Great! Starting with just discovery-server, auth-service, and cart-service is a smart and manageable way to begin your Kubernetes journey.

Let’s break this into steps to deploy these three services on Minikube:

**✅ Step 1: Prerequisites Check**

Ensure the following are working:

1. ✅ minikube start works
2. ✅ kubectl get pods returns results (even if empty)
3. ✅ Docker images for each service are either:
   * Built locally and pushed to Minikube Docker daemon, or
   * Pushed to a remote registry (e.g., Docker Hub or GitHub Container Registry)

Let me know how you'd like to handle image builds.

**🛠 Step 2: Structure for Each Service**

Each service will need:

1. **Dockerfile** (you already have)
2. **Kubernetes manifests**:
   * deployment.yaml
   * service.yaml
3. For discovery-server, add a **headless service or cluster IP** and expose port 8761.
4. For internal services like auth-service and cart-service, we expose via ClusterIP or later via Ingress.

**📦 Example Folder Structure**

k8s/

├── discovery-server/

│ ├── deployment.yaml

│ └── service.yaml

├── auth-service/

│ ├── deployment.yaml

│ └── service.yaml

├── cart-service/

│ ├── deployment.yaml

│ └── service.yaml

**📌 Next Steps**

Let’s pick what you'd like to do first:

* 🐳 Build Docker images and push to Minikube
* 📄 Start writing K8s manifests for discovery-server
* 🧪 Deploy and verify one service (e.g., discovery-server) before moving to others

Which one would you like to begin with?

Check List

Great — now that you've \*\*enabled Kubernetes on Docker Desktop\*\*, here's a clear checklist and the \*\*next steps to start running your microservices on K8s\*\*.

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### ✅ \*\*Kubernetes Setup Prerequisite Checklist\*\*

| Step | Task | Command / Check |

| ---- | ---------------------------- | ------------------------------------------------------------------------------------------------------------------------ |

| ✅ 1 | Verify Kubernetes is running | `kubectl cluster-info` |

| ✅ 2 | Verify node is ready | `kubectl get nodes` (should show `Ready`) |

| ✅ 3 | Check current context | `kubectl config current-context` (should be `docker-desktop`) |

| ✅ 4 | Docker images ready? | Build or verify images: `docker images` |

| ✅ 5 | K8s YAML files? | You’ll need: `deployment.yaml`, `service.yaml` (I’ll help generate them) |

| ✅ 6 | Namespace (optional) | Use `default` or create one via `kubectl create ns my-namespace` |

| ✅ 7 | K8s dashboard (optional) | Install via `kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.7.0/aio/deploy/recommended.yaml` |

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### 🛠️ Next Steps

Since you want to deploy `discovery-server`, `auth-service`, and `cart-service`, let's do it step-by-step:

1. \*\*Ensure local Docker images are built:\*\*

```bash

docker build -t discovery-server:latest ./discovery-server

docker build -t auth-service:latest ./auth-service

docker build -t cart-service:latest ./cart-service

```

⚠️ Since Docker Desktop shares the Docker daemon with K8s, you \*\*do not need to push these to a registry\*\*.

2. \*\*Generate K8s Deployment and Service YAMLs\*\*

For each service, we’ll need:

\* `deployment.yaml` (for the pod)

\* `service.yaml` (to expose it inside the cluster)

👉 Would you like me to generate these for `discovery-server`, `auth-service`, and `cart-service` with the expected ports and configurations?

Once you apply these YAMLs with `kubectl apply -f`, we can test the setup.