

OpenStack软件架构

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Who is taking to me

- WangWei
- UnitedStack SDN Team
- Senior year
- Blog: mytrix.me
- Weibo: @mathematrix



OpenStack

- 最受欢迎的云开源项目
- 数以百计的厂商参与
- 复杂的分布式系统
- 来自世界不同地区的上千名开发人员



Why Python

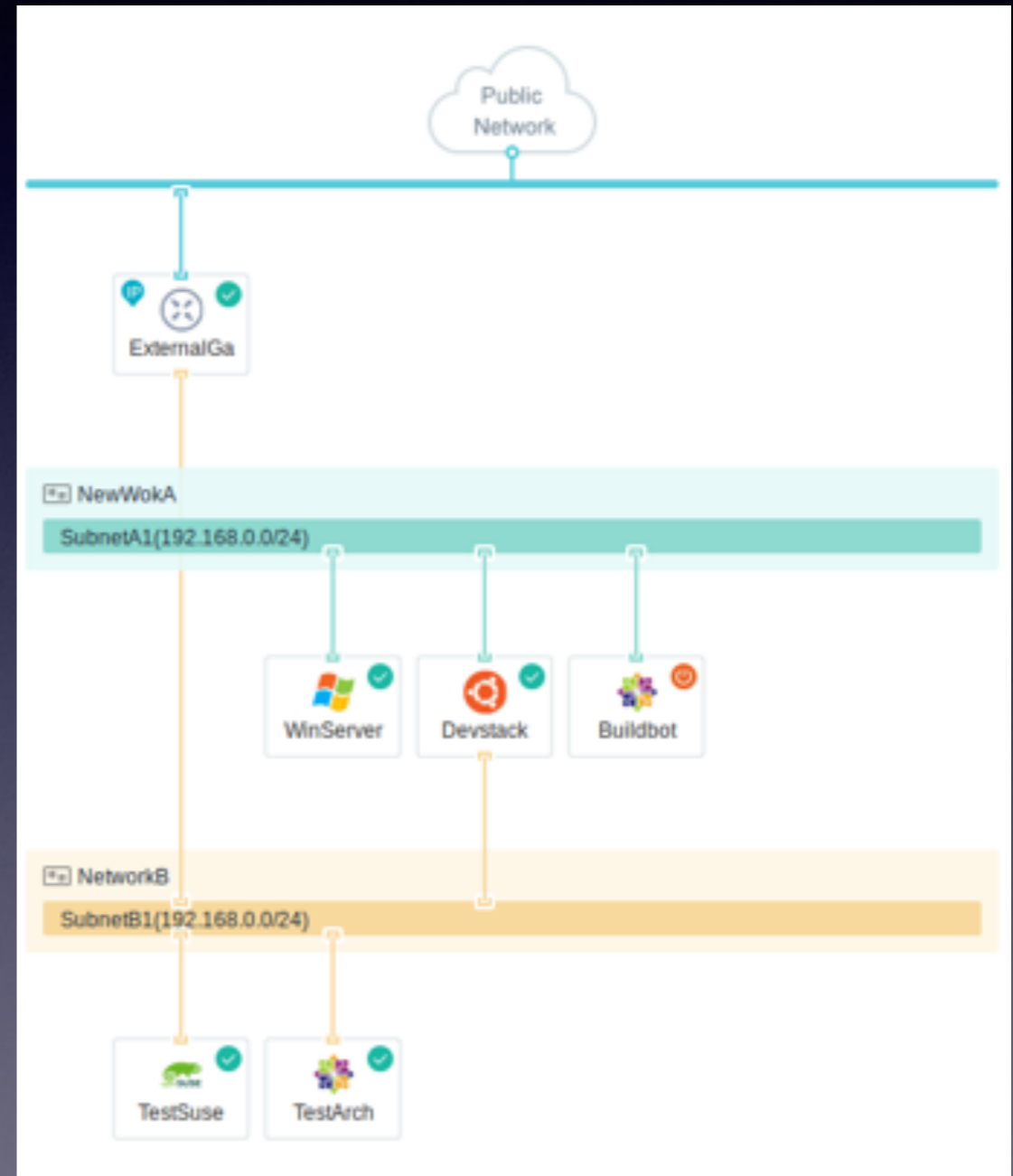
- 历史原因 RackSpace & NASA
- 胶水语言 受运维人员欢迎的语言
- 高级特性 反射、自省、动态继承
- 丰富的库 Paste、Routes、requests、alembic

分布式系统面临的问题

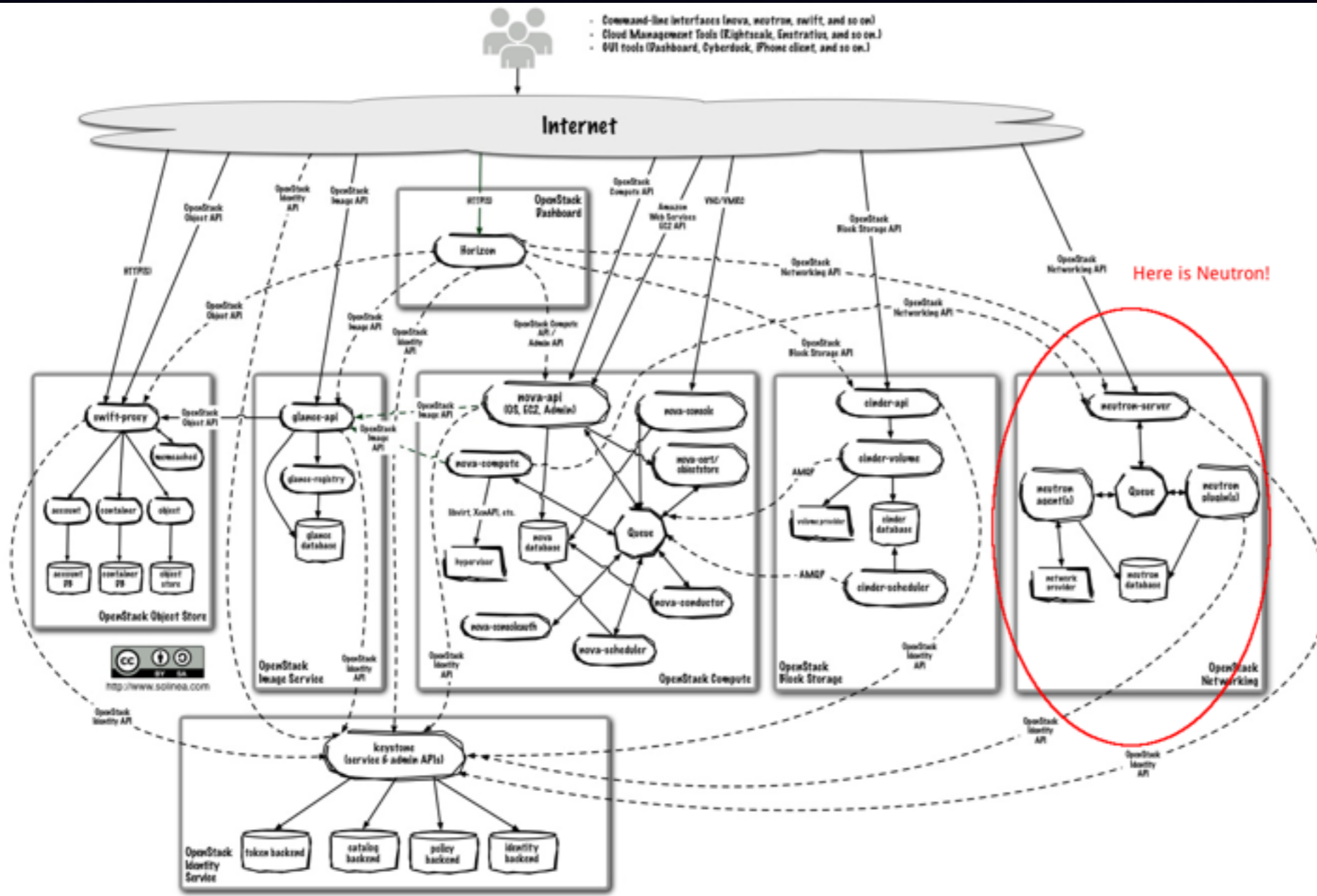
- 连接建立与服务初始化
- 事件分离与事件处理程序分派
- IPC 与网络协议处理
- 静态和动态组件
- 并发与同步

Neutron 简介

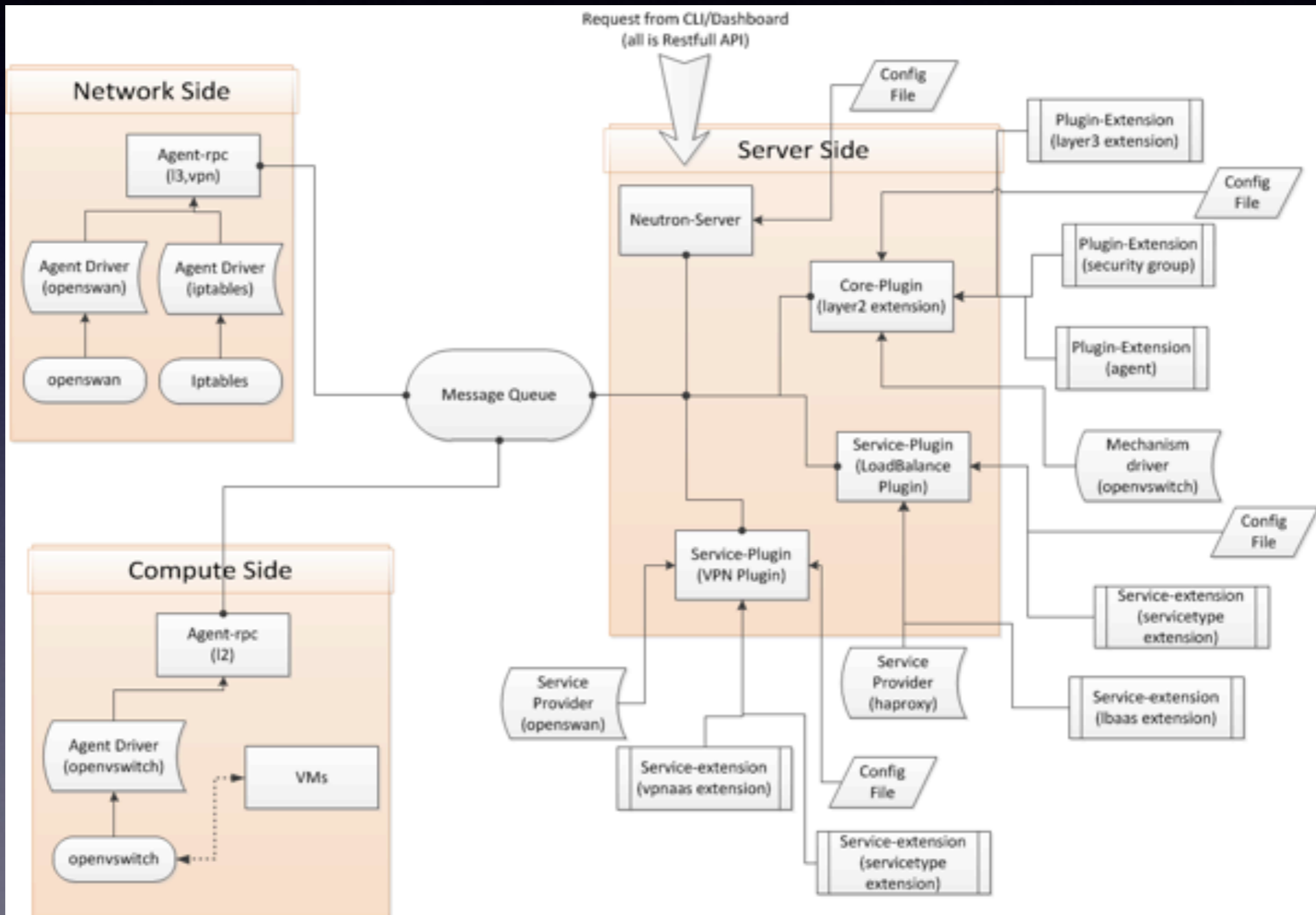
- SDN控制器
- Unified API
- Small Core
- Pluggable Open Architecture
- Extensible



Big Picture

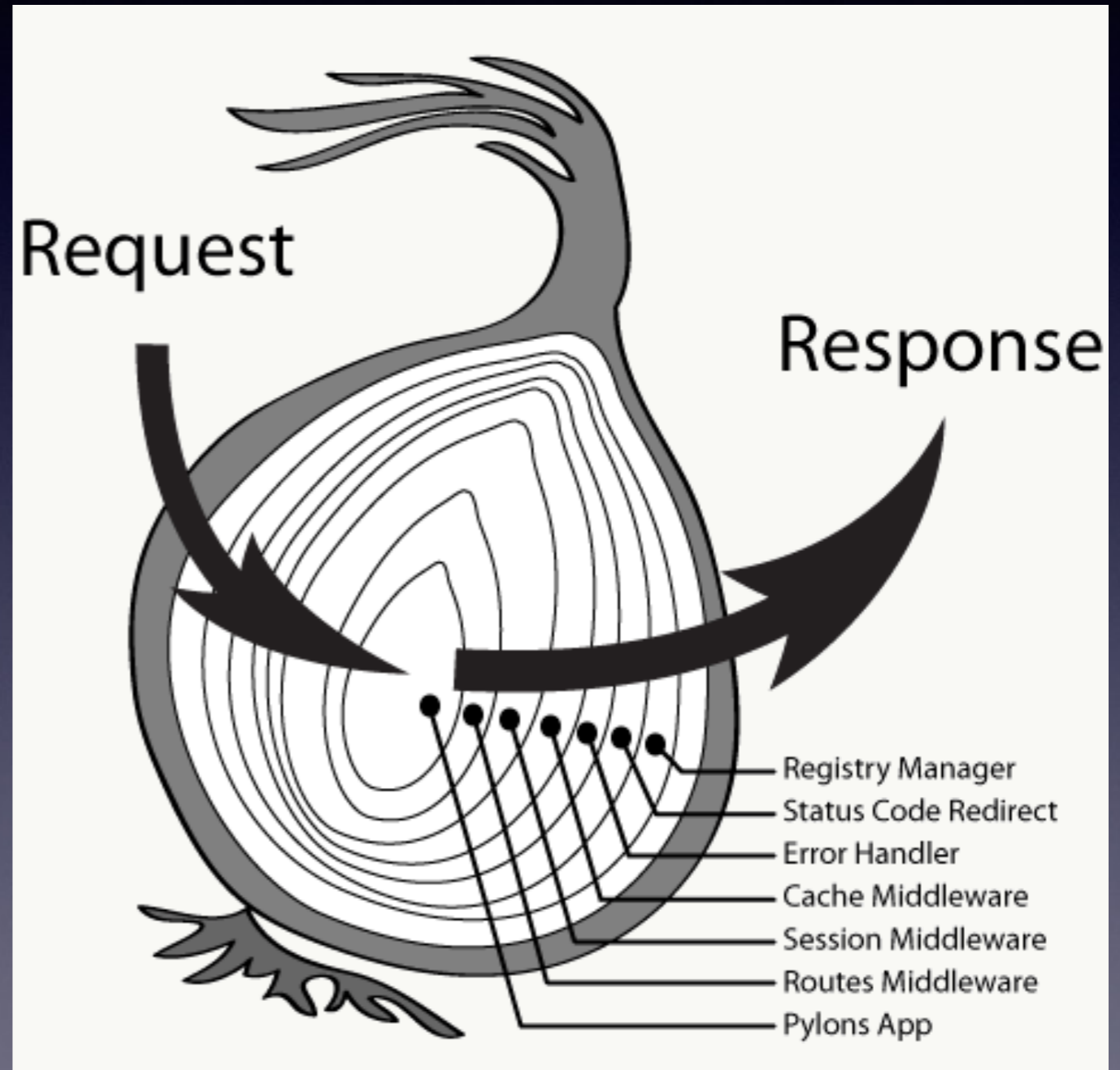


Detailed



NeutronServer

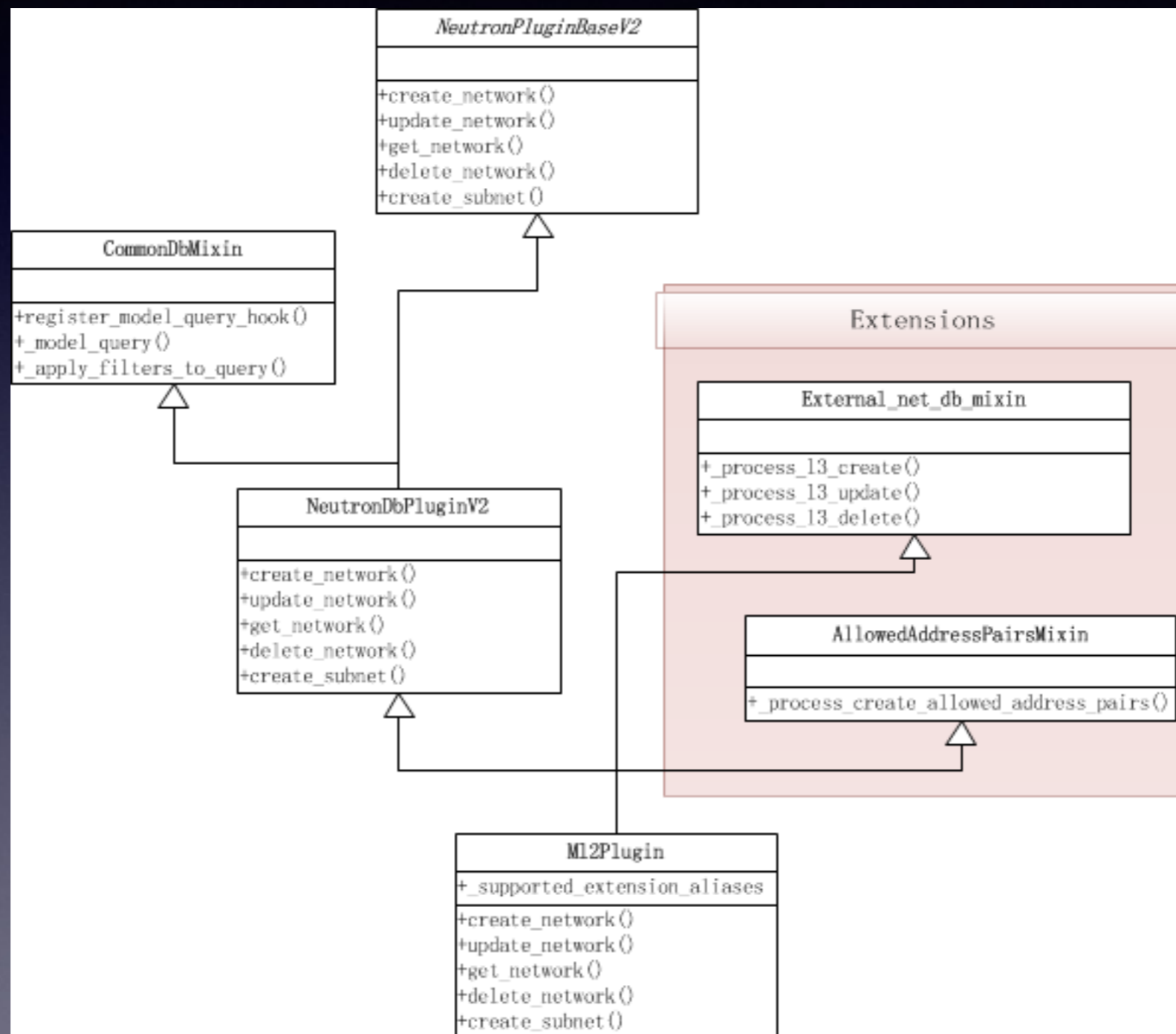
- WSGI
- request_id
- catch_errors
- authtoken
- keystonecontext
- extensions
- APIRouter



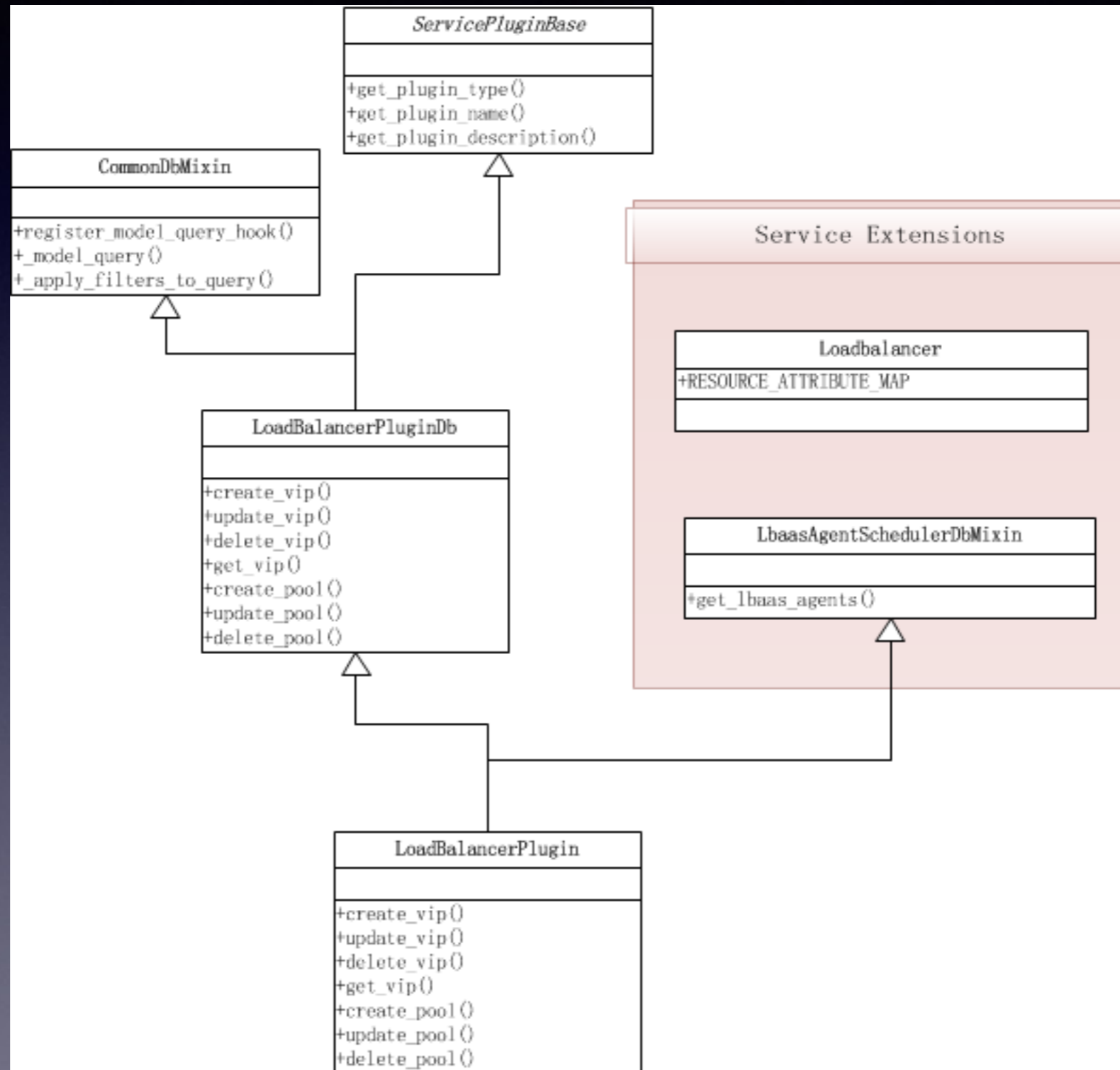
资源定义

```
1. ADDRESS_PAIRS = 'allowed_address_pairs'
2. EXTENDED_ATTRIBUTES_2_0 = {
3.     'ports': {
4.         ADDRESS_PAIRS: {'allow_post': True, 'allow_put': True,
5.             'convert_list_to':
6.             attr.convert_kvp_list_to_dict,
7.             'validate': {'type:validate_allowed_address_pairs':
8.                 None},
9.             'enforce_policy': True,
10.            'default': attr.ATTR_NOT_SPECIFIED,
11.            'is_visible': True},
12.     }
13. }
```

Core Plugin and Extensions

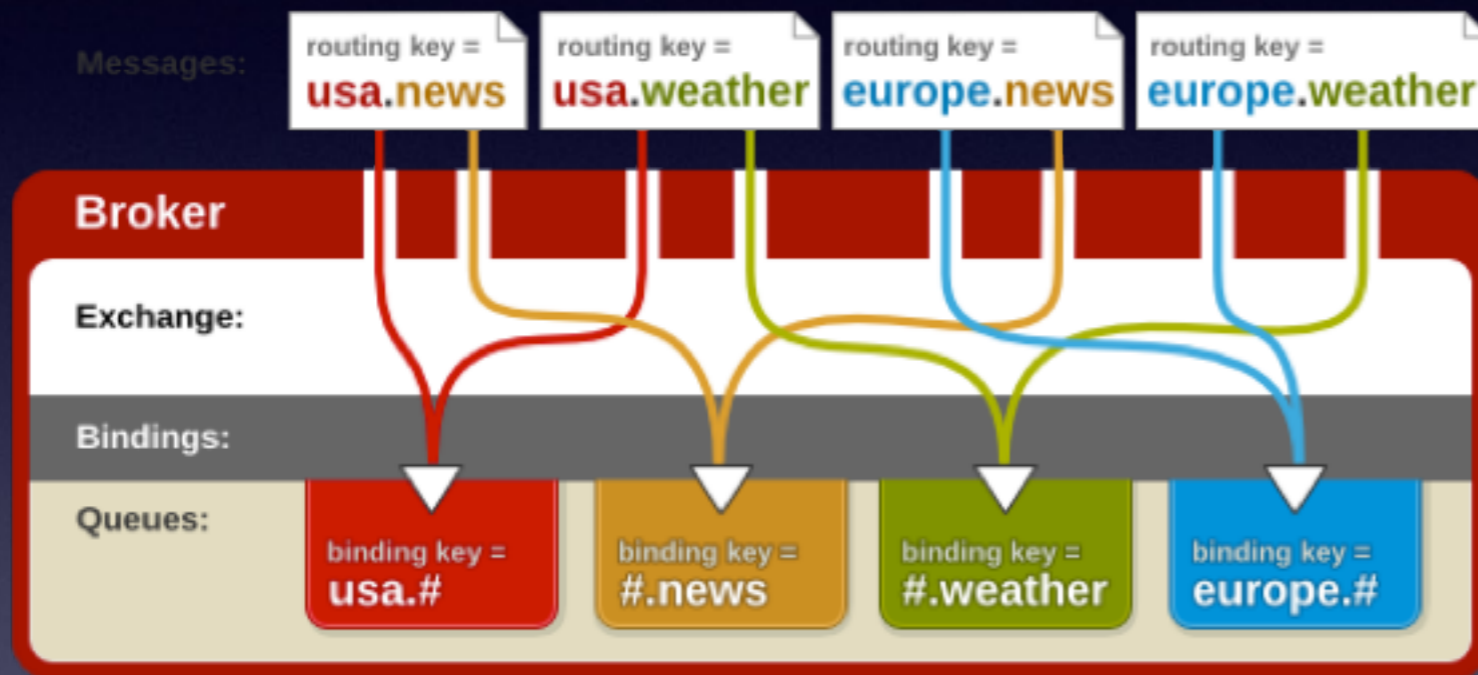


Service Plugin



Agent

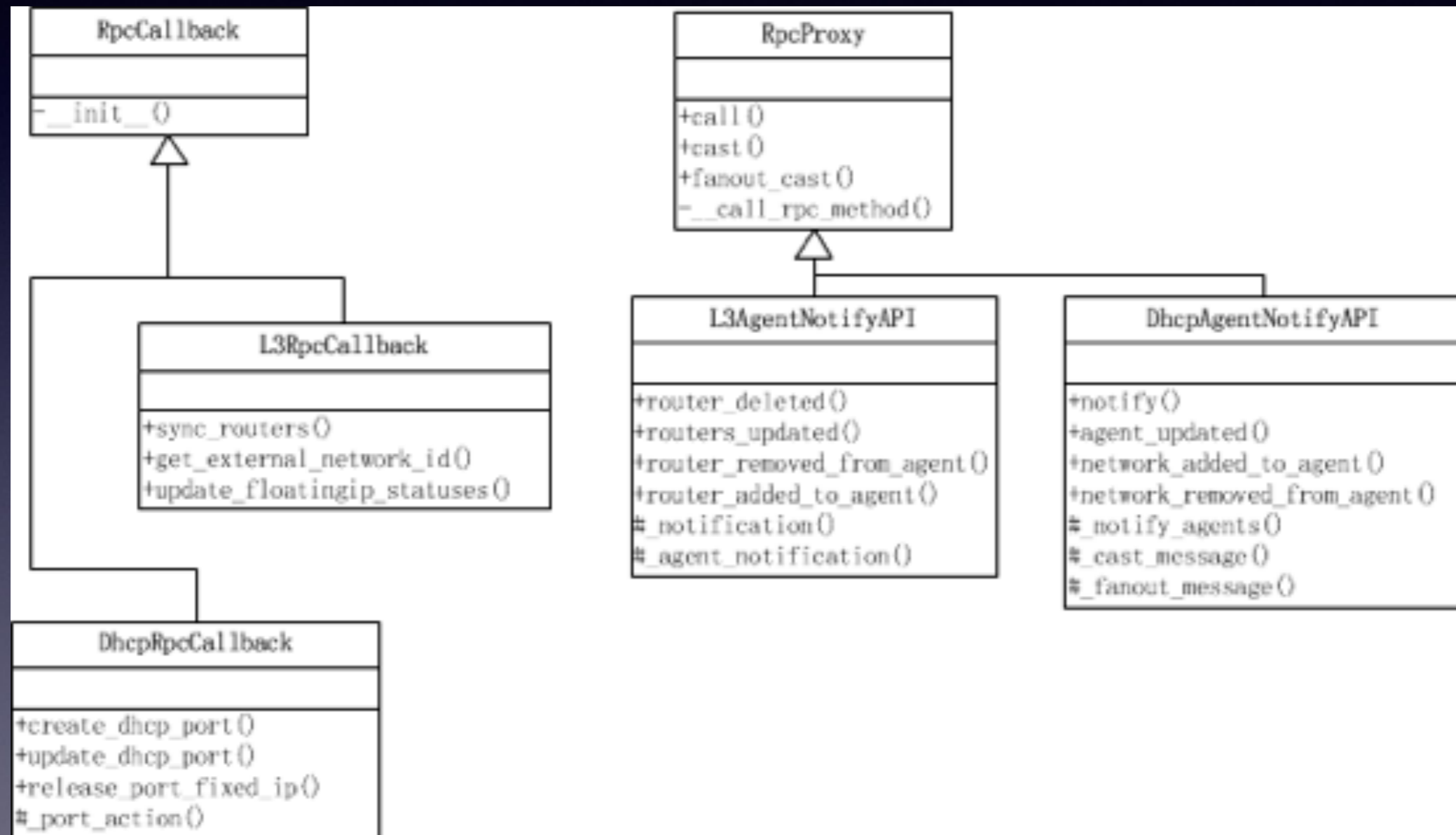
Topic Exchange



Oslo.messaging:
RabbitMQ
ZeroMQ
Qpid

Fanout、 Cast、 Topic

RPC



总结

- Pros:
 - 运营在UStack公有云和托管云中
 - 方便服务迁移和横向扩展
- Cons:
 - 代码混杂
 - Break rule

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网页



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