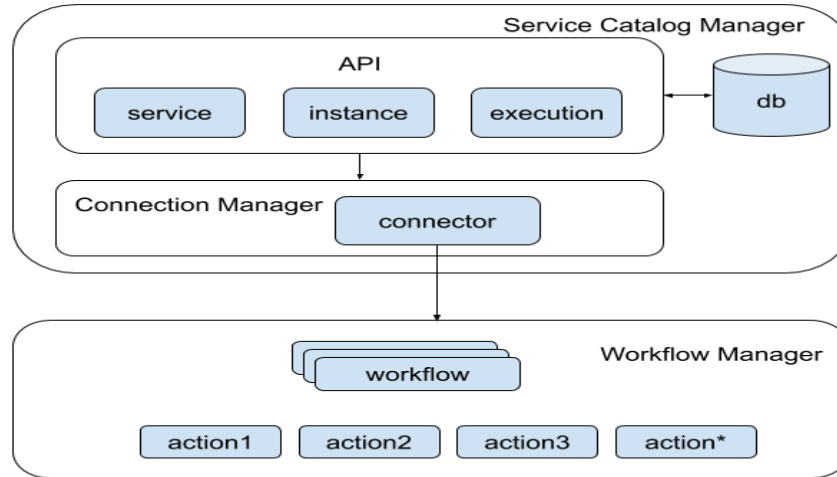
Number of instances : 0

Migration bucket Service

▶ Create

☰ Instances

High level design

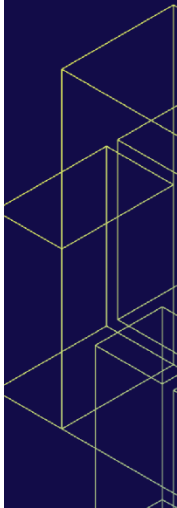


DEMO

The screenshot displays the SODA Service Catalog interface. The top navigation bar is blue and contains the 'soda' logo, a 'Start Tour' button, a 'Need Help?' button, and a 'Welcome admin' message with a location indicator for 'default_region'. A dark blue sidebar on the left lists navigation options: Home, Profile, Resource, Dataflow, Monitor, Services, Infrastructure, and Identity. The main content area is titled 'Service Catalog' and includes the subtitle 'Create and Manage Service Instances'. It features two expandable panels: 'Provisioning' and 'Migration'. The 'Provisioning' panel shows a 'volume provision' service with 2 instances and a 'Create' button. The 'Migration' panel shows a 'migration bucket' service with 0 instances and a 'Create' button.

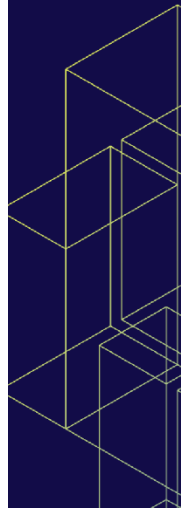
Advantage Opensource

- An Opensource Orchestration Framework
- Can be customized as per requirement
- Just define the actions for orchestration engine
- Developed and maintained by community
- No vendor lock-in



Blueprint

- <https://github.com/sodafoundation/orchestration>
- https://github.com/sodafoundation/design-specs/blob/master/specs/capri/orchestration_automation_design.md
- <https://github.com/sodafoundation>





Thank You

[<https://sodafoundation.io>]

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