

LAYER5

Expect more from your infrastructure

Hacktoberfest Prep: Easing into Cloud Native Open Source Projects



LAYER5



HACK
TOBER
FEST

Hacktoberfest Prep



Gaurav Chadha - Layer5 Overview (5 min)

- Welcome and introduction to Layer5's community
- Our history with Hacktoberfest
- This year's theme includes the Meshery Docker Extension

Sahil Suman - Navigating your first issue (10 min)

- My story

Nikhil Ladha - The Mechanics of Contributing (20 min)

- Overview of layer5.io site structure and the framework used.
- Demo a fix in layer5.io which includes:
 - Code semantics
 - Site build
 - Commit sign-off
 - Lint checks

Harshit Dandryl - Finding and Landing Your Issue Assignment (5 min)

- Using GitHub labels effectively; Searching across GitHub Orgs
- Polluting poking a well-intentioned issue squatter
- Suggesting your own issues

Ashish Tiwari - Get "GO"ing with Meshery (5 min)

- Quick overview of Meshery architecture
- Navigating through Meshery's source code
- How and where to contribute first for gophers?

Abhi Kumar - Your Cloud Native Catalog (5 min)

- Meshery Catalog - Designs, Applications, Filters

Anita Ihuman - Joining the Layer5 Community (5 min)

- How to join the community
- New members form
- Accessing resources

Alexis Abakasanga - Contributing impactfully as a Designer (5 min)

- Layer5's Design File
- Contribution Guidelines

Gaurav Chadha - Conclusion

- Jump in!

...with guest Contributors

Pranav Singh and Kamal Singh



Gaurav Chadha

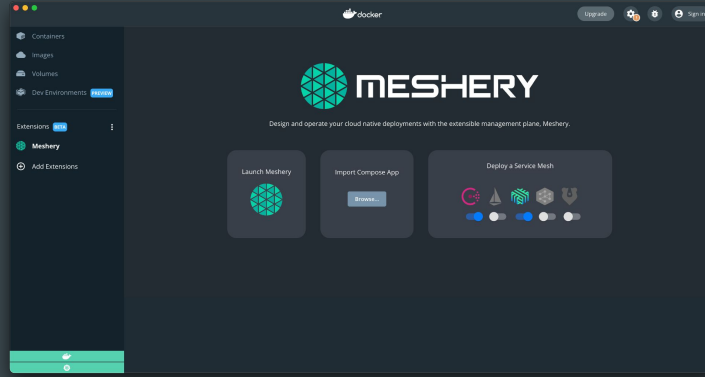
Software Engineer Intern and Meshmate at

LAYER5

layer5.io/community/members/gaurav-chadha



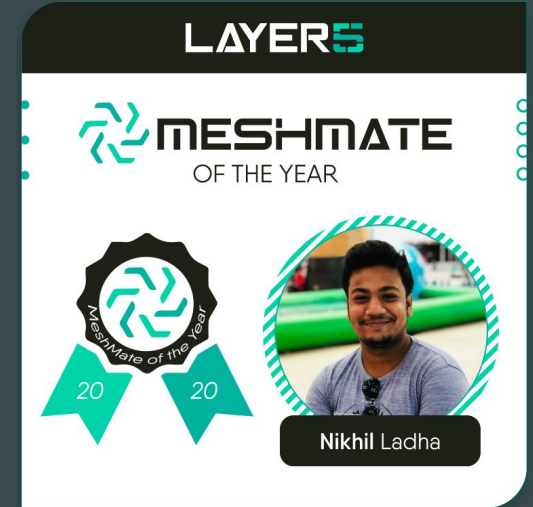
Get Started with Layer5



Docker Extension for Meshery



Newcomer
Onboarding
Program



Open Source
programs



GSoD



LFX



MLH



GSoC

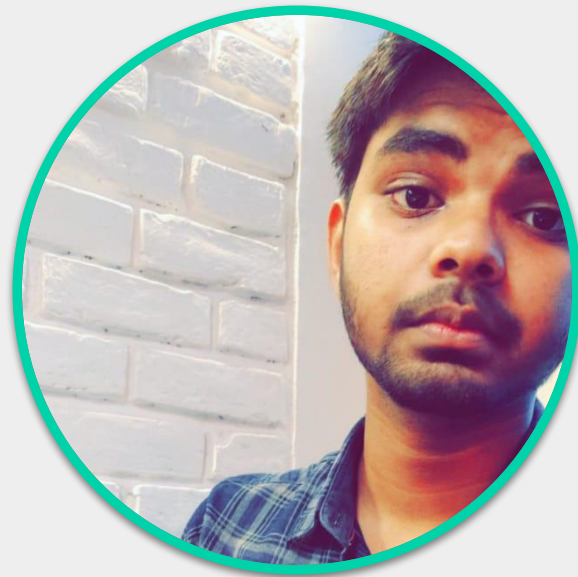


She Code Africa

Sahil Suman

Software Engineer Intern at **LAYER5**

layer5.io/community/members/sahil-suman/



Navigating your first issue



From zero to contributing

- **First time contributing to open-source? How to start?**
 - *What type of issues shall I take up?* 🤔
- **Confused where to add the fix?**
 - *How to navigate through a large codebase* 😞
- **Take some time, settle-in** 🤔
 - *Understand the code, the "why's" and "how's"*
- **Kaboom!**
 - *You are through!* 🚀



Nikhil
Ladha

Software Engineer at  Red Hat
Maintainer and Meshmate at **LAYER5**

layer5.io/community/members/nikhil-ladha



The Mechanics of Contributing

layer5.io site structure and frameworks



Code Semantics

- *Understand which component to use and when.*

Reuse.

- *Consistency = quality.*
- *Consistency = faster PR merge times.*

Build and Preview

- *Await your deploy preview and review changes.*



Give your John Hancock.

- *Commit your changes (with sign-off, i.e, DCO)*

Buckle up. Preflight check.

- *Review and fix any failing build checks like eslint checks, while you **patiently** await another contributor or maintainer to offer feedback.*

Grammar counts.

- *Craft a meaningful PR title and push with your changes inside.*

Harshit Dandriyal

Software Engineer Intern at **LAYERS**

layer5.io/community/members/harshit-dandriyal



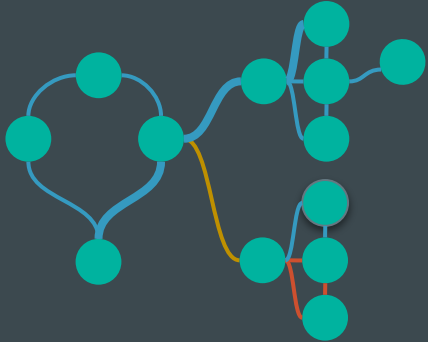
Not Finding a Code-based Issue to Work On?



1. Run the project by following the documentation, then you can start finding issues on your own.

2. No-code contribution by finding an issue to make the project better or you can also assign that issue to yourself by asking from maintainers.

3. You can still create a blog, work on the design, edit project documents, and welcome new participants.



Abhi Kumar

Software Engineer and Maintainer at

LAYERS

layer5.io/community/members/abhishek-kumar





Discover best practices. Publish design patterns.

Meshery Catalog



Users can share:

- Operational designs
- Network Filters
- Governance Policies
- Mesh Add-ons



Teams can:

- Create private catalogs visible only to your teams and approved by your org.



Advanced users can:

- Build your WASM Filters and eBPF Programs



WASM Filters


Service Patterns

eBPF Programs


OPA Policies

TRAFFIC MGMT

Singleton Queue




WEBASSEMBLY


 MESHERY023

SECURITY

Sesion Autorizer




WEBASSEMBLY

 MESHERY019

TRAFFIC MGMT

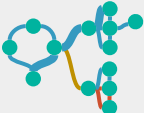
Circuit Breaker



MESHERY003

RESILIENCY

Retries



MESHERY012

OBSERVABILITY


L7 Traces



MESHERY045

SECURITY


L7 Denial



MESHERY046

OBSERVABILITY


Correlate Event



MESHERY055

SECURITY


Single Tenant




MESHERY059

TRAFFIC MGMT

JWT Transformer



WEBASSEMBLY

 MESHERY034

OBSERVABILITY

HTTP Metrics

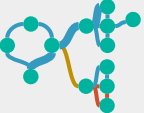


WEBASSEMBLY

 MESHERY028

SECURITY

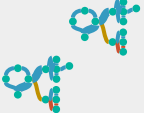
Mutual TLS



MESHERY014

DEPLOYMENT


Multi-Cluster



MESHERY013

RESILIENCY

Retry Deadline



MESHERY044

DEPLOYMENT


Node Agent



MESHERY043

RESILIENCY


Only w/Agent



MESHERY057

DEPLOYMENT

Pre-provision



MESHERY056

Create

MeshMap Designer



Meshery Applications

Import Docker Compose apps, Helm Charts, or Kubernetes Manifests for visual configuration

WebAssembly Filters

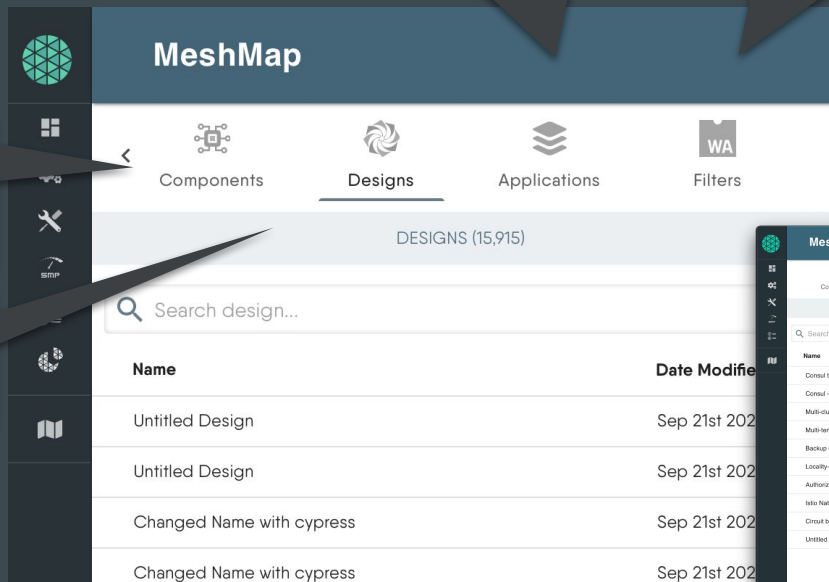
Import, configure, chain, and deploy your WASM filters

Cloud Native Components

Hundreds of versioned components to choose from

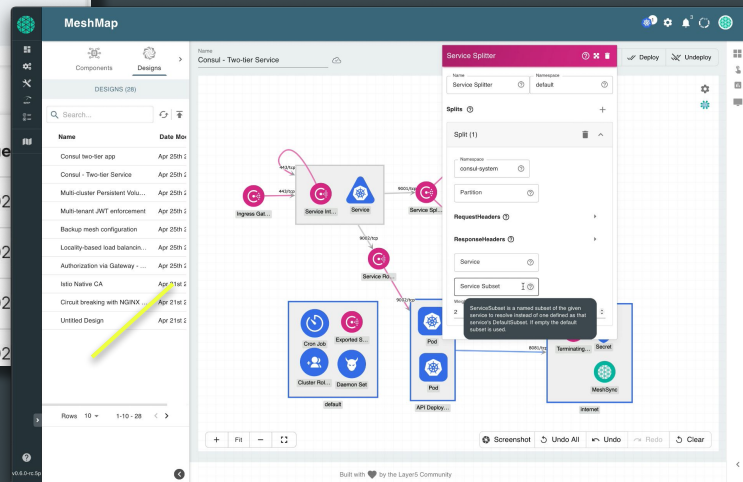
Designs and Patterns

Compose designs. Reuse designs as patterns.



The MeshMap interface shows a navigation bar with icons for Components, Designs, Applications, and Filters. The 'Designs' tab is active, displaying a list of 15,915 designs. A search bar is present above the list. The list has columns for Name and Date Modified.

Name	Date Modified
Untitled Design	Sep 21st 2022
Untitled Design	Sep 21st 2022
Changed Name with cypress	Sep 21st 2022
Changed Name with cypress	Sep 21st 2022



The MeshMap interface shows a detailed view of a service mesh configuration. The main area displays a diagram with nodes for Ingress Gateway, Service Mesh, Service Splitter, and Service. A 'Service Splitter' configuration panel is open on the right, showing settings for 'Split (1)' and 'Request Headers'. A 'Service Subject' configuration panel is also visible, showing a list of subjects. The bottom of the interface shows a 'Revs' section with a list of revisions.

Operate

MeshMap Visualizer



MeshMap

View Selector: Single Cluster | Kinds: DaemonSet, Pod | Namespaces: meshery, linkerd

Search...

METRICS FOR MESHERY-MESHSYNC-77667F87DD-WBQC9

Friday, April 8, 2022 7:39 PM - now, 10s

Custom Pod Metrics

Pod CPU Utilization

Pod Memory Utilization

```
Log: meshery-brooker-0
[meshery-brooker-0:reloader] 2022-04-08T19:10:10.993179652Z [9] 2022/04/08 19:10:10 Starting
NATS Server Reloader v0.6.0@git
[meshery-brooker-0:nats] 2022-04-08T19:10:10.799523978Z [9] 2022/04/08 19:10:10.799330 [
[NF] Starting nats-server version 2.1.9
[meshery-brooker-0:nats] 2022-04-08T19:10:10.799554838Z [9] 2022/04/08 19:10:10.799399 [
[NF] Git commit: [7c76626]
[meshery-brooker-0:nats] 2022-04-08T19:10:10.803857541Z [9] 2022/04/08 19:10:10.803506 [
[NF] Starting http monitor on 0.0.0.0:8222
[meshery-brooker-0:nats] 2022-04-08T19:10:10.803873124Z [9] 2022/04/08 19:10:10.803580 [
[NF] Listening for client connections on 0.0.0.0:4222
[meshery-brooker-0:nats] 2022-04-08T19:10:10.803891632Z [9] 2022/04/08 19:10:10.803587 [
[NF] Server id is MBOUW47264K30W6V4Y0C533163K0W6V255AWX206N9V2383YVX
[meshery-brooker-0:nats] 2022-04-08T19:10:10.803878747Z [9] 2022/04/08 19:10:10.803588 [
[NF] Server is ready
|
```

Historical Performance Metrics
Sliding window of past performance

Real-time Performance Metrics
Object-specific metrics and alerts

Interactive Terminal
Establish sessions with one or more pods at-a-time

Log Stream
Live tail a stream of logs from one or more pods at-a-time. Apply search filter for log keywords.

Ashish Tiwari

Software Engineer and Maintainer at
LAYER5

layer5.io/community/members/ashish-tiwari/

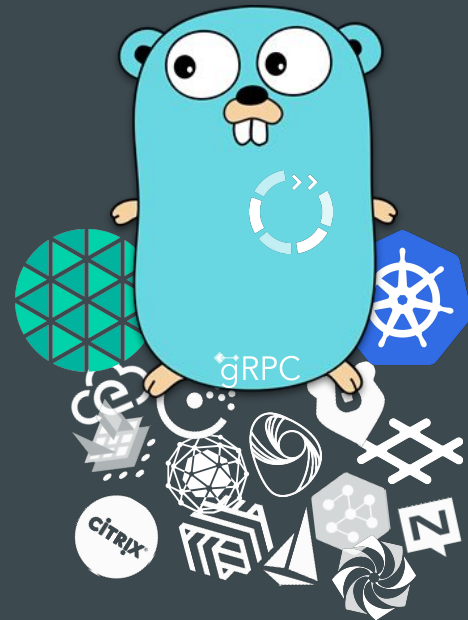




Get “Go”ing with Meshery



- Quick overview of [Meshery Architecture](#)
- Navigating Meshery source code
 - mesheryctl, Meshery Server, Adapters,
 - Operator, MeshSync
- How and where to start contributing for Gophers?
 - End to End workflows
 - Propagating changes across adapters





Anita
Ihuman

MeshMate at Layer5

layer5.io/community/members/anita-ihuman



Join the Layer5 Community!



Where do I start?

- Jump into our [slack](#)
- Go over our beginner guides
- Ask a [Meshmate](#) questions

How do I become a member?

- Community [Members Form](#)
- [Member profiles](#)
- Attend our [meetings](#)

Where do I find an area to contribute?

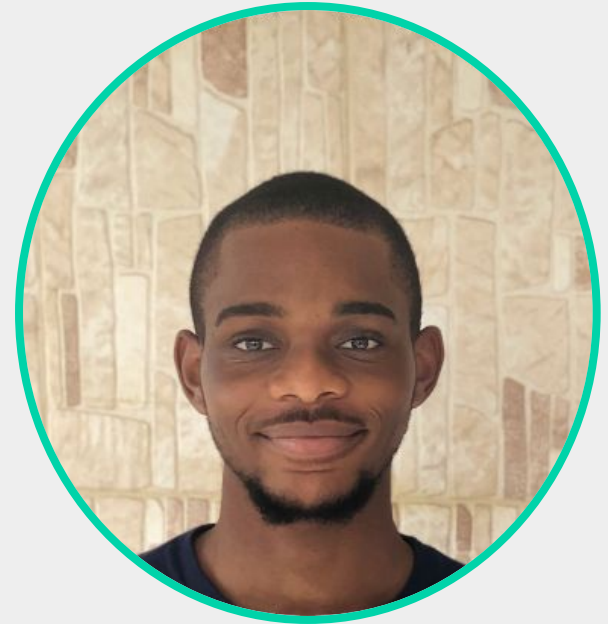


- Explore the [GitHub repositories](#)
- Request an issue
- Create an issue
- Jump on discussions in the forum, slack, & meetings

Alexis Abakasanga

UX Designer at Layer5

layer5.io/community/members/alexis-abakasanga



Contributing impactfully as a UX Designer



- **Layer5 Figma Design Files**

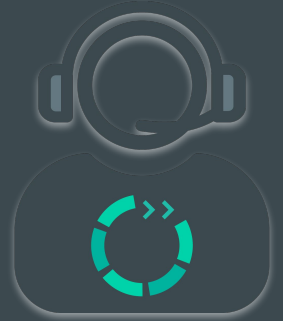
The home of all Layer5 projects, all hands on deck with design issues are just a comment away.

<https://www.figma.com/file/5ZwEkSjwUPitURD59YHMEN/Layer5-Designs?node-id=1869%3A2967>

- **Contribution Guidelines**

These are important in-order to facilitate and maintain impactful design contributions moving forward.

<https://www.figma.com/file/5ZwEkSjwUPitURD59YHMEN/Layer5-Designs?node-id=5310%3A0>





#1 Most Popular Project
in Linux Foundation Mentorship Program



Participate!
It's Hacktoberfest every month at
Layer5



github.com/layer5io



twitter.com/layer5



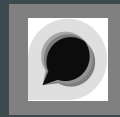
linkedin.com/company/layer5



slack.laye5.io

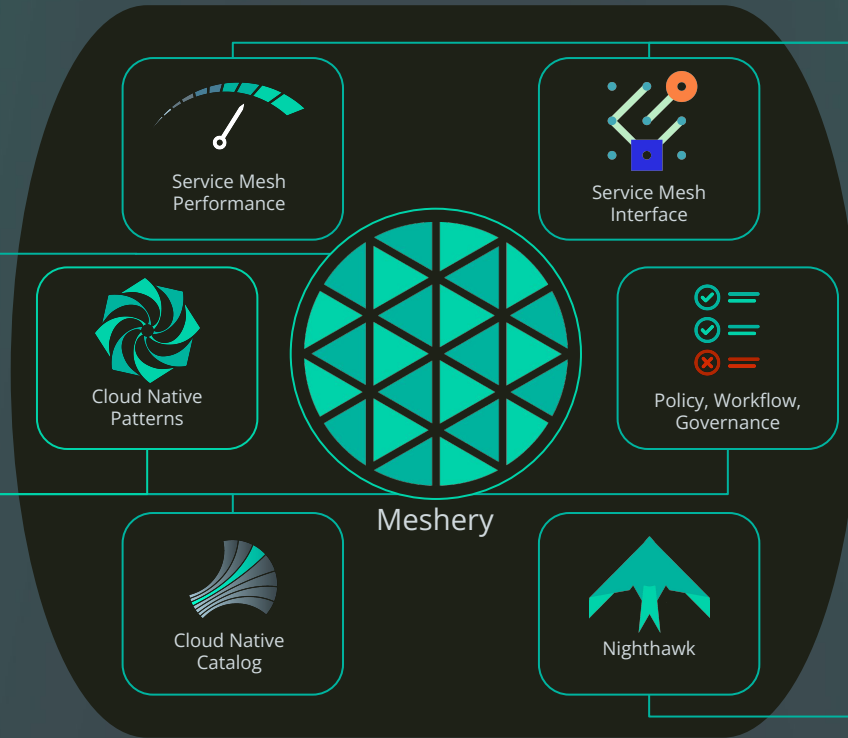


youtube.com/c/Layer5io



discuss.layer5.io

LAYER 5



Define and Enforce
Service Mesh Standards



The Only Openly Governed
Cloud Native Manager



Best Practice Patterns
and Templates



Advanced Performance
Analysis and Intelligence





LAYERS **SS**