

Meet the Maintainers

Service Mesh Interface



SMI Maintainers



Virtual



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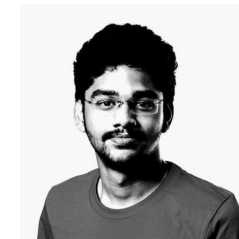
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***Present
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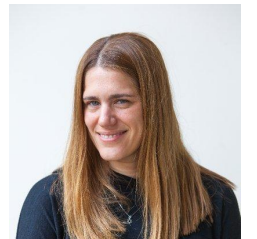
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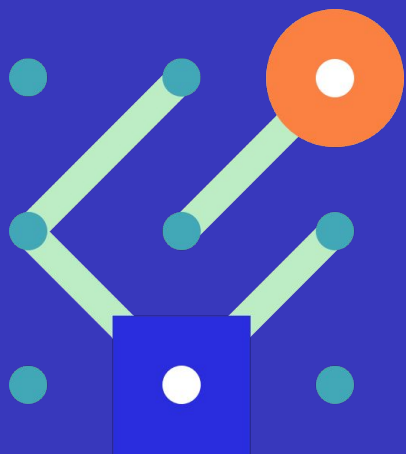
Jason Hansen

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Idit Levine

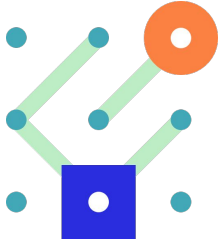
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Service Mesh Interface

Introduction

Service Mesh Interface



SMI aims to provide:

- A standard interface for service meshes on Kubernetes
- Basic Feature set for most common service mesh use cases
- Flexibility to support new service mesh capabilities over time
- Space for the ecosystem to innovate with service mesh technology

Service Mesh Interface



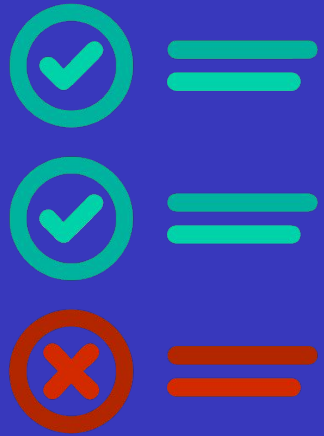
North America 2020

GOAL

SMI Specs are to provide a common, portable set of Service Mesh APIs which a Kubernetes user can use in a provider agnostic manner.

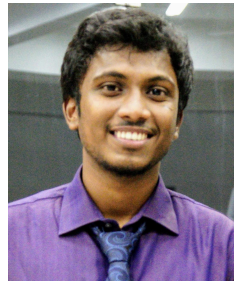
SPECIFICATIONS

1. Traffic Access Control
2. Traffic Metrics
3. Traffic Specs
4. Traffic Split



SMI Conformance

Deep-Dive



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Conformance Testing

Validating compliance with Meshery



Virtual

Operate and upgrade with confirmation of SMI compatibility.

- ✓ [Meshery](#) as the service mesh manager to orchestrate conformance testing.
- ✓ Defines compliant behavior.
- ✓ Produces compatibility matrix.
- ✓ Ensures provenance of results.
- ✓ Runs a set of conformance tests.
- ✓ [Learn Layer5](#) sample application used for validating test assertions.
- ✓ To be built into participating service mesh's release pipeline.

[Project Overview](#) | [Issue #70](#) | [Design spec](#)

The screenshot displays the Meshery Conformance dashboard. The left sidebar contains navigation links: Performance, Results, Conformance, SMI Results, Management, Consul, Istio, Linkerd, Network Service Mesh, Octarine, Citrix Service Mesh, Open Service Mesh, Kuma, NGINX Service Mesh, and Community. The main content area is titled 'Conformance' and shows 'Service Mesh Interface Conformance Results'. It lists two test runs, each with a table of results.

ID	Date	Service Mesh	Service Mesh Version	% Passed	Status																												
b749f...	Thursday, October 22, 2020 8:59 PM	Open Service Mesh	v0.3.0	0	completed																												
<table border="1"><thead><tr><th>Specification</th><th>Assertions</th><th>Time</th><th>Version</th><th>Capability</th><th>Result</th><th>Reason</th></tr></thead><tbody><tr><td>traffic-access</td><td>10</td><td>15.775600146s</td><td>alpha1/v1</td><td>Full</td><td>Passing</td><td></td></tr><tr><td>traffic-split</td><td>8</td><td>35.849463067s</td><td>alpha1/v1</td><td>Full</td><td>Passing</td><td></td></tr><tr><td>traffic-spec</td><td>12</td><td>1m 16.7s</td><td>alpha1/v1</td><td>Half</td><td>Failing</td><td>no matches for kind "TrafficTarget" in version "access.smi-spec.io/v1alpha1"</td></tr></tbody></table>						Specification	Assertions	Time	Version	Capability	Result	Reason	traffic-access	10	15.775600146s	alpha1/v1	Full	Passing		traffic-split	8	35.849463067s	alpha1/v1	Full	Passing		traffic-spec	12	1m 16.7s	alpha1/v1	Half	Failing	no matches for kind "TrafficTarget" in version "access.smi-spec.io/v1alpha1"
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e3779...	Thursday, October 22, 2020 7:32 PM	Open Service Mesh	v0.3.0	0	completed																												
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Built with ❤ by the Layer5 Community

Conformance Results

Provenance and Publishing



KubeCon










CloudNativeCon

North America 2020

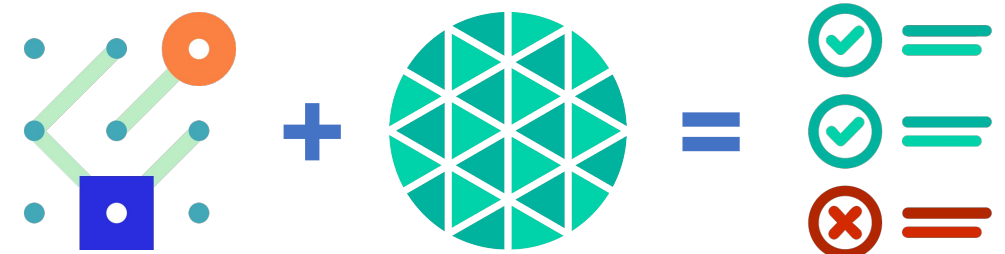
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Detailed Compliance Reports

a compatibility matrix identifying the SMI specs that are supported per service mesh per version

Service Mesh	Mesh Version	Traffic Access	Traffic Split	Traffic Spec	% Passed
	v0.3	✓	✓	✓	100%
	v1.7	✓	✓	✓	100%
	v2.9	✗	✓	✓	66%
	v1.4	✓	✓	✗	66%
	v0.7	✗	✗	✗	0%
	v1.8	✗	✗	✗	0%
	n/a	✗	✗	✗	0%

- Currently 24 Assertions Overall.
 - Many more to be defined
- Assertions preconfigured to define expectations if needed from other sources than the response
 - Assertions connects to prometheus instance for Metrics Specs validation
- [Learn Layer5](#) used as the sample service mesh workload.



Call for Participation

- Meet on every other Wednesday at 10-10:30AM PT
- Read the meeting minutes.
- Connect us on the Slack Channel (#smi).
- Join the SMI-MAINTAINERS mailer at lists.cncf.io

