LISP & LISPmob

Overview and use cases

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Questions

- Who has heard about LISP?
  - … and knows a use case other than routing scalability?
- Who has heard about LISPmob?
  - … and is already using it?

Intro

Use cases

LISP 101

- Locator/Identifier Separation Protocol
  - RFC 6830
- Two disjoint namespaces
  - Endpoint Identifiers (EIDs)
  - Routing Locators (RLOCs)
- Map-and-encap approach

LISP encapsulation

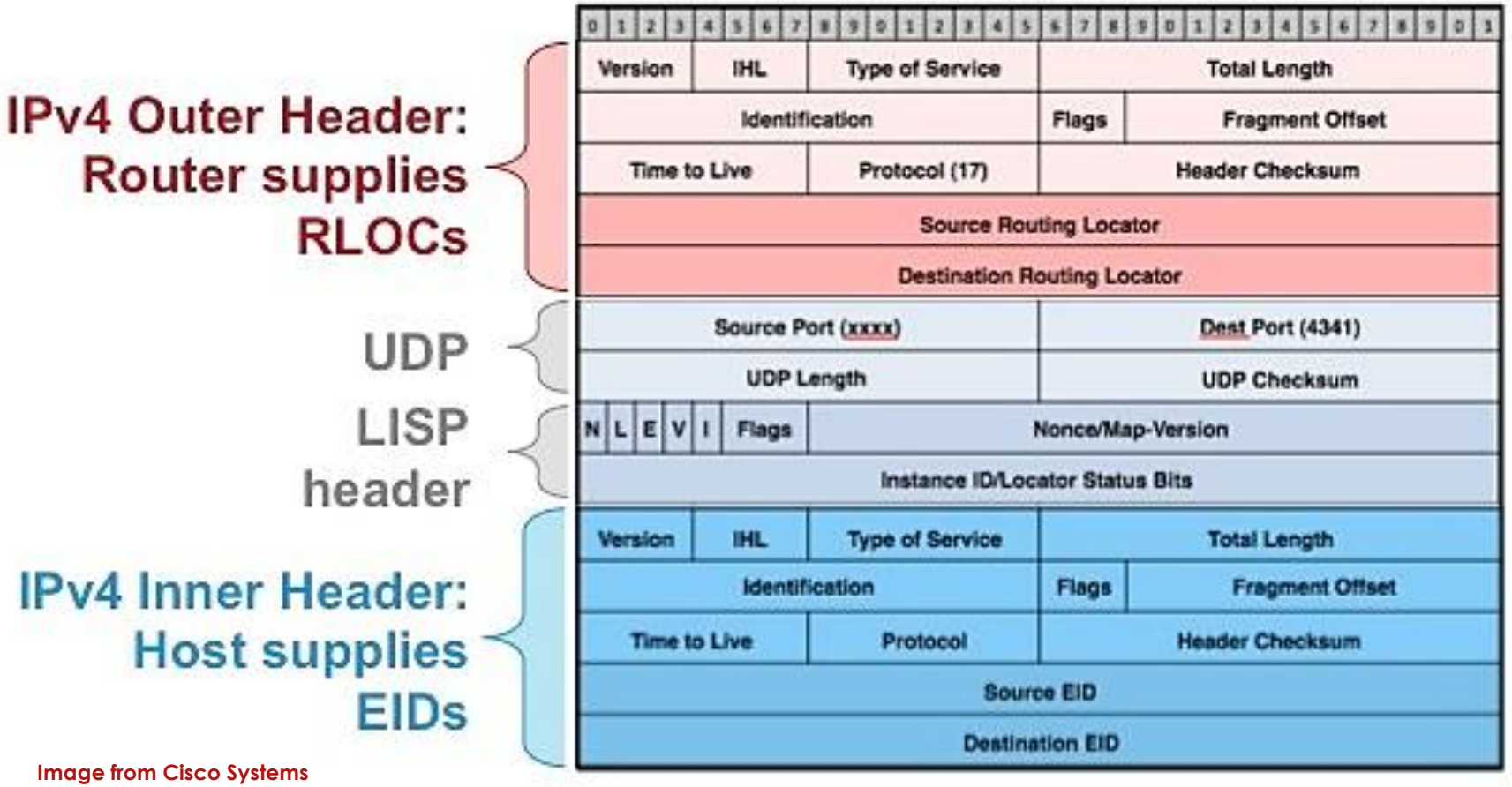
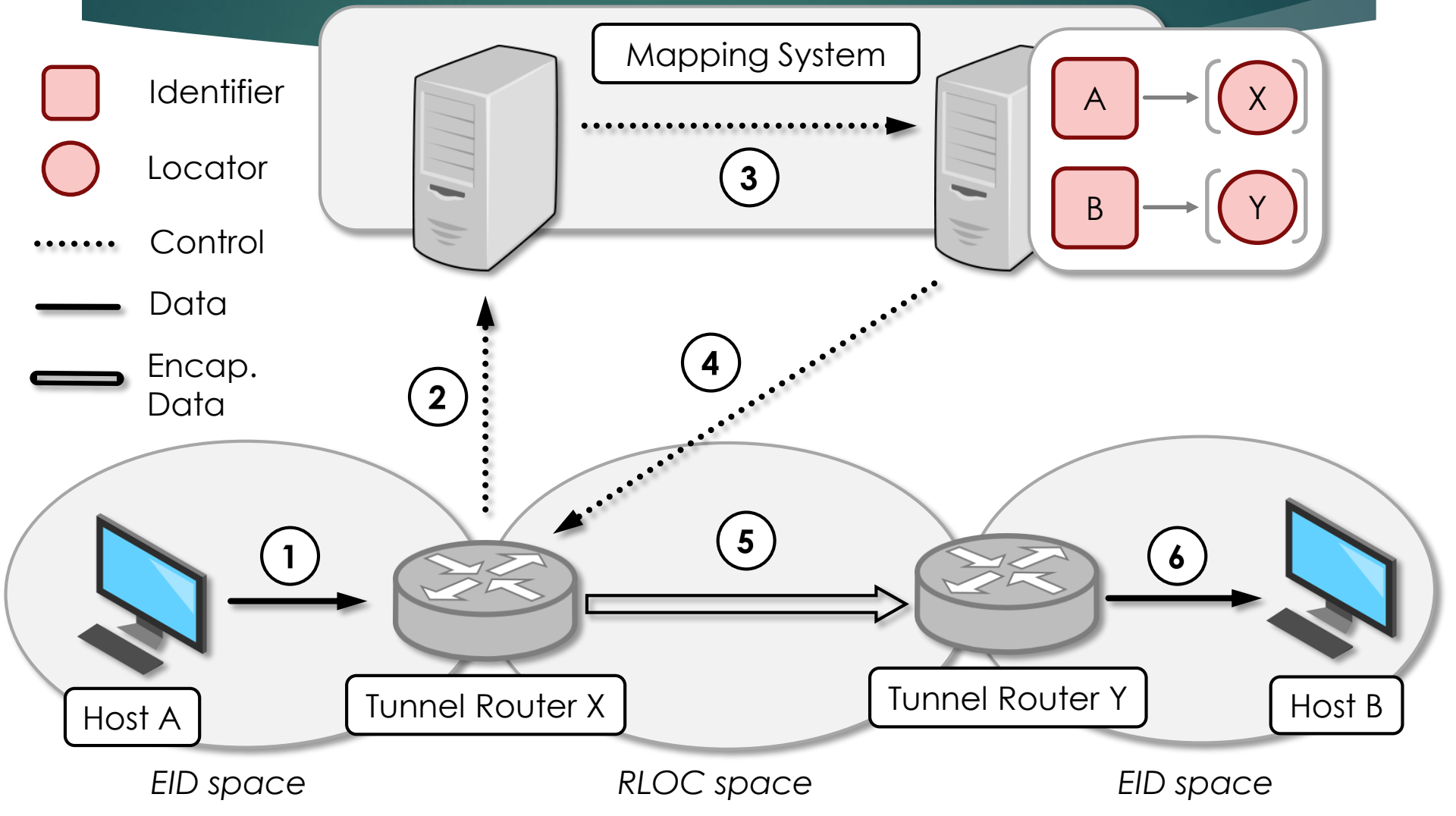
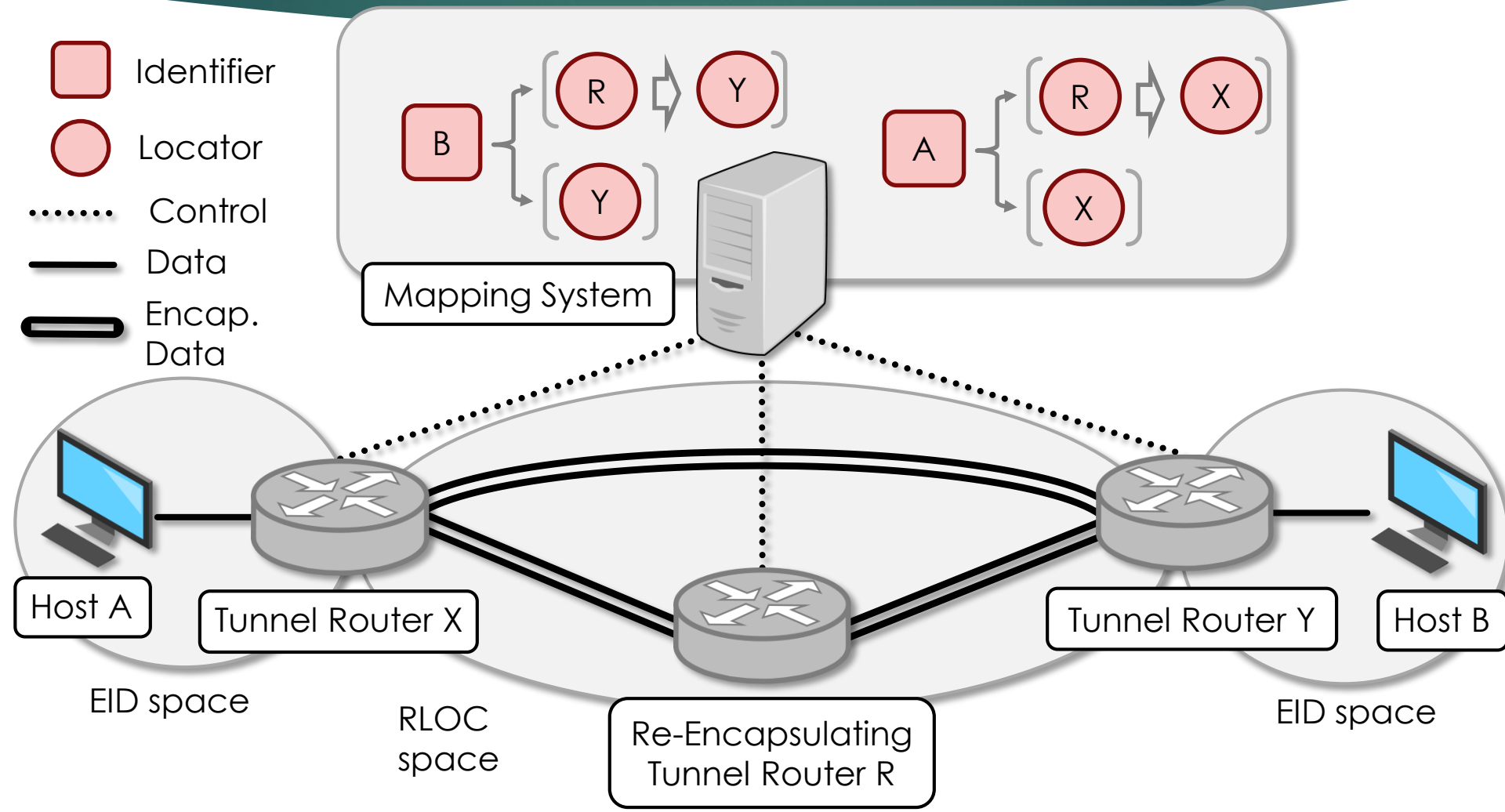


Image from Cisco Systems

LISP architecture at a glance



Traffic Engineering



Use cases

- Multihoming
- IPv4-IPv6 co-existence
- VPNs
- VM mobility

Future

- Software Defined Networks
- Network Function Virtualization
- Service Function Chaining

Intro

Architecture

Features

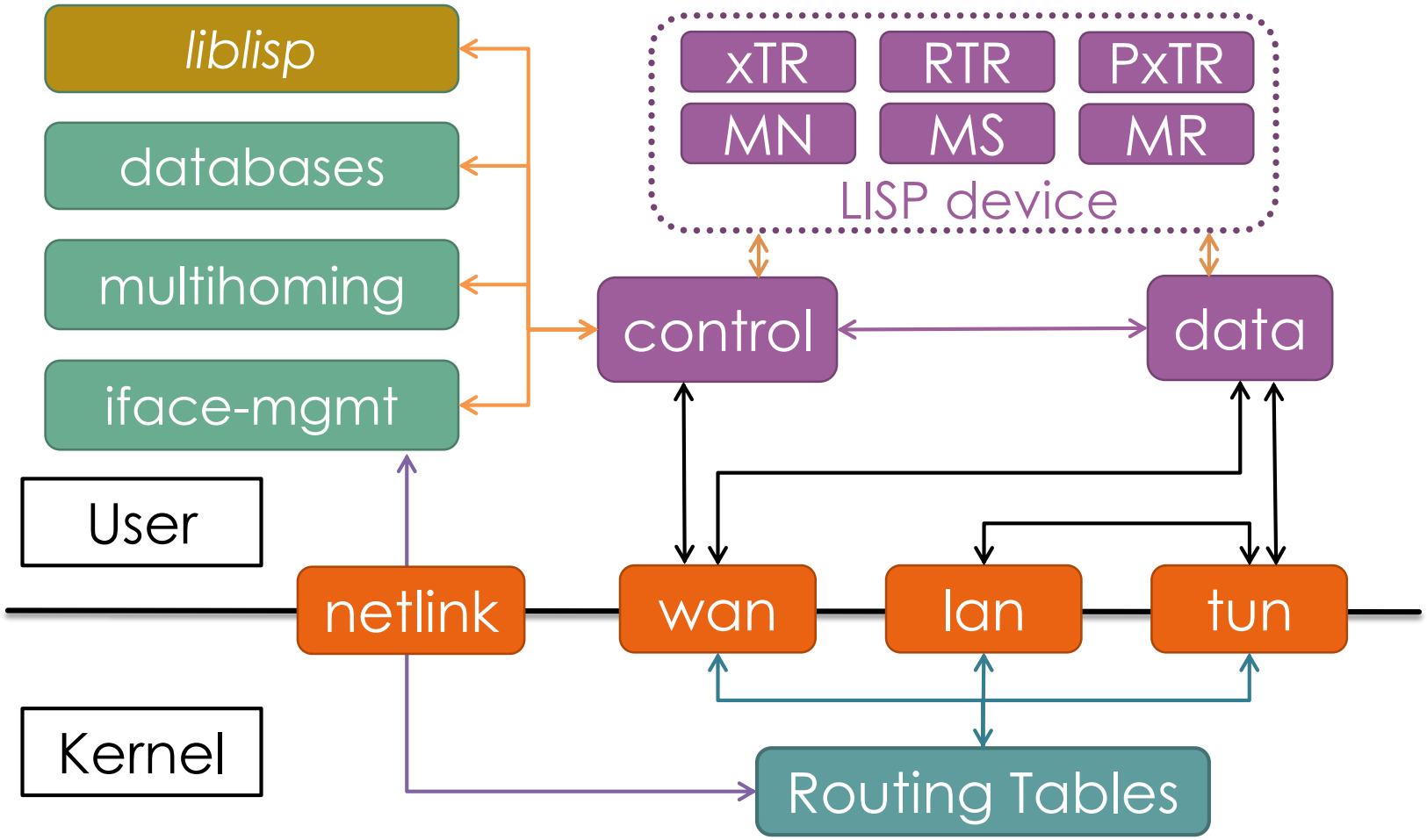
Use cases

LISPmob

What is LISPmob?

- LISP open-source implementation
  - Linux, Android, OpenWrt
- Full featured implementation
  - With focus on home xTRs and MNs
- Growing community
  - Individuals/companies/academia
- Since 2011 in active development

LISPmob internals



Features

- Implementing RFC6830 & companions
- Full IPv4/IPv6 support
- Interface management
  - Handovers
- Multihoming
  - Active-Backup / Active-Active
  - Ingress & Egress Traffic balancing
- NAT traversal

Use cases: end users

- IPv6 over IPv4
  - …and sometimes the other way around
- Home multihoming
  - Two DSL lines

Use cases: industry/academia

- To learn and prototype
  - LISP proof-of-concept deployments
- Easy LISP provision
  - Plug'n'Play LISP boxes (OpenWrt+LISPmob)
- Research
  - LISPmob as a framework

Future

- Improved configuration
  - NETCONF & YANG
- Performance
  - Intel DPDK
- Beyond IP
  - Layer 2 support

Try it!

- Visit the webpage
  - http://lispmob.org
- Check out the code
  - https://github.com/LISPmob/lispmob
- Connect to the LISP beta-network
  - Fill the form at http://lispmob.org/contact
- Get the binaries