

Collaboration is Important for Admission Webhooks in Service Meshes

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 @alpeb

 github.com/alpeb/servicemeshcon-2019

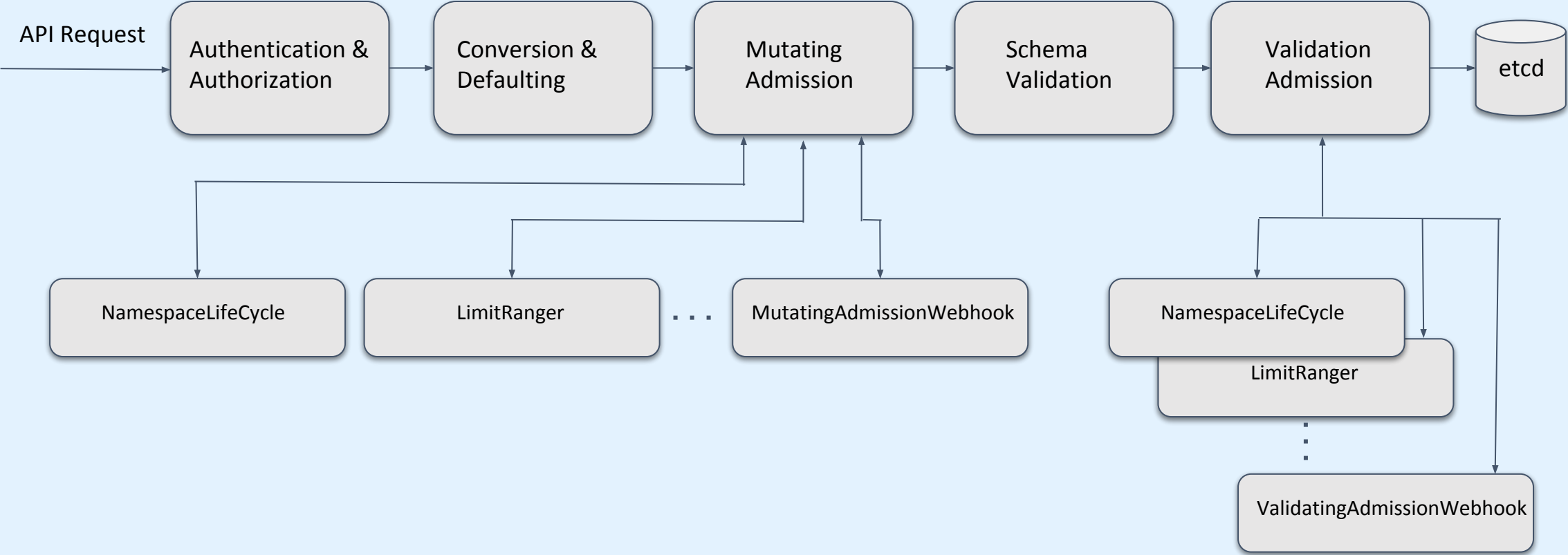


LINKERD

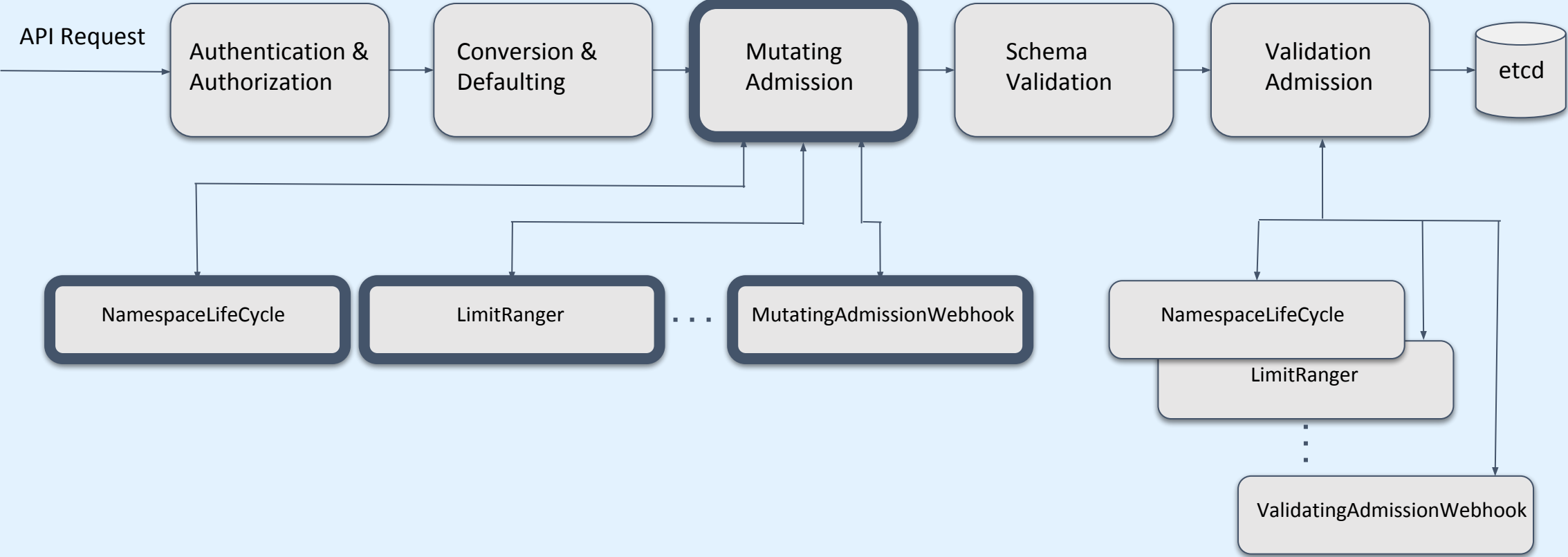
Admission Webhooks are Great!

- Validation, Policy, Injection
- Sidecar proxy injection in Linkerd
- There are caveats

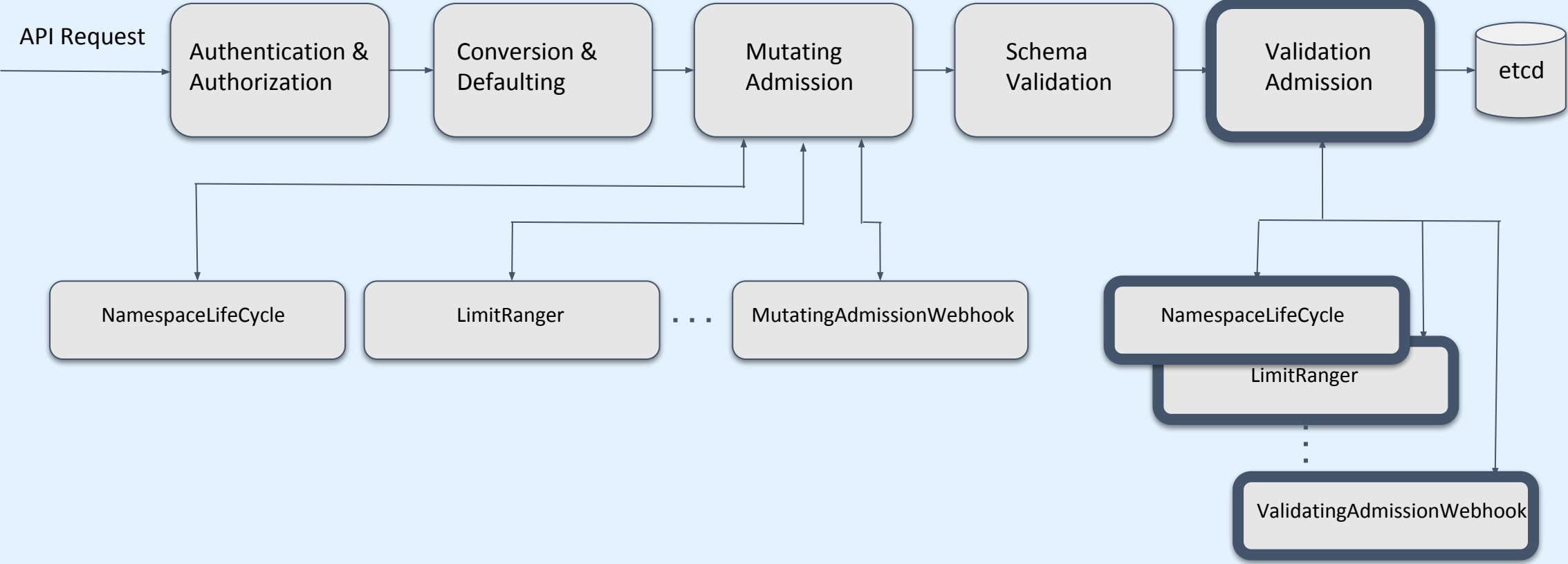
Resource Admission Workflow



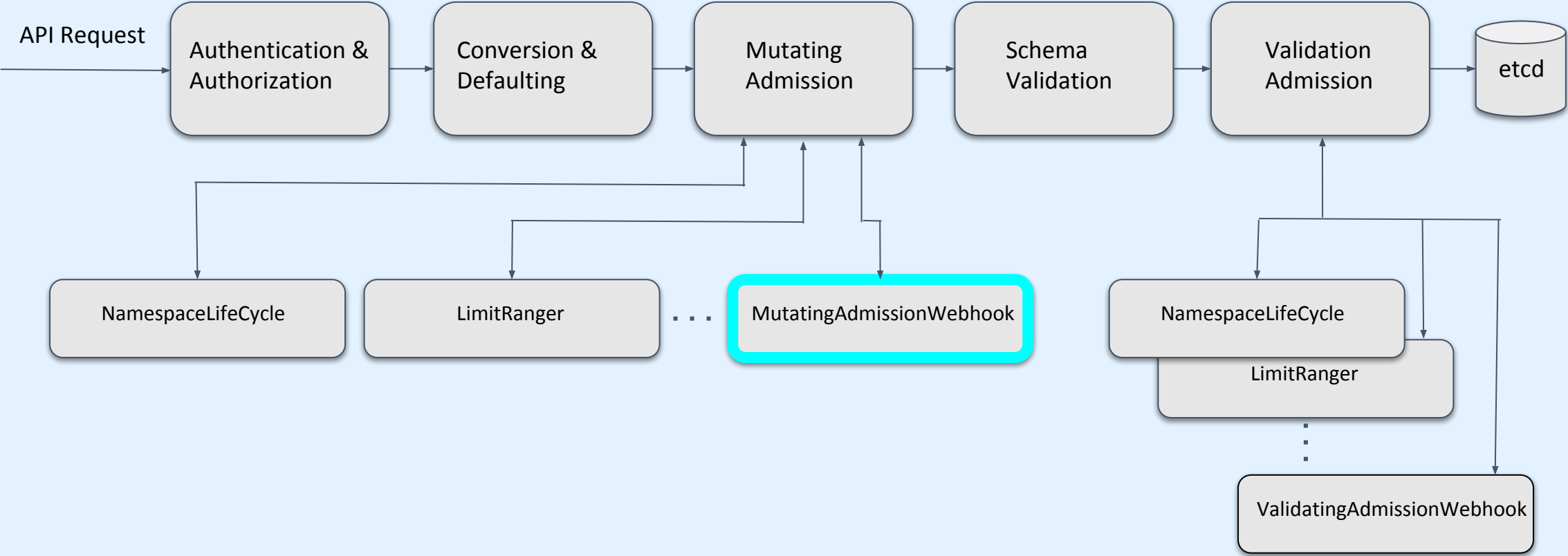
Resource Admission Workflow



Resource Admission Workflow

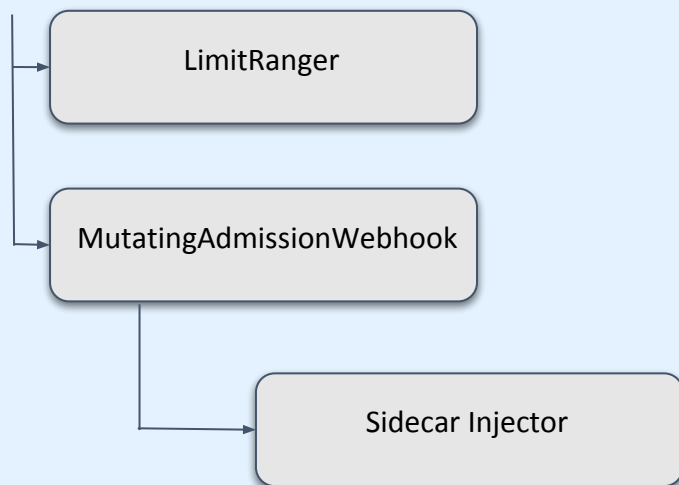


Resource Admission Workflow

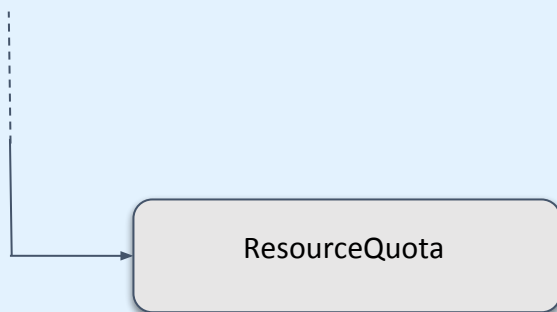


Admission Workflow Before 1.15

Mutating Admission

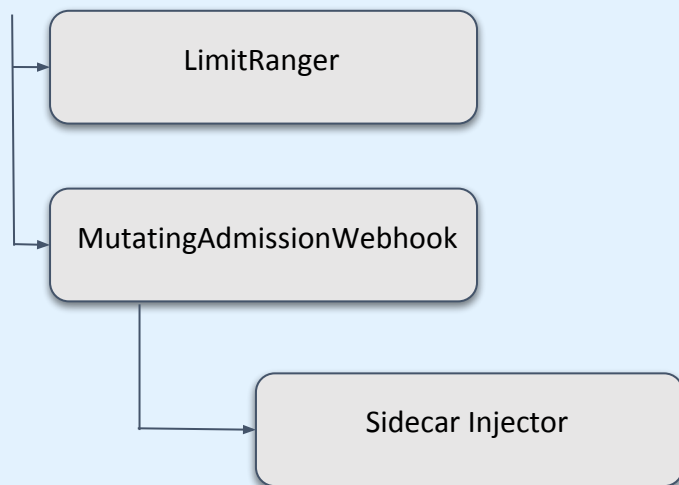


Validating Admission



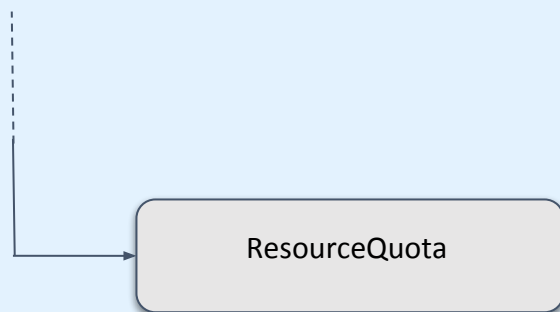
Admission Workflow Before 1.15

Mutating Admission



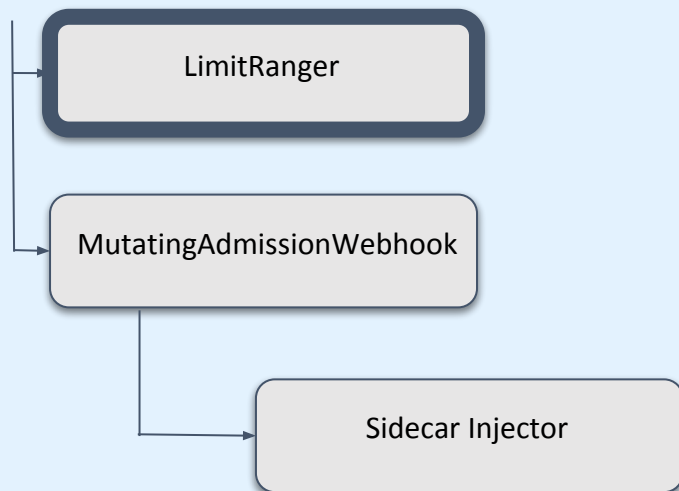
Pod:
- main container

Validating Admission



Admission Workflow Before 1.15

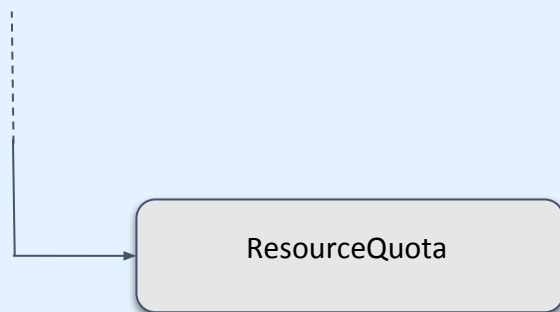
Mutating Admission



Pod:

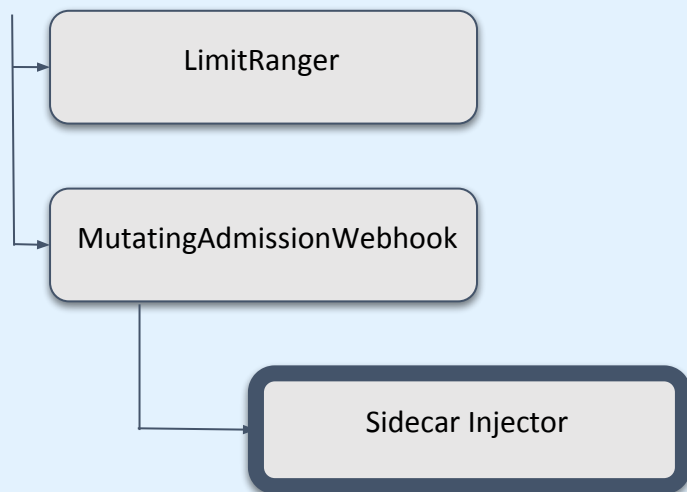
- main container with mem limit

Validating Admission



Admission Workflow Before 1.15

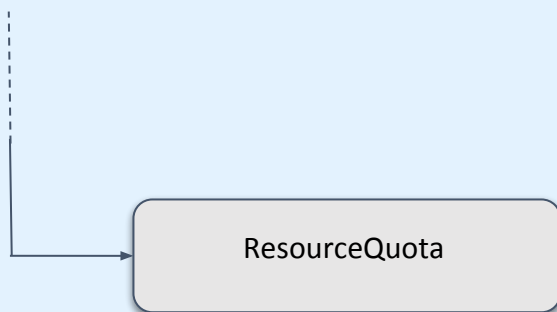
Mutating Admission



Pod:

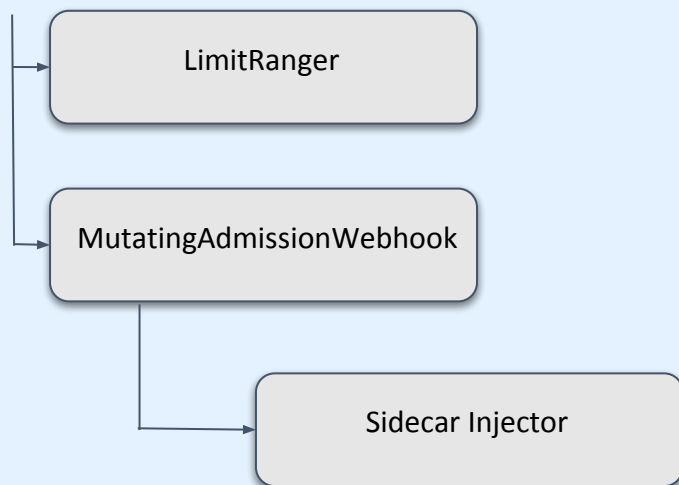
- main container with mem limit
- sidecar

Validating Admission

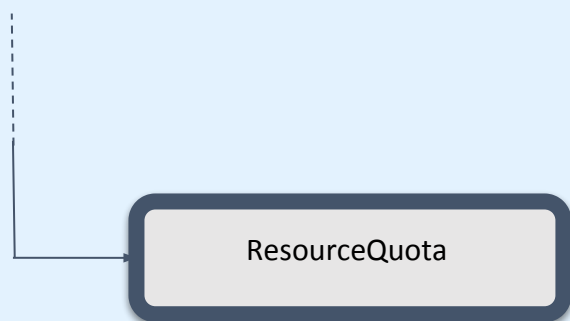


Admission Workflow Before 1.15

Mutating Admission



Validating Admission

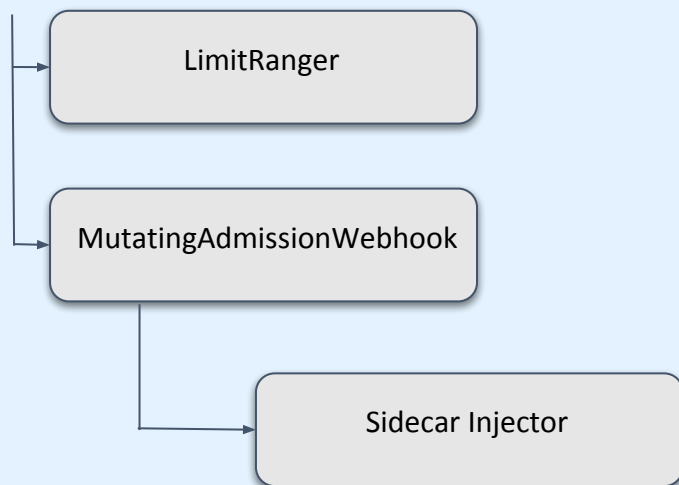


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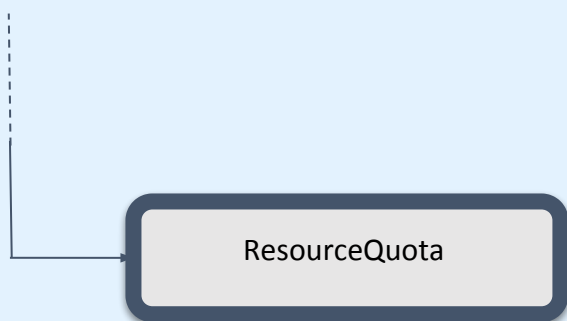
- main container with mem limit
- sidecar **without** mem limit

Admission Workflow Before 1.15

Mutating Admission



Validating Admission



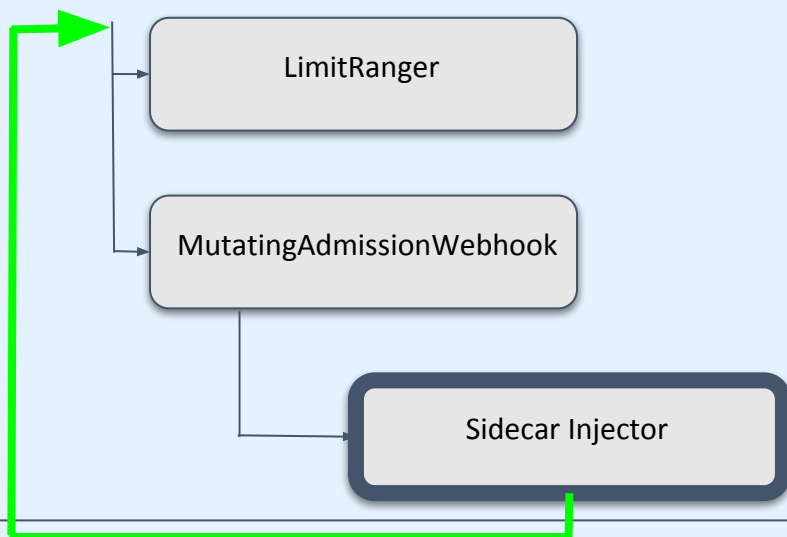
Pod:

- main container with mem limit
- sidecar **without** mem limit



Admission Workflow After 1.15

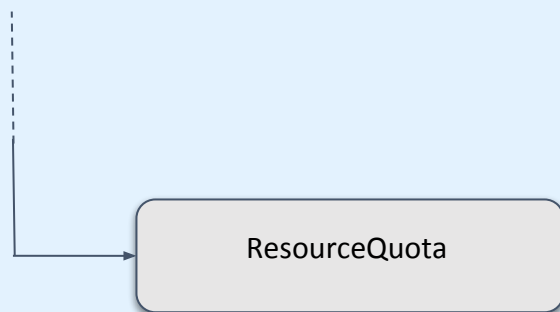
Mutating Admission



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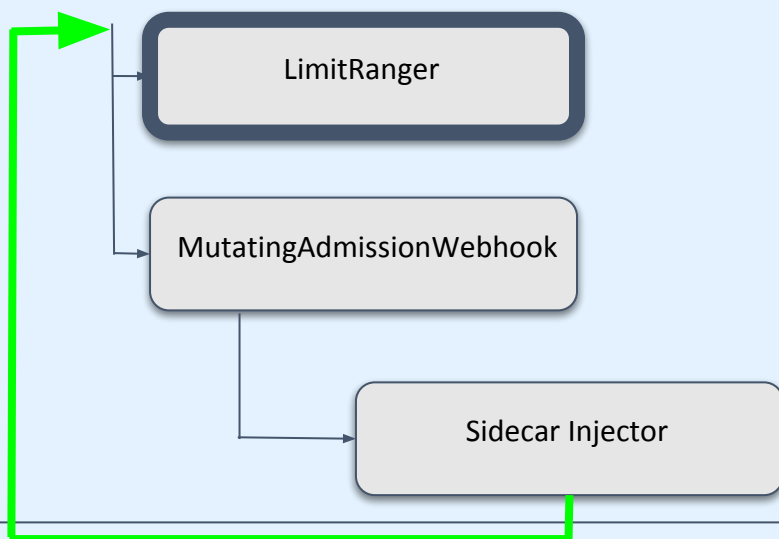
- main container with mem limit
- sidecar

Validating Admission



Admission Workflow After 1.15

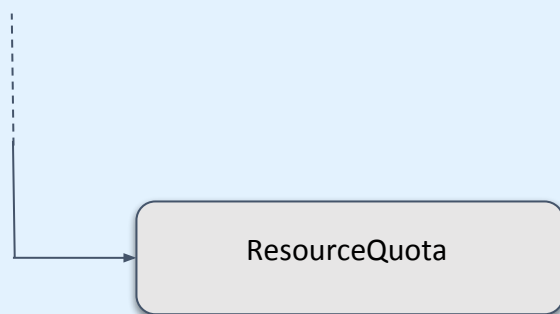
Mutating Admission



Pod:

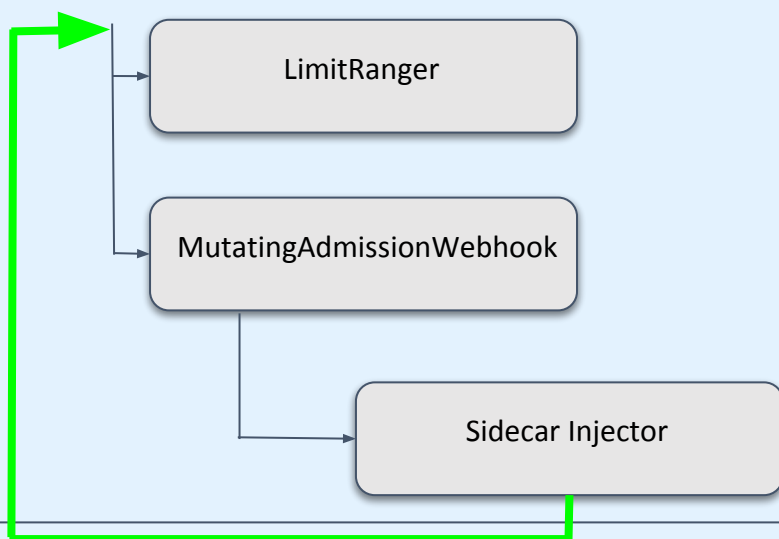
- main container with mem limit
- sidecar **with** mem limit

Validating Admission

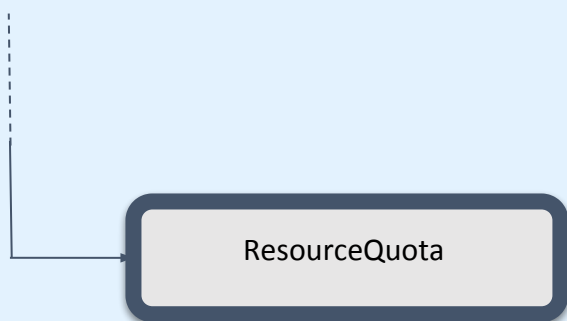


Admission Workflow After 1.15

Mutating Admission



Validating Admission



Pod:

- main container with mem limit
- sidecar **with** mem limit



Sidecars Lifecycle Issue

- When pod shuts down, proxy might already be gone
- 1.18: lifecycle.type: Sidecar
- preStop hook in sidecar

Sidecar Lifecycle Admission Webhook

DEMO

Summary

- After 1.15: no more surprises with webhooks
- ReinvocationPolicy property
- After 1.18: sidecar



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