

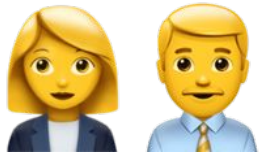
Ты не пройдешь!

Casbin - система контроля доступа

Николаева Ольга
Software Engineer

 @featherman

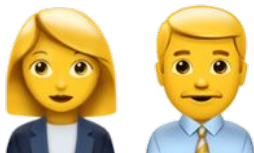
Background. Business



Background. Business



Отчетные
документы



Счет компании и список
сотрудников



Доступ для сотрудников

Background. Business



Сотрудник администратор



Сотрудник, который может покупать себе и другим

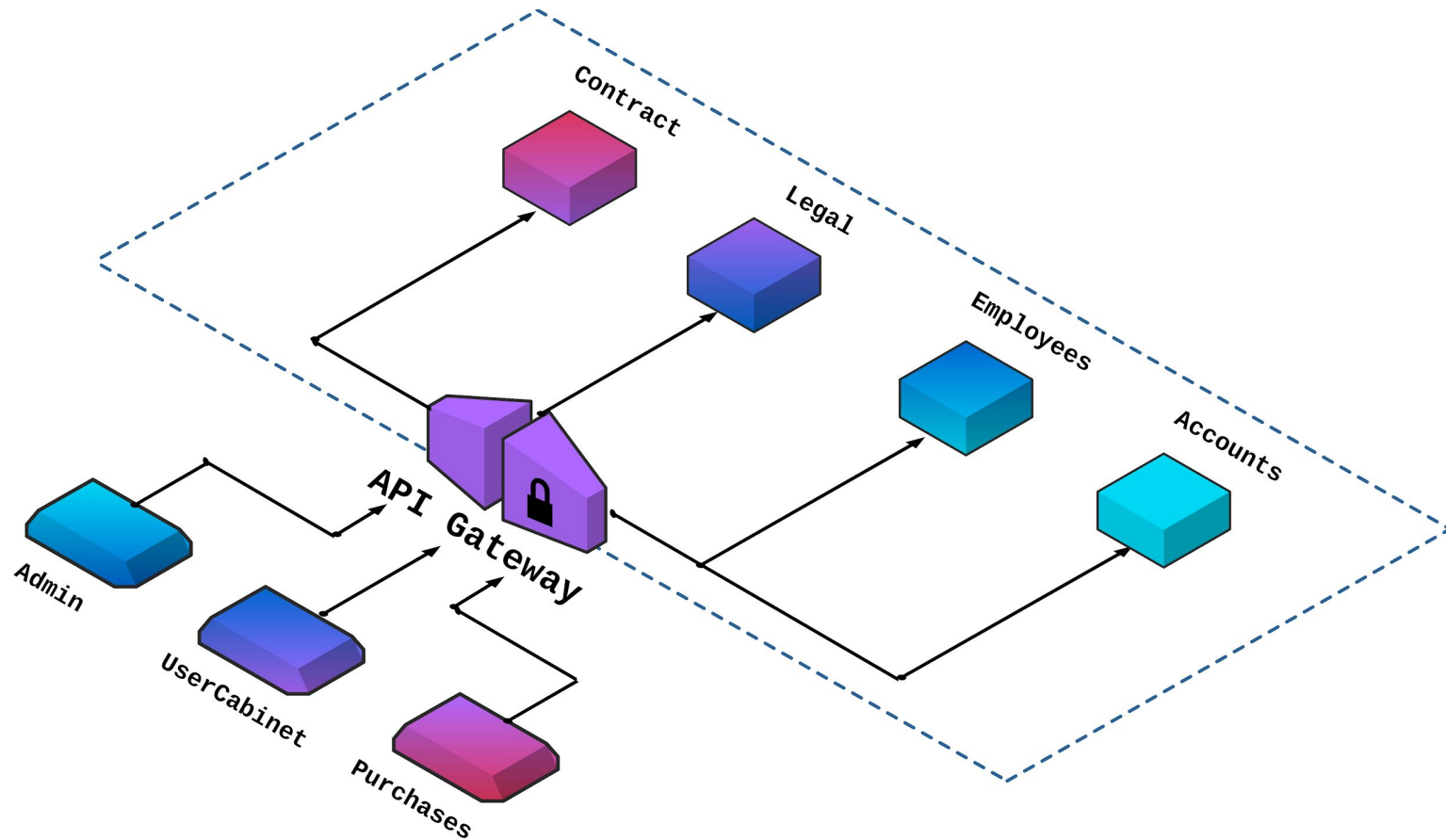


Сотрудник, который может покупать другим

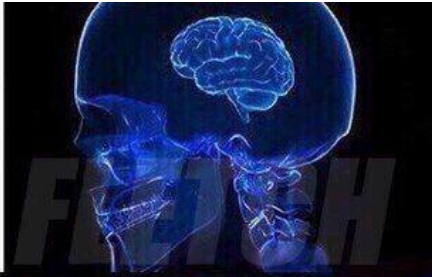
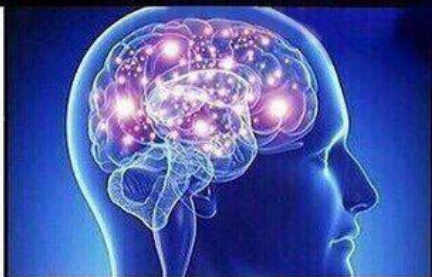
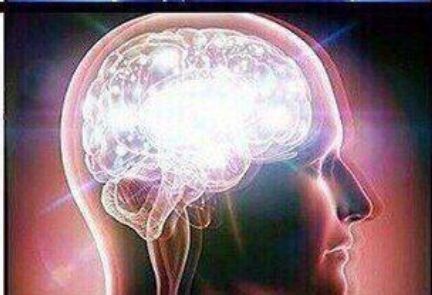


Сотрудник, который может покупать себе

Background. Tech



Research. Paradigms

<p>ACL</p>	
<p>RBAC</p>	
<p>ABAC</p>	



26



24



>= 25

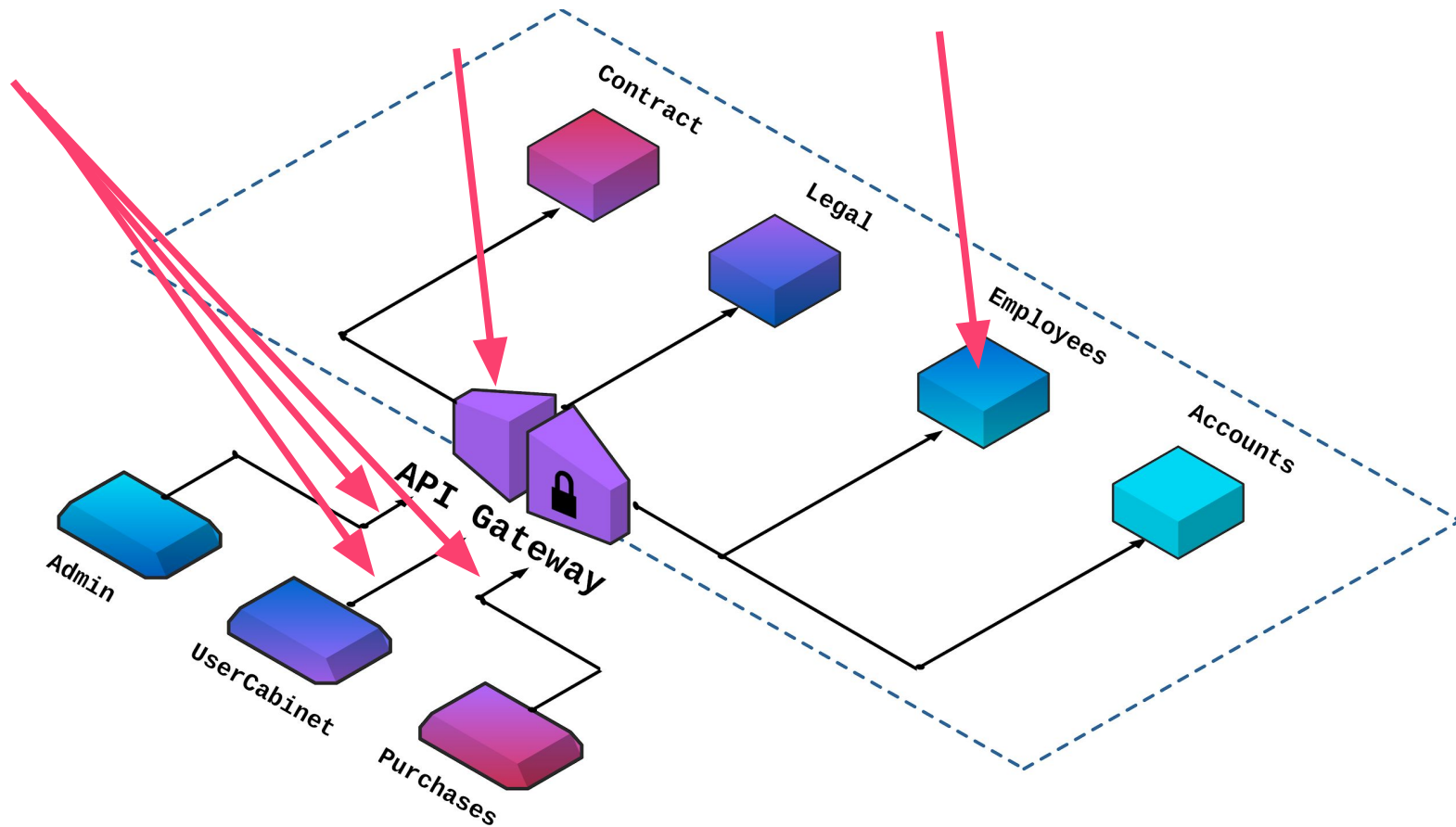


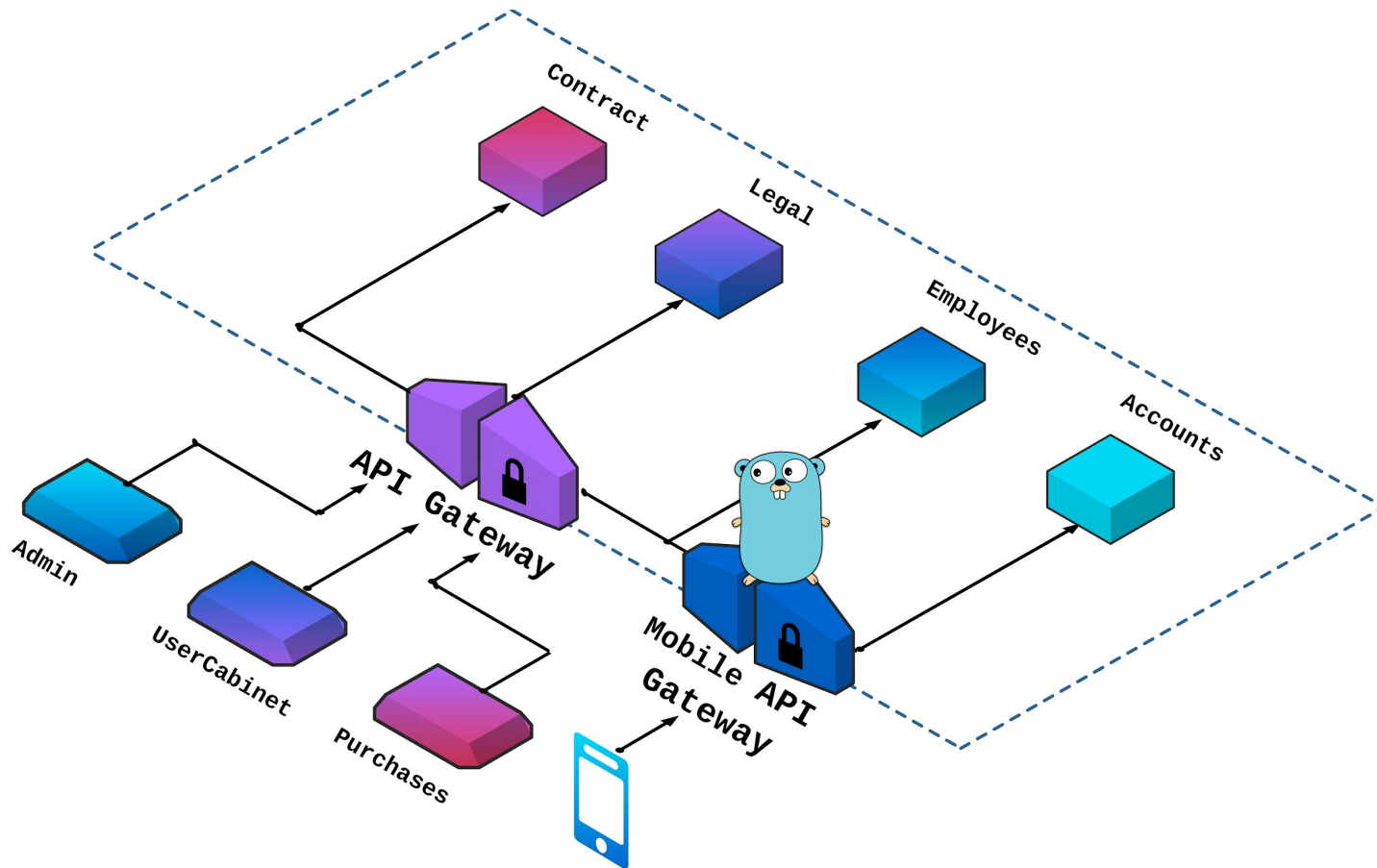
Research. Tools



Zend\Permissions\Acl
Zend\Permissions\Rbac







Casbin



News: still worry about how to write the correct Casbin policy? [casbin online editor](http://casbin.org/editor/) is coming to help! Try it at: <http://casbin.org/editor/>



Casbin is a powerful and efficient open-source access control library for Golang projects. It provides support for enforcing authorization based on various [access control models](#).

All the languages supported by Casbin:

 Go	 Java	 node	 php
Casbin	jCasbin	node-Casbin	PHP-Casbin
production-ready	production-ready	production-ready	production-ready

 python™	 Microsoft® .NET	 PASCAL	 Rust
PyCasbin	Casbin.NET	Casbin4D	Casbin-RS
production-ready	production-ready	experimental	WIP

Who's using Casbin?

Hundreds of projects are using Casbin, from established Fortune 500 companies to hot new startups. If you're curious to see what can be accomplished with Casbin, [check out these apps!](#)



vmware



verizon



ETH zürich



BOSE

Casbin Server



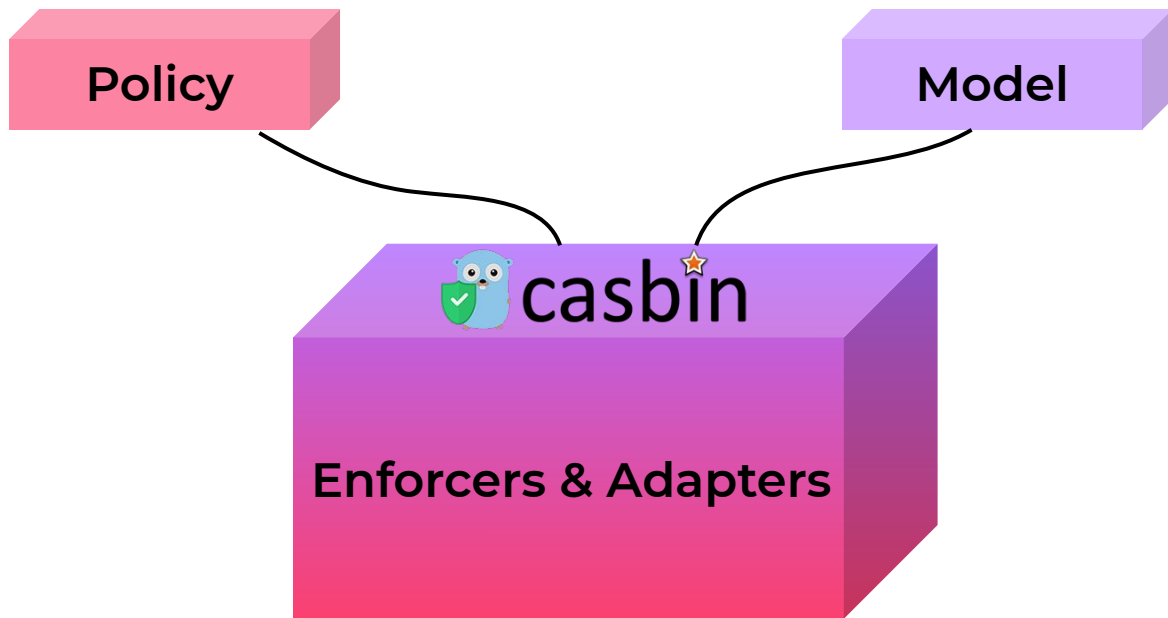
ACaaS



GRPC



Casbin Server. How to use



Casbin. How to use. Model



```
[request_definition]
```

```
r = sub, obj, act
```

```
[policy_definition]
```

```
p = sub, obj, act
```

```
[role_definition]
```

```
g = _, _
```

```
[policy_effect]
```

```
e = some(where (p.eft == allow))
```

```
[matchers]
```

```
m = g(r.sub, p.sub) && r.obj == p.obj && r.act == p.act
```

Casbin. How to use. Model



[request_definition]

```
r = sub, obj, act
```

[policy_definition]

```
p = sub, obj, act
```

...

[matchers]

```
m = r.sub.Age >= 25 && g(r.sub.Id, p.sub) && r.obj == p.obj  
&& r.act == p.act
```

Casbin. How to use. Policy



```
[policy_definition]
```

```
p = sub, obj, act
```

```
[role_definition]
```

```
g = _, _
```

p, guest, alcohol, buy

g, 123, guest

Casbin. How to use. Example



Request

{Id: "123", Age: 26}

"alcohol"

"buy"

Model

[request_definition]

r = sub, obj, act

[policy_definition]

p = sub, obj, act

....

[matchers]

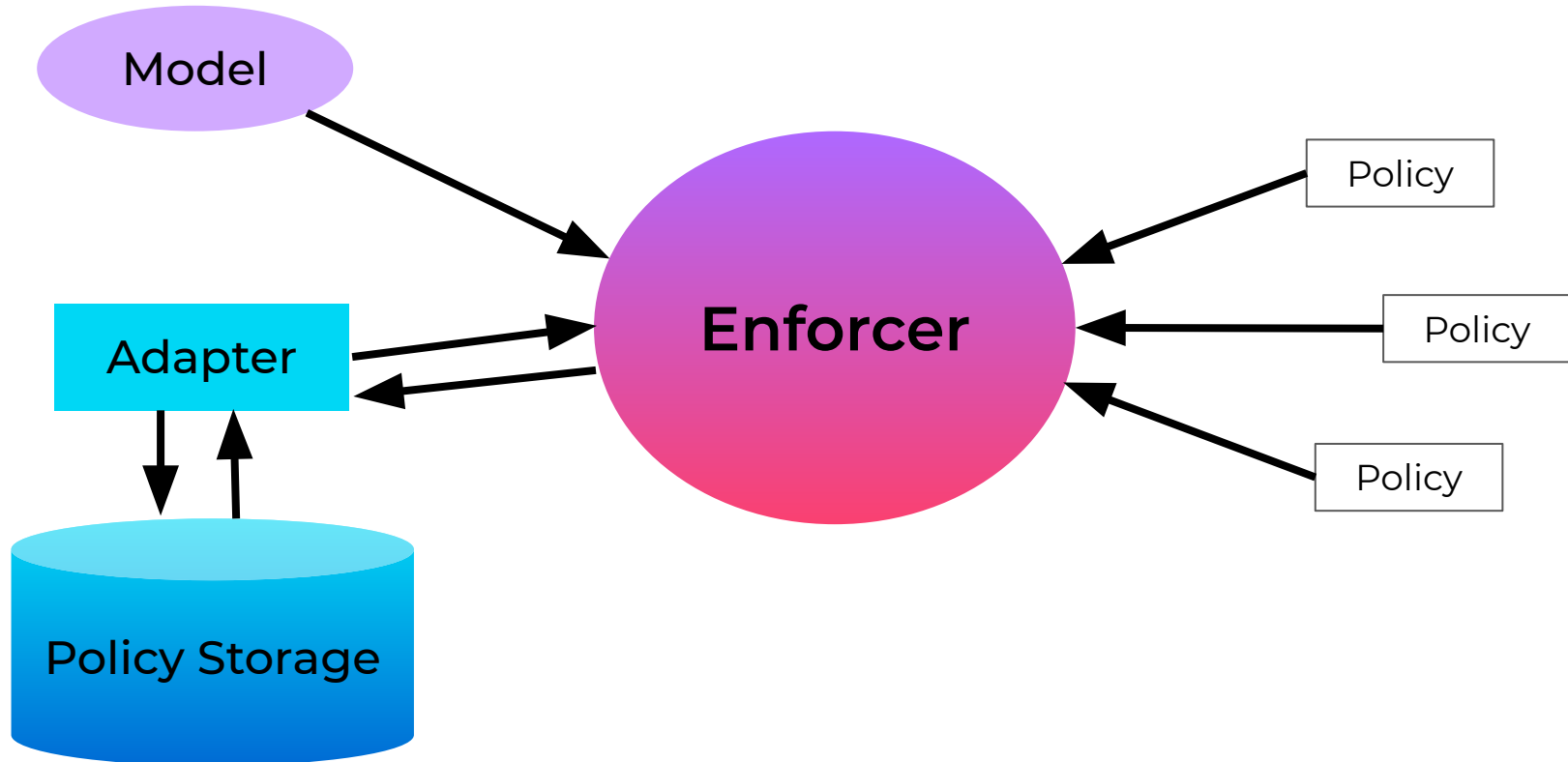
m = r.sub.Age >= 25 && g(r.sub.Id, p.sub)
&& r.obj == p.obj && r.act == p.act

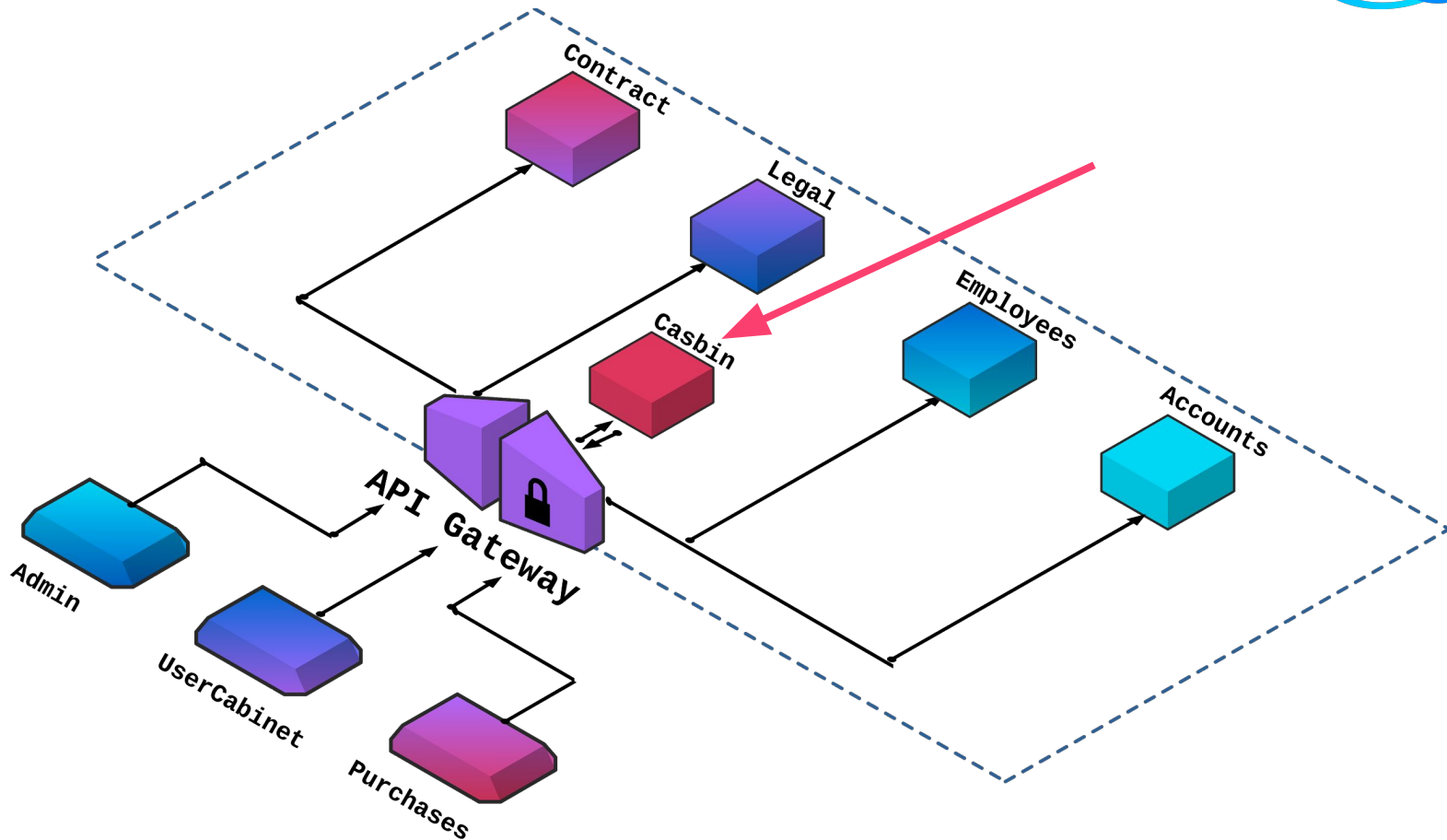
Policy

p, guest, alcohol, buy

g, 123, guest

Casbin. Enforcers & Adapters





Casbin. Challenges



1. Не было http/1.1 api

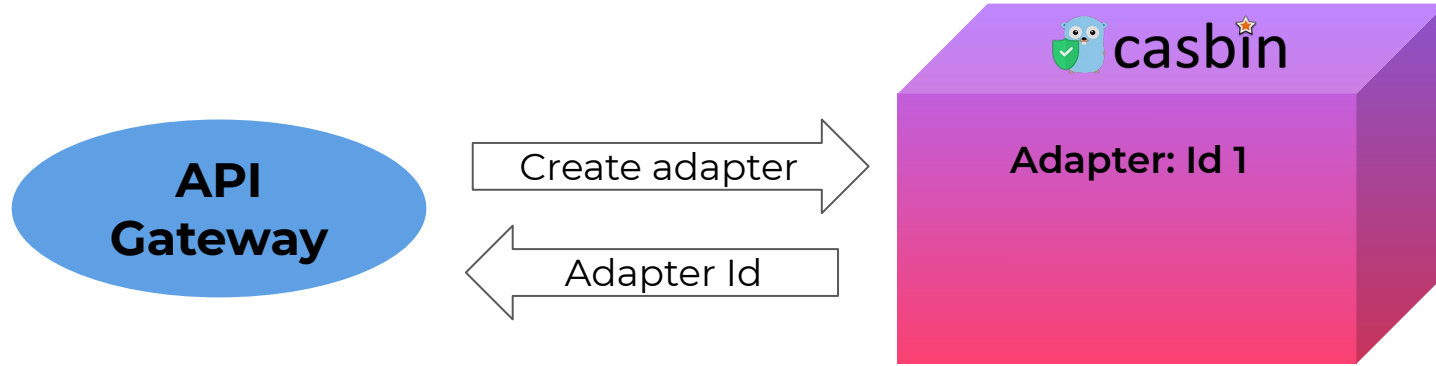
`http proxy`

2. Разные ответы на одни и те же запросы

`mutex`

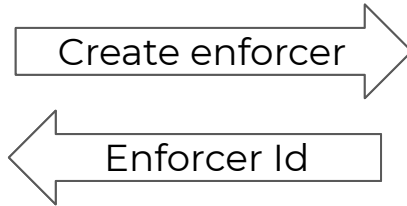
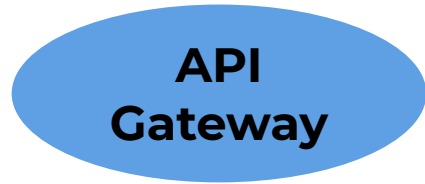
3. Горизонтальное масштабирование

Casbin. Challenges



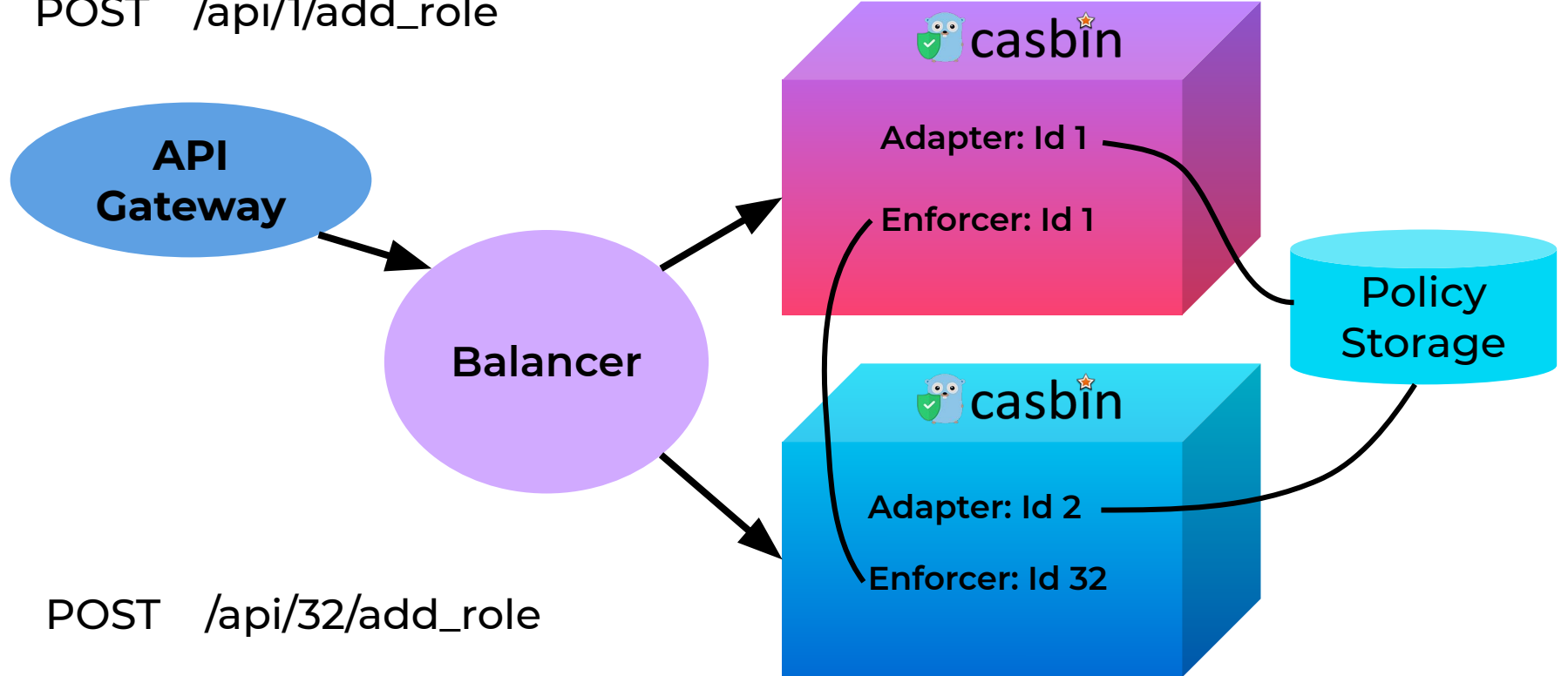
Casbin. Challenges

POST /api/1/add_role



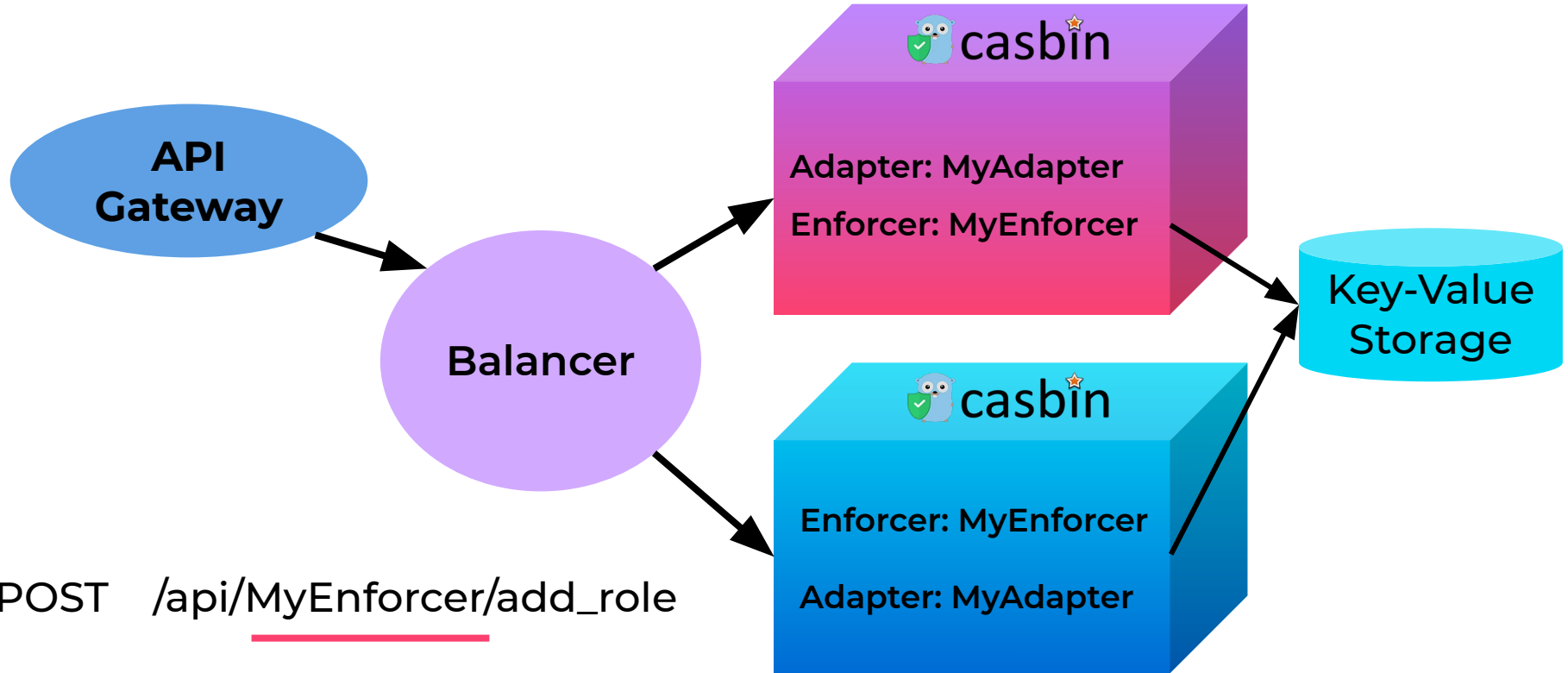
Casbin. Challenges

POST /api/1/add_role



POST /api/32/add_role

Casbin. Challenges



POST /api/MyEnforcer/add_role

Casbin. Challenges



1. Не было http/1.1 api

`http proxy`

2. Разные ответы на одни и те же запросы

`mutex`

3. Горизонтальное масштабирование

`watcher`

`init adapters&enforcer`

Casbin. Summary



Гибкая система контроля доступа

Независимый сервис

Высокий уровень доступности (availability)

Универсальный инструмент для создания систем контроля доступа



- Предыстория
- ACL, RBAC, ABAC
- Инструменты
- Почему Casbin?
- Casbin и Casbin Server
- Модель и политики
- Адаптеры и энфорсеры
- Casbin в Tutu

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Software Engineer

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<https://casbin.org>