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Ingress in depth

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How Ingress works:
API to config

API client

1. **Access control (Role + ClusterRole)**
2. **Watch events**
   a. Ingress
   b. Service
3. **Build config file from template**
4. **Notify reverse proxy**

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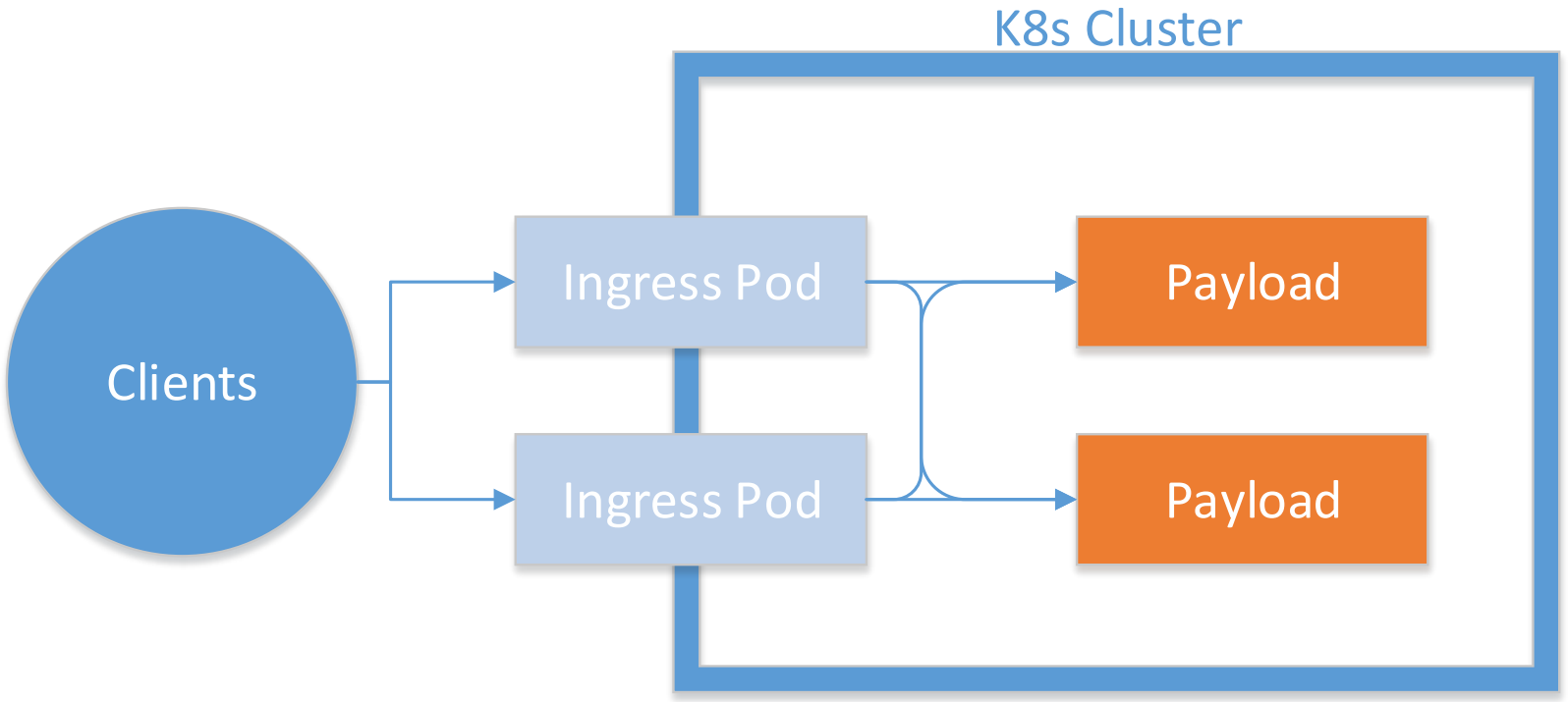
How Ingress works:
Service or DaemonSet

Ingress DaemonSet



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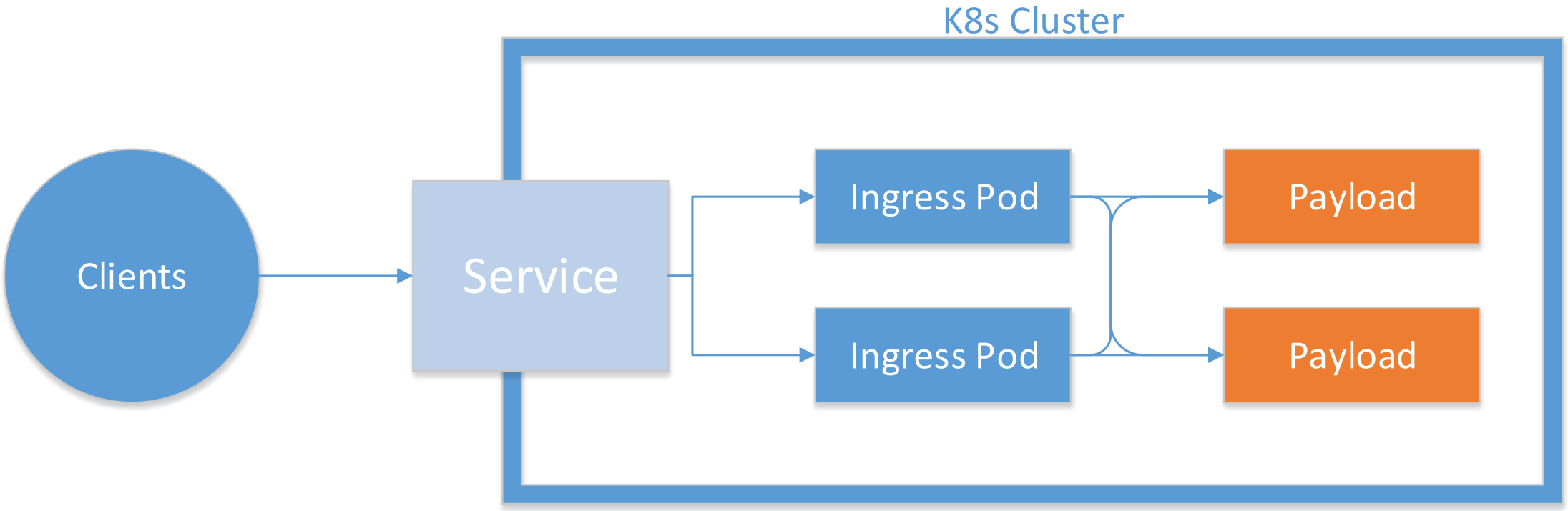
Ingress Service



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How Ingress works:
Reverse Proxy

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Choices

Choices - Nginx

- **Well known**
- **Almost 0 effort**
- **Web server components unused**
- **Poor monitoring/reporting**
- **Sub-par load balancing**

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Choices - HAproxy

- **You need to learn it first**
- **No unused extras**
- **Better at reverse proxy than Nginx**
  - Better load-balancing algorithms
  - Better statistics/reporting

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Choices - Kong API GW

- **The world of plugins**
- **Live config in database (PGSQL/Cassandra)**
- **Based on OpenResty (openresty.org/en)**
  - **Know LUA**
  - **Intended for large scale**
  - **How different from nginx?**

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Choices - Traefik

- **Designed for the task**
- **In-memory reconfiguration**
- **Less performant than nginx (and haproxy)**

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Choices - roll your own

- **Massive investment of time/money**
- **Reinventing the wheel**
  - **Everyone needs a hobby**

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Conclusion

Conclusion

- **Know your needs**
- **Empirical testing will beat blog post speculation/tech talk presentations**
- **Defaults are there for a reason**

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Q&A

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Thank you

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