

Idea and Advantages

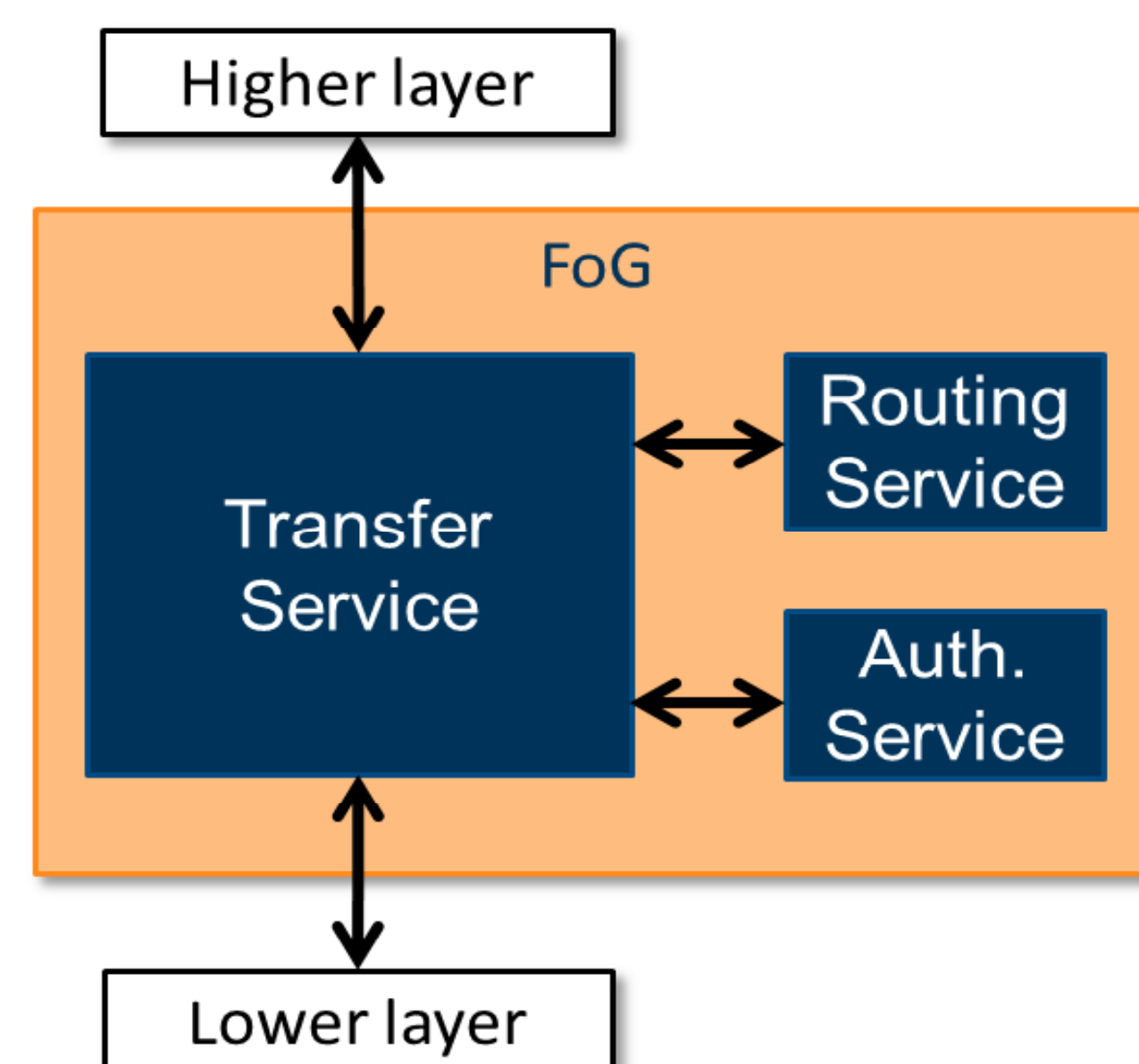
- ▶ **Combines building block creation and classical routing**
 - ▶ Re-using building blocks
 - ▶ Location-routing problem
- ▶ **Enables native QoS and dynamic stack creation**
- ▶ **Frees routing from forwarding**
 - ▶ Addressing internal to routing
 - ▶ Multiple routing services
- ▶ **Scalable routing**
 - ▶ Incremental route calculation
 - ▶ Respects network operator policies (routing/security)
- ▶ **Built-in authentication**
- ▶ **Flexible integration of innovations into the network**

Index-based forwarding system composed of building blocks

ONLY!

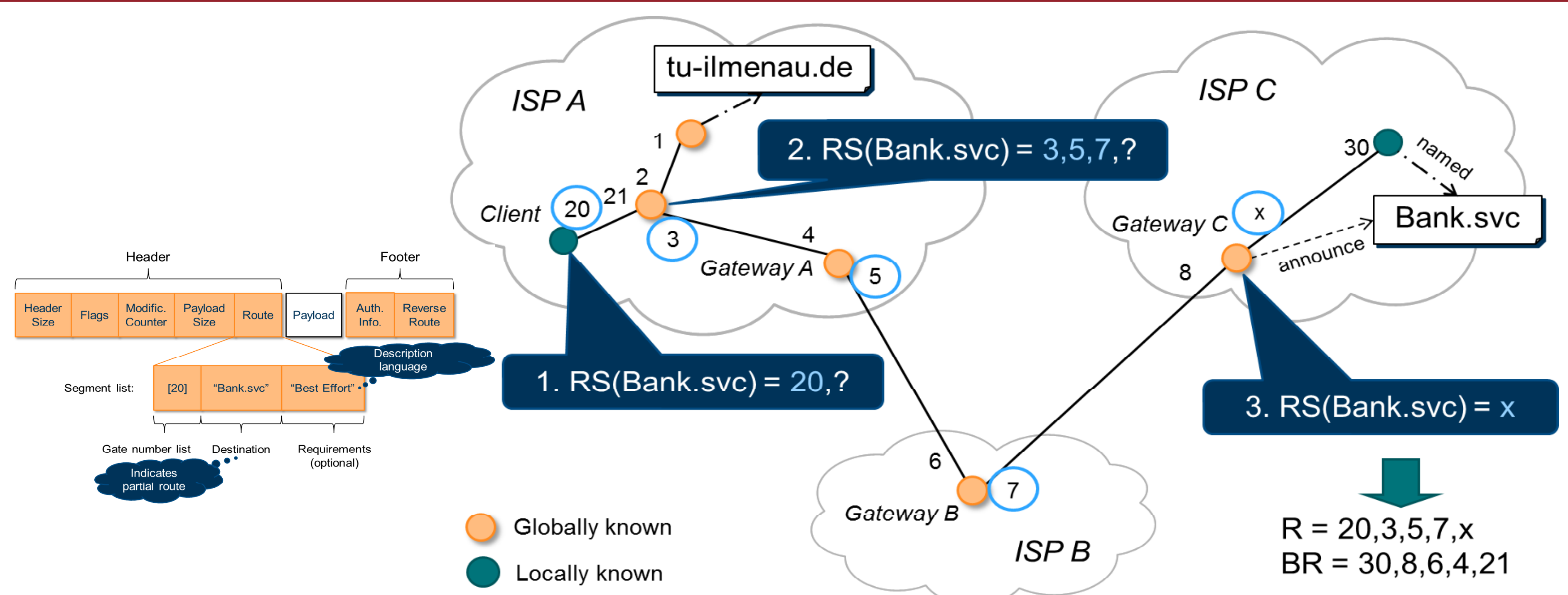
Architecture

- ▶ **Higher layer (e.g. App. / L4)**
- ▶ **Transfer service**
 - ▶ Consists of and manages "gates" and "forwarding nodes"
 - ▶ Packet forwarding and adaptation
- ▶ **Routing service**
 - ▶ Partial path calculation
 - ▶ Determination of missing gates
- ▶ **Authentication service**
 - ▶ AAA support
- ▶ **Lower layer (e.g. Ethernet / IP)**



Partial Routing

- ▶ **Encode routing decision for transfer service**
- ▶ **Scalability**
 - ▶ Nodes with limited knowledge
 - ▶ Iterative process
- ▶ **Security**
 - ▶ Policy-based routing
 - ▶ Route access
 - ▶ QoS usage



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