

**CLOUD NATIVE  
COMPUTING  
FOUNDATION**

# “How-to” of Cloud-native Traffic Management

Ranga Rajagopalan,  
Co-founder and CTO, Avi Networks

# About

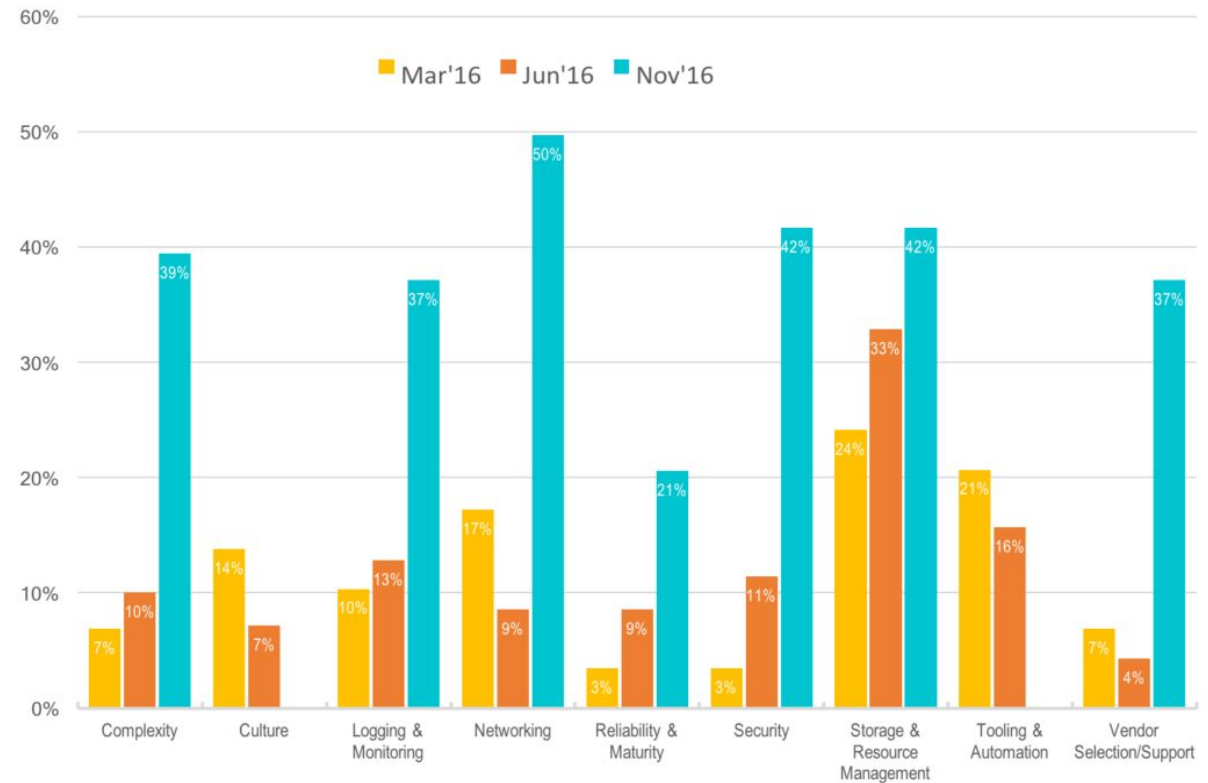
- Co-founder, Chief Architect and CTO, Avi Networks
- CNCF Ambassador
- Container Networking and Application Service Meetup organizer



# Recent CNCF Survey

## Top challenges in using and deploying containers

- Networking (50%)
- Security (42%)
- Logging & Monitoring (37%)



# Day in the life of a microservices request

## Workflow

# Day in the life of a microservices request



User request:

[www.acme.com](http://www.acme.com)

# Day in the life of a microservices request



User request:

[www.socialmedia.com](http://www.socialmedia.com)

DNS / Service Discovery

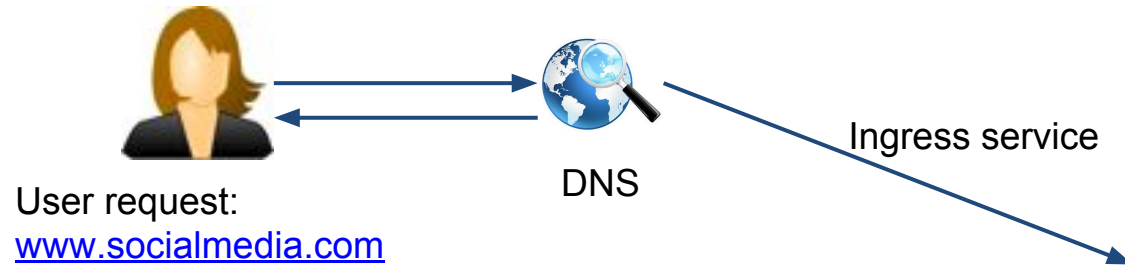
# Day in the life of a microservices request



User request:  
[www.socialmedia.com](http://www.socialmedia.com)

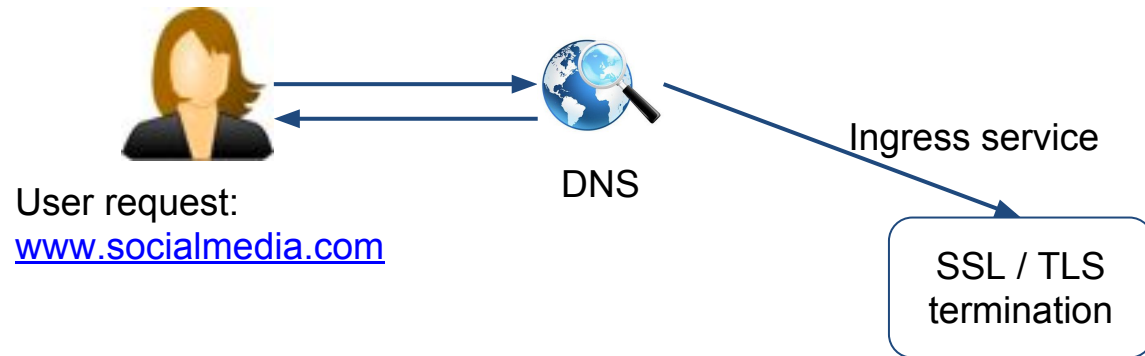
DNS responds with  
IP address

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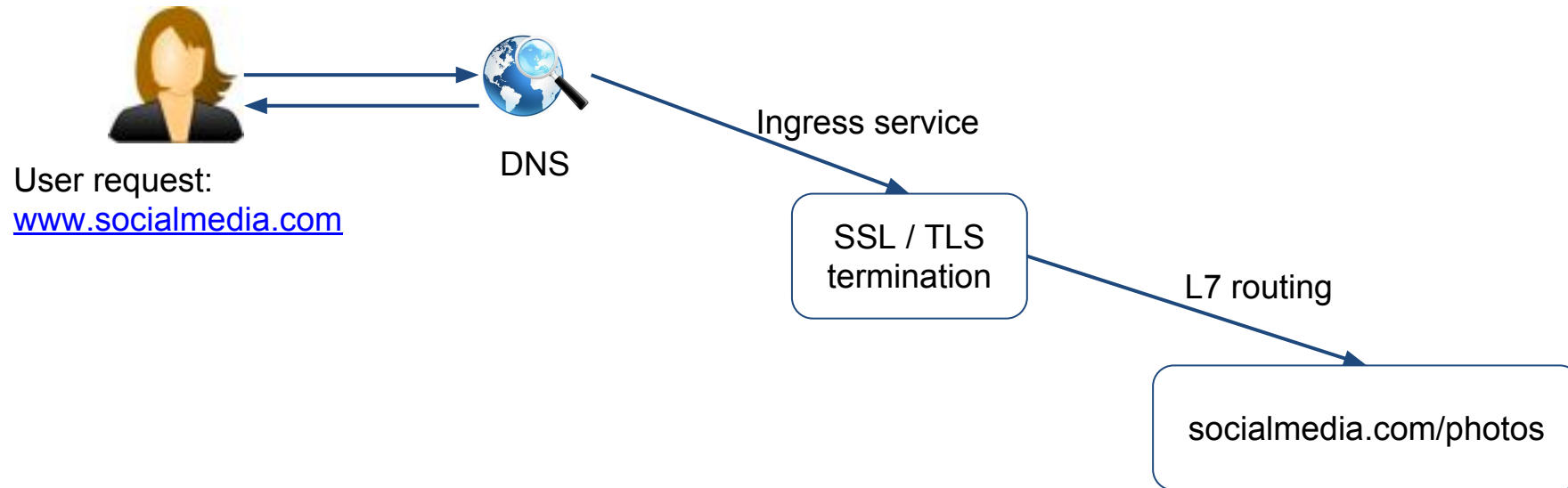




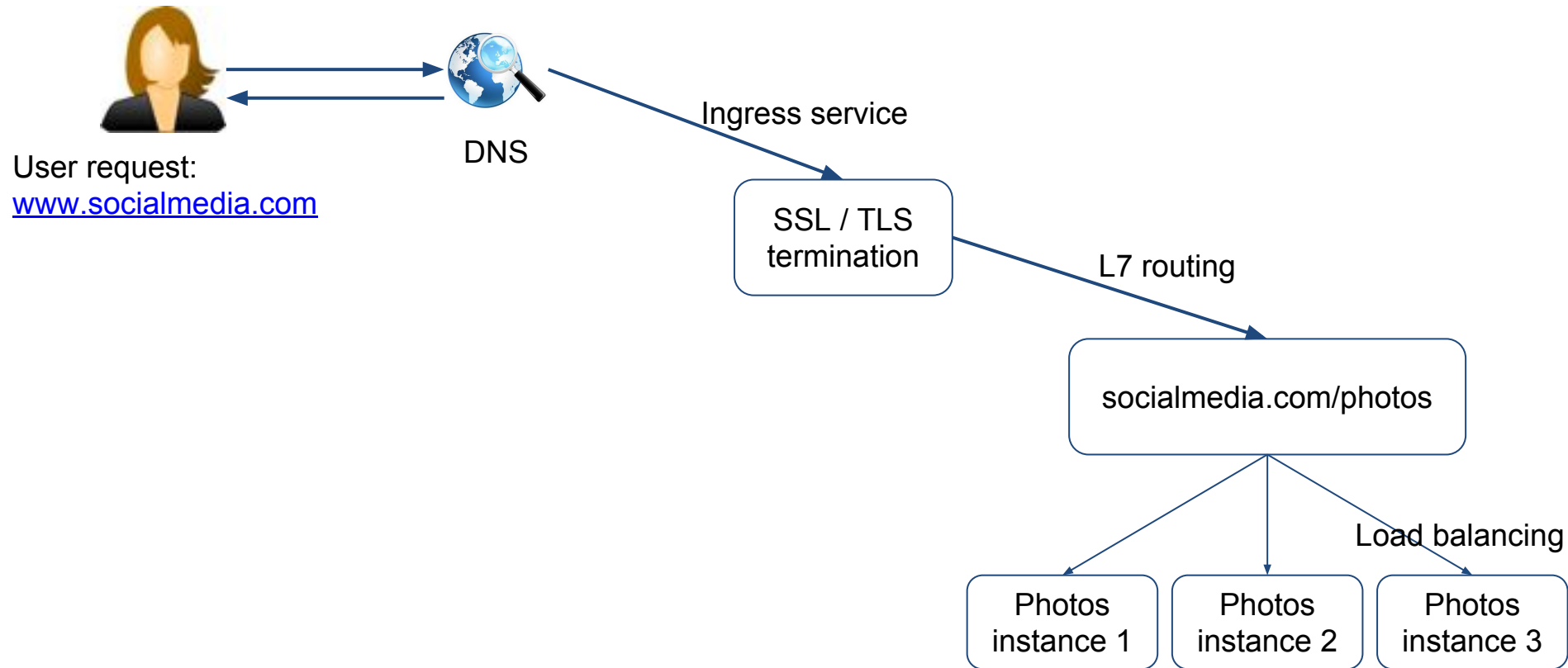
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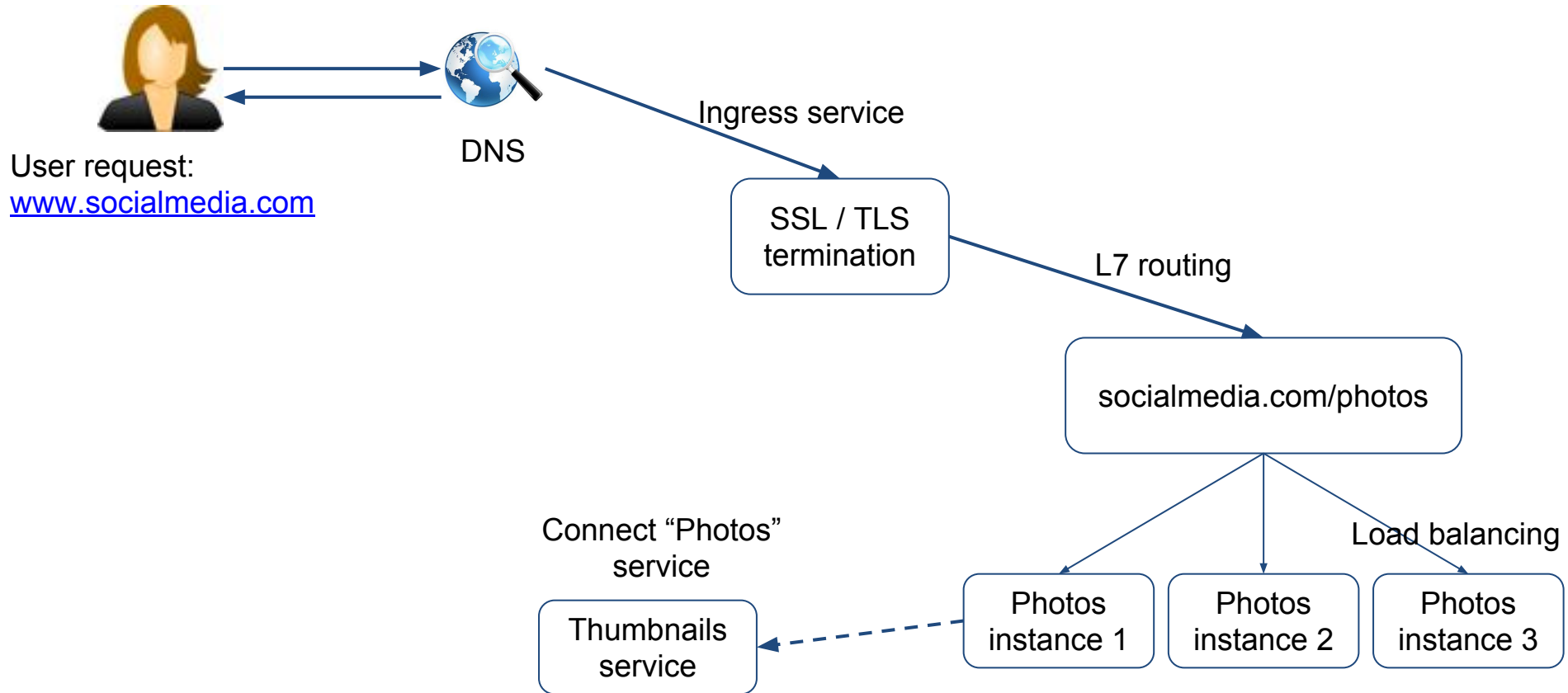
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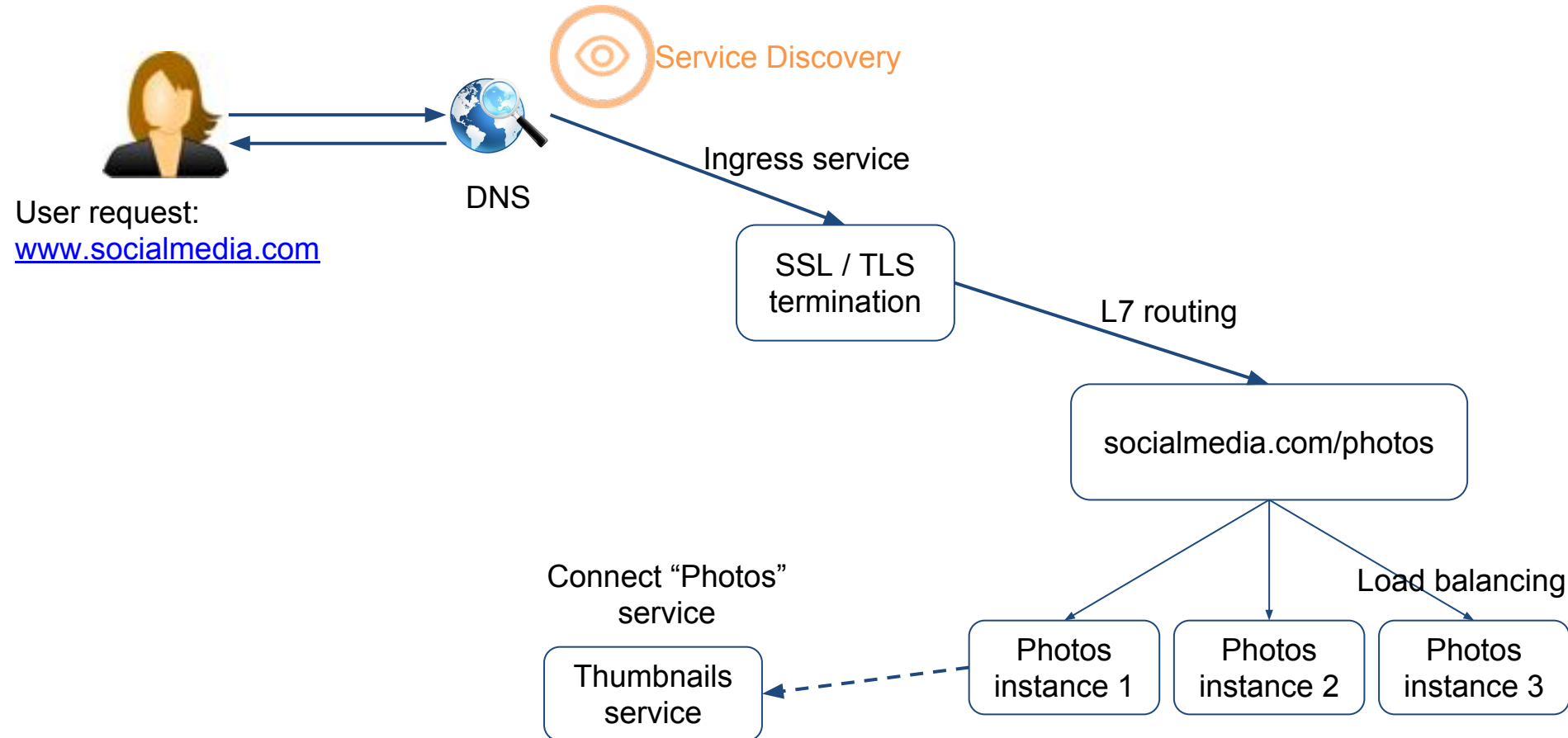
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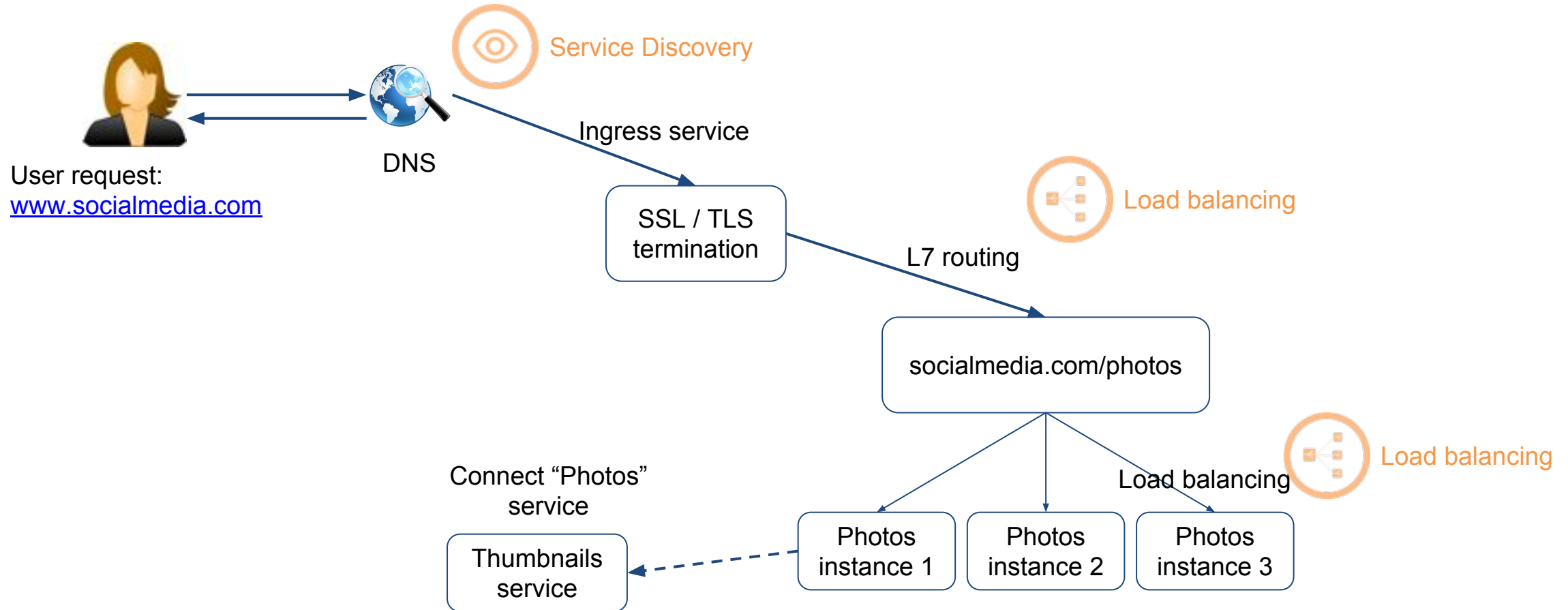
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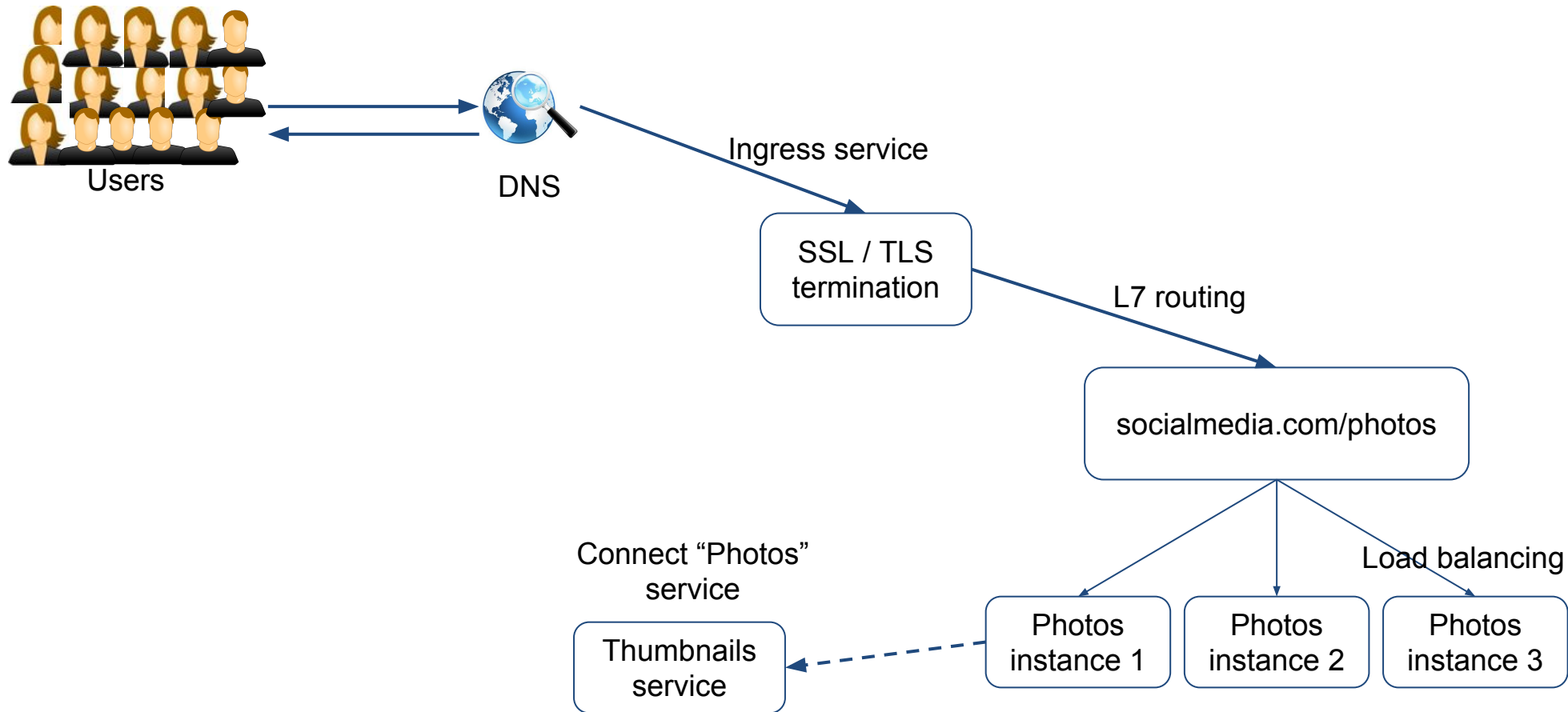
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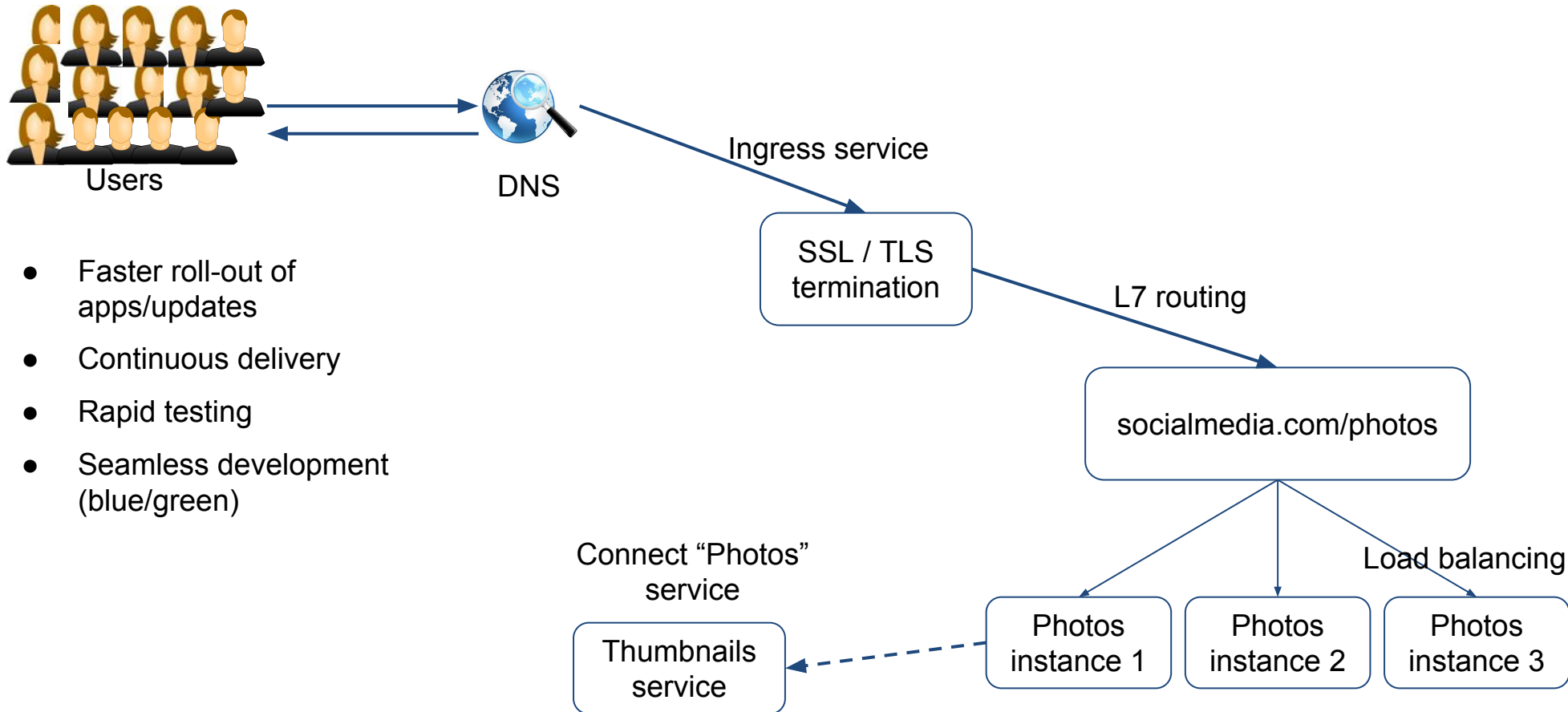
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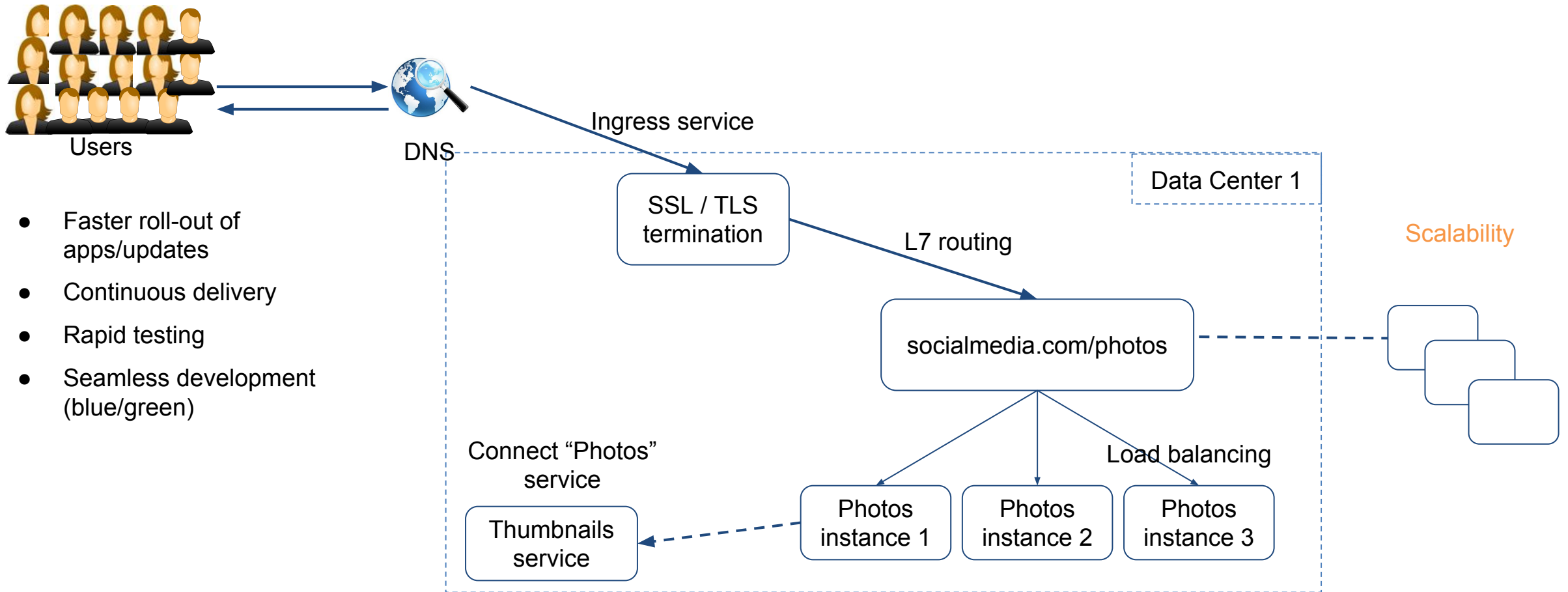
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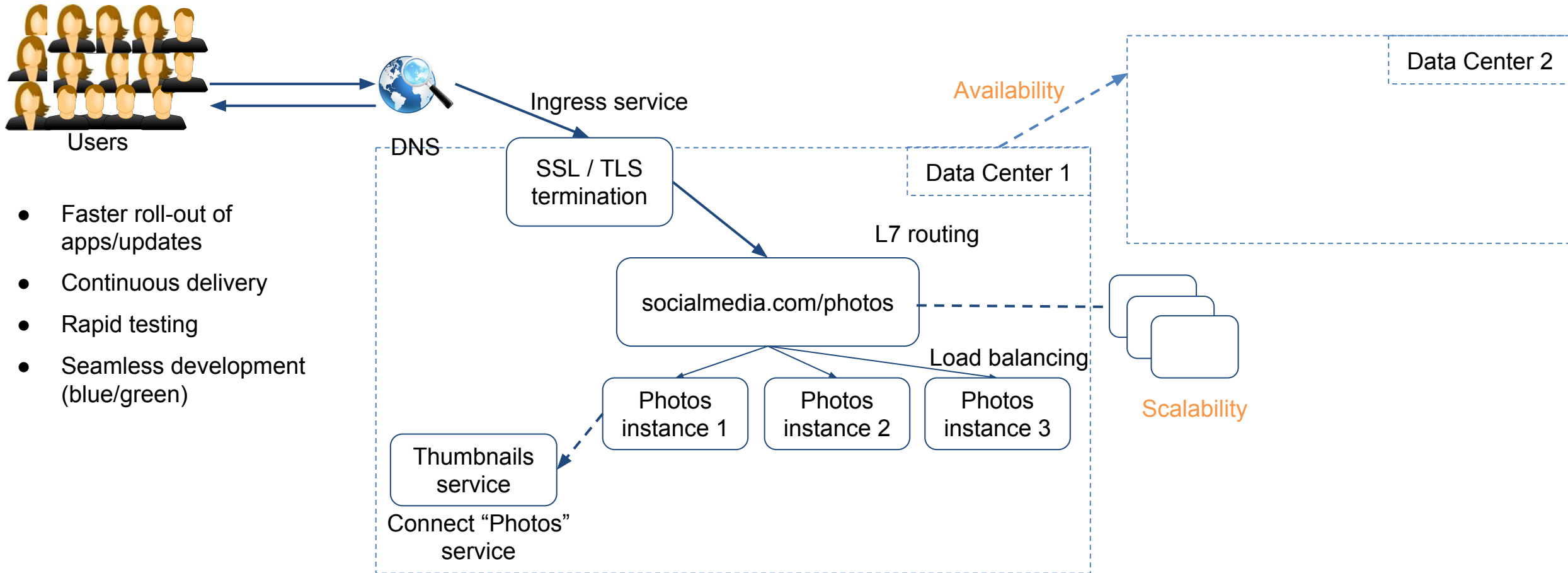
- Faster roll-out of apps/updates
- Continuous delivery
- Rapid testing
- Seamless development (blue/green)



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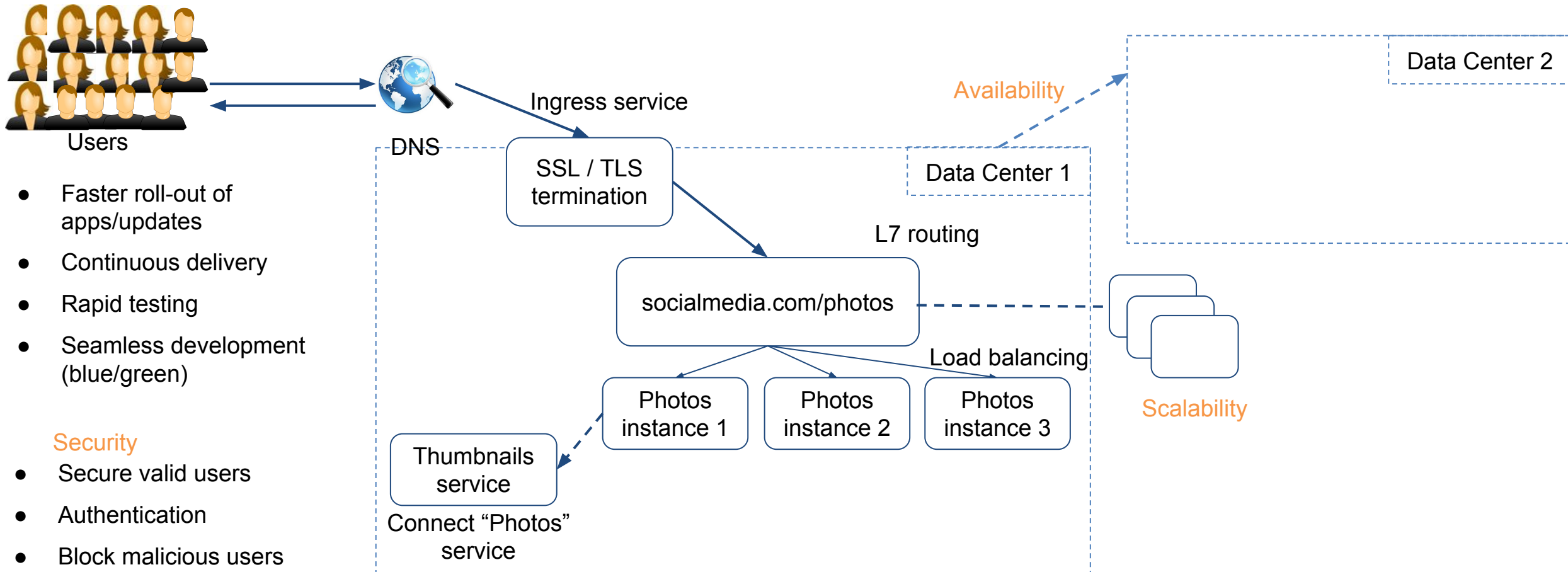


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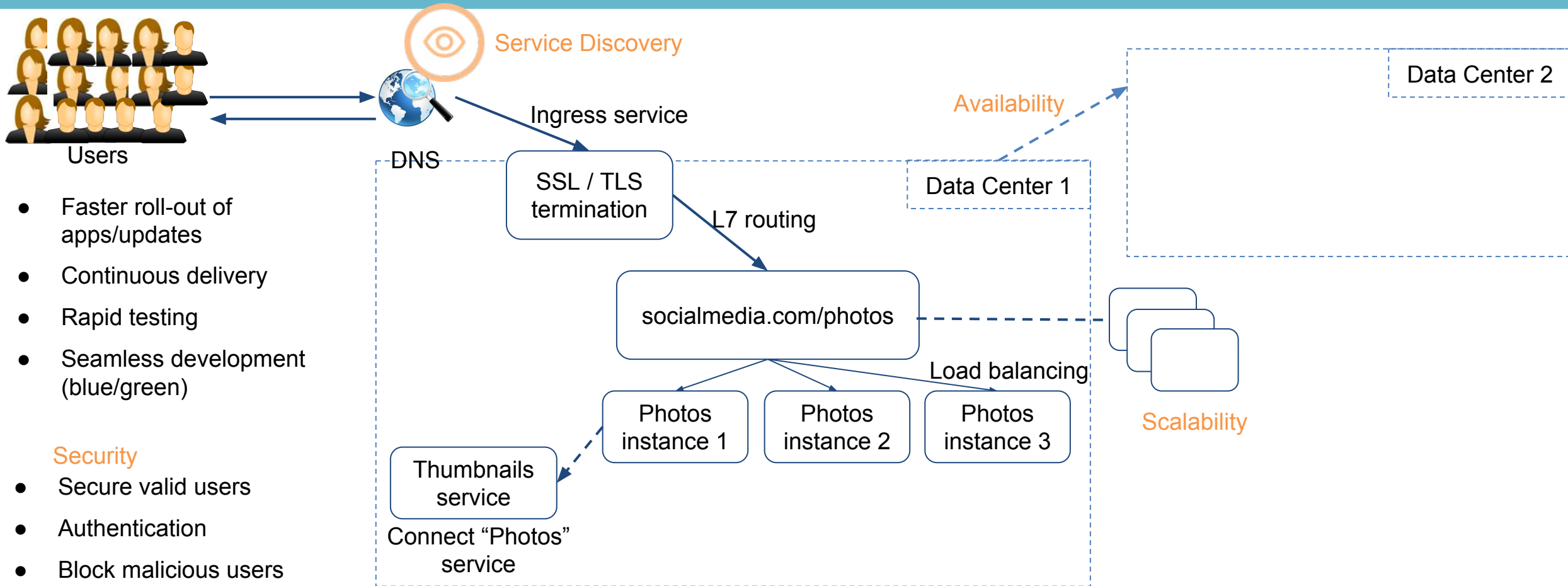


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## Security

- Secure valid users
- Authentication
- Block malicious users
- DDoS mitigation
- WAF

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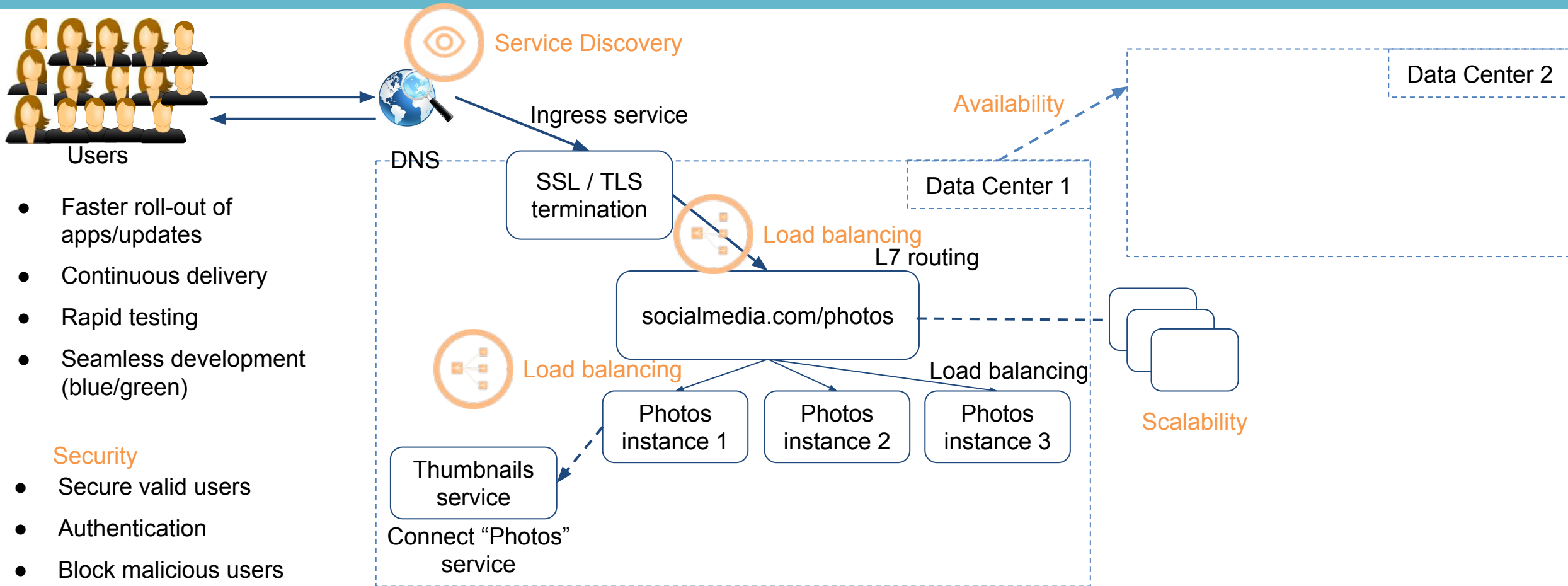


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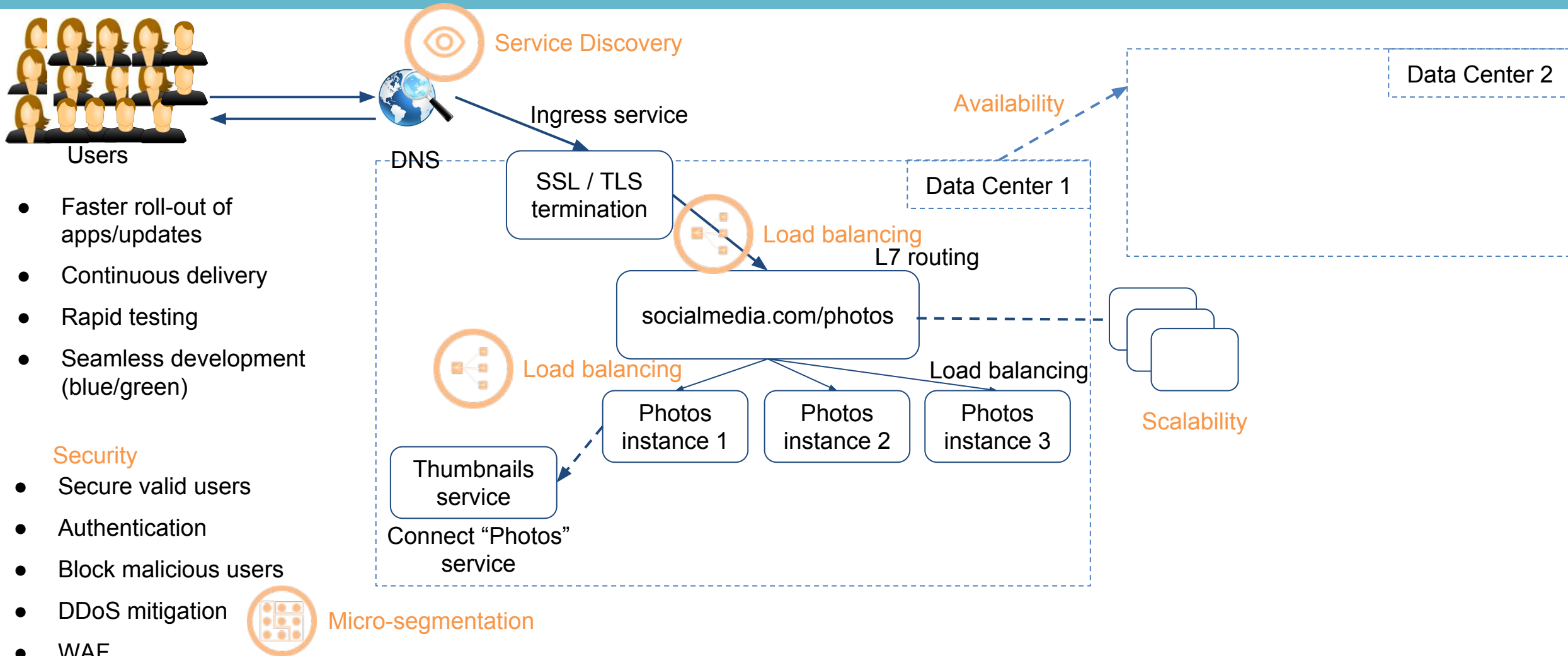


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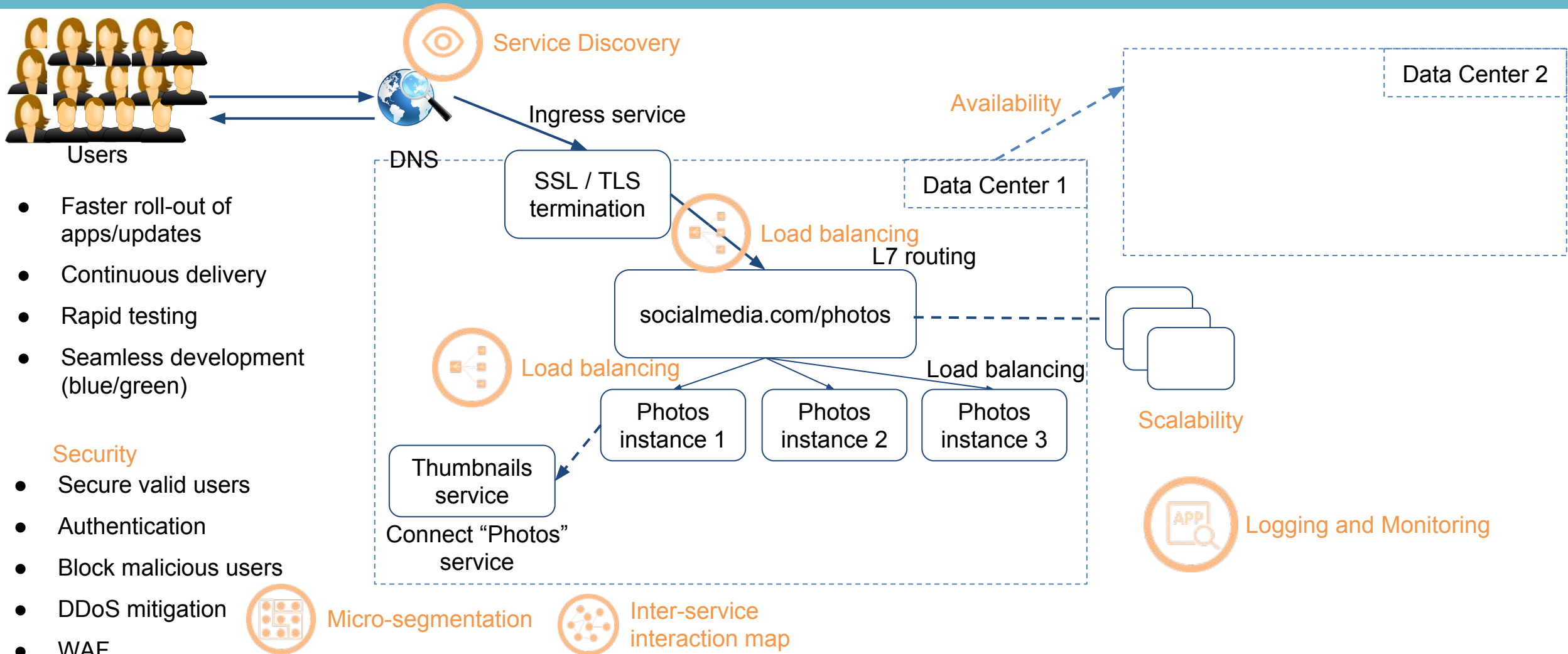
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Micro-segmentation

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# To conclude...

- Traffic Management
  - Cluster Ingress
  - Intra-cluster
- Application Services
  - Service Discovery / DNS
  - Service Proxy / Load Balancing
  - Security / Micro-segmentation
  - Logging and Monitoring
  - Availability / Autoscaling



# Questions?

## How to reach Ranga

- CNCF Slack (@rangar)
- Twitter ([@rangar100](https://twitter.com/rangar100))
- rangar@avinetworks.com



Thank You

# Automation and Integration are key!

Service Discovery

Service Proxy

Security

Logging and  
Monitoring

Availability

Automated Application Services

Integrated with the cluster

In-meshed Fabric