



Recent Achievements for Computer and Communication Network Management

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WHO AM I

- Stoyan Mishinev <mishinev@openintegra.com>
- Cofounder and CEO of OPENINTEGRA
- PhD student in IICT - BAS

Corporate facts

- 100% Bulgarian company – est. 2003
- Systems & Software integrator
- Open source software focused
- Founders are recognizable IT leaders
- IBM Business Partner
- Red Hat Ready Partner
- EMC Velocity Solution Provider Affiliate Partner
- VMware professional solution provider
- Silver Citrix Solution Provider
- Reseller of EMC, IBM, Apple, Cisco, NetApp, VMware, Citrix, RSA, Lenovo, Posiflex, Micros/Fidelio & etc.

iOS Android Windows™ Phone

Mobile platforms

Cloud & Virtualization

zEnterprise POWER™ Intel/AMD 32/64-bit

Hardware platforms

Software development
(web & mobile)

- LAN / WAN / Internet
- Data management, Backup & Archiving, De-duplication
- Data (content) replication & data storage
- Core infrastructure & collaboration (web, mail, etc.)
- Security

Hybrid (heterogeneous) solutions

Open platforms Proprietary platforms

GNU/Linux *BSD Mac OS X AIX™ Microsoft® Windows™

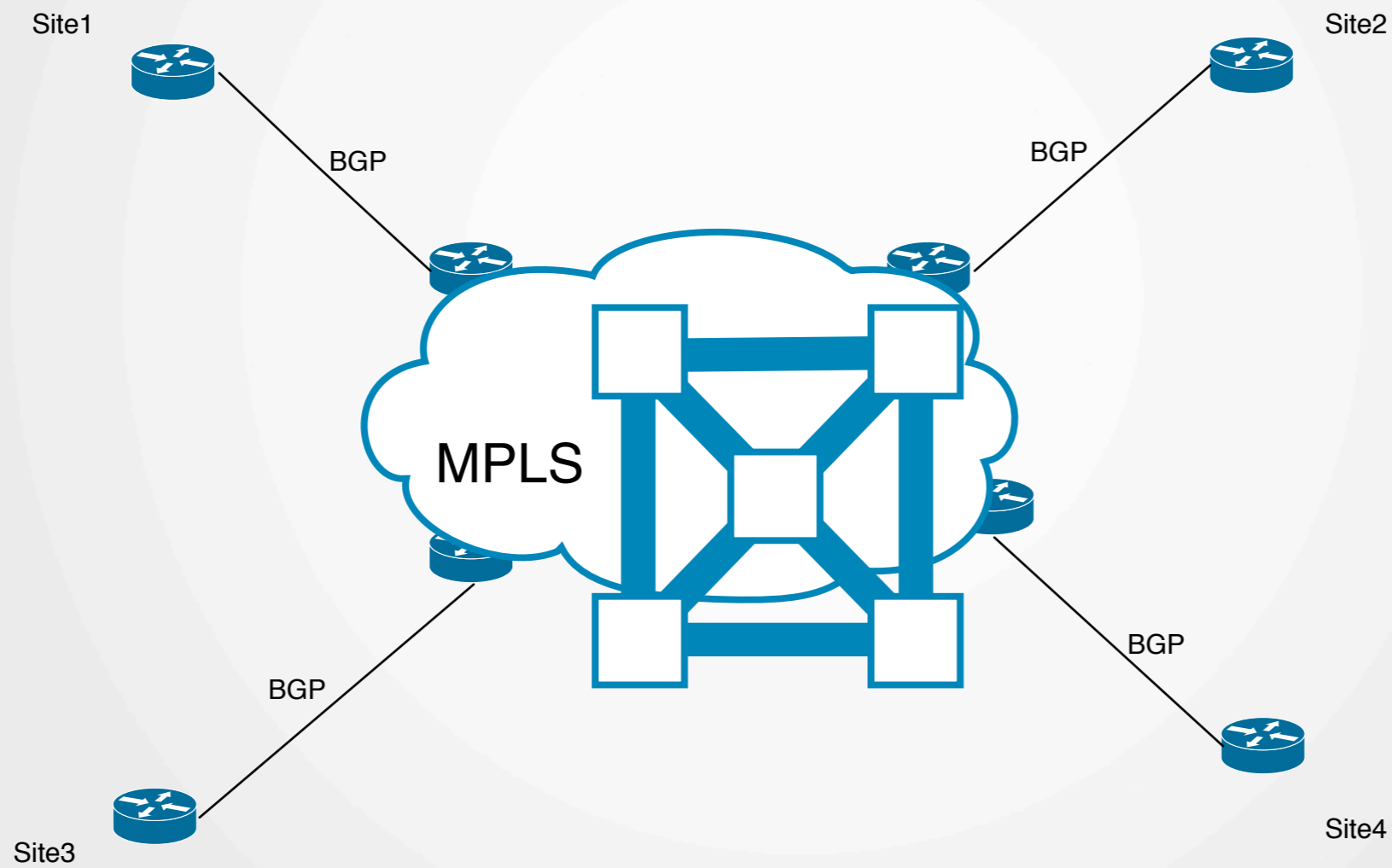
Satisfy customer requirements using supported and unsupported configurations

- **DMVPN backup of MPLS Virtual Private Network**
- **Wireless extender for Wireless Controller driven network**

DMVPN Backup of MPLS VPN - Terminology

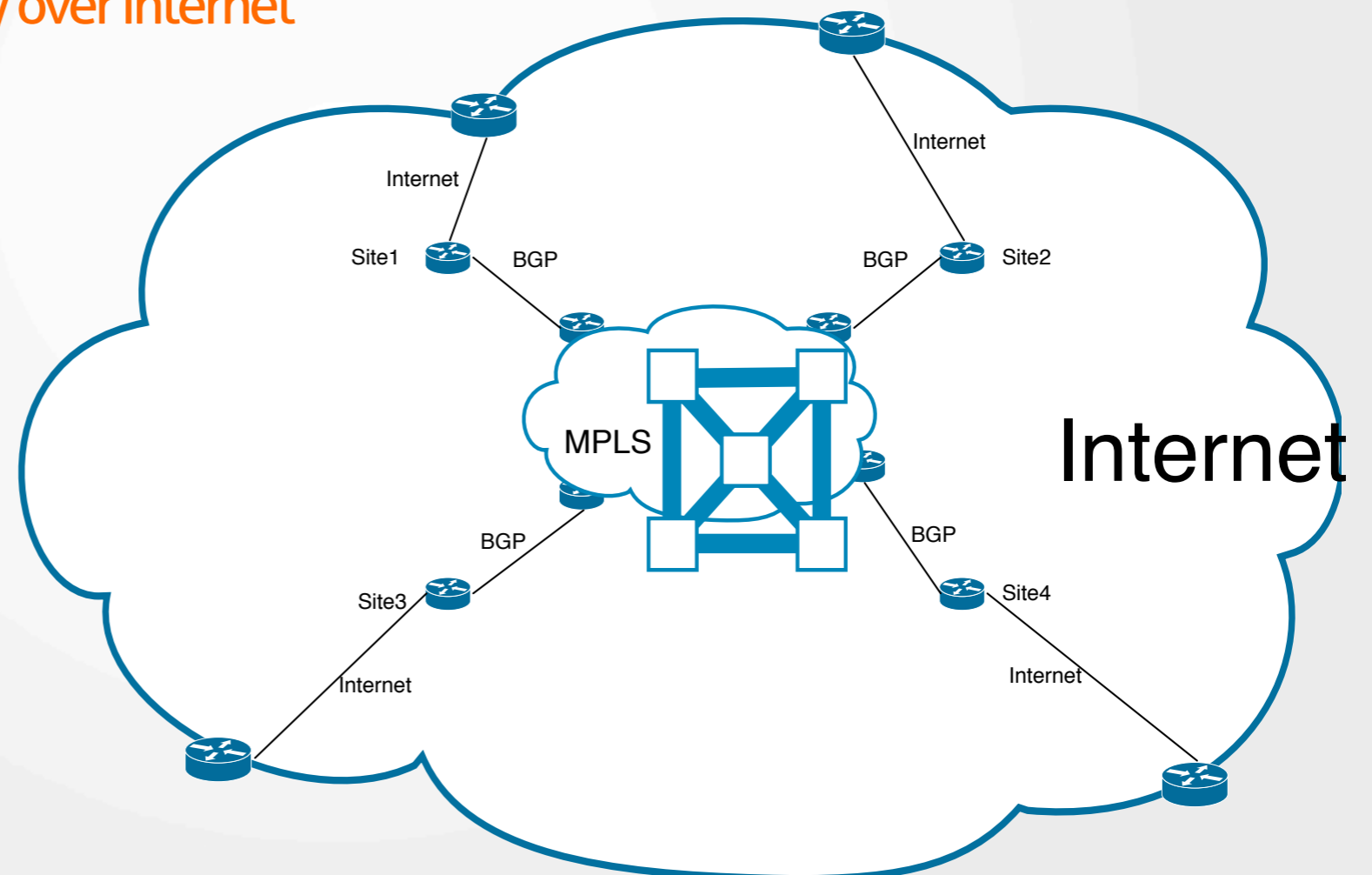
- MPLS - MultiProtocol Label Switching
- VPN - Virtual Private Network
- DMVPN - Dynamic Multipoint Virtual Private Network

The Starting Point



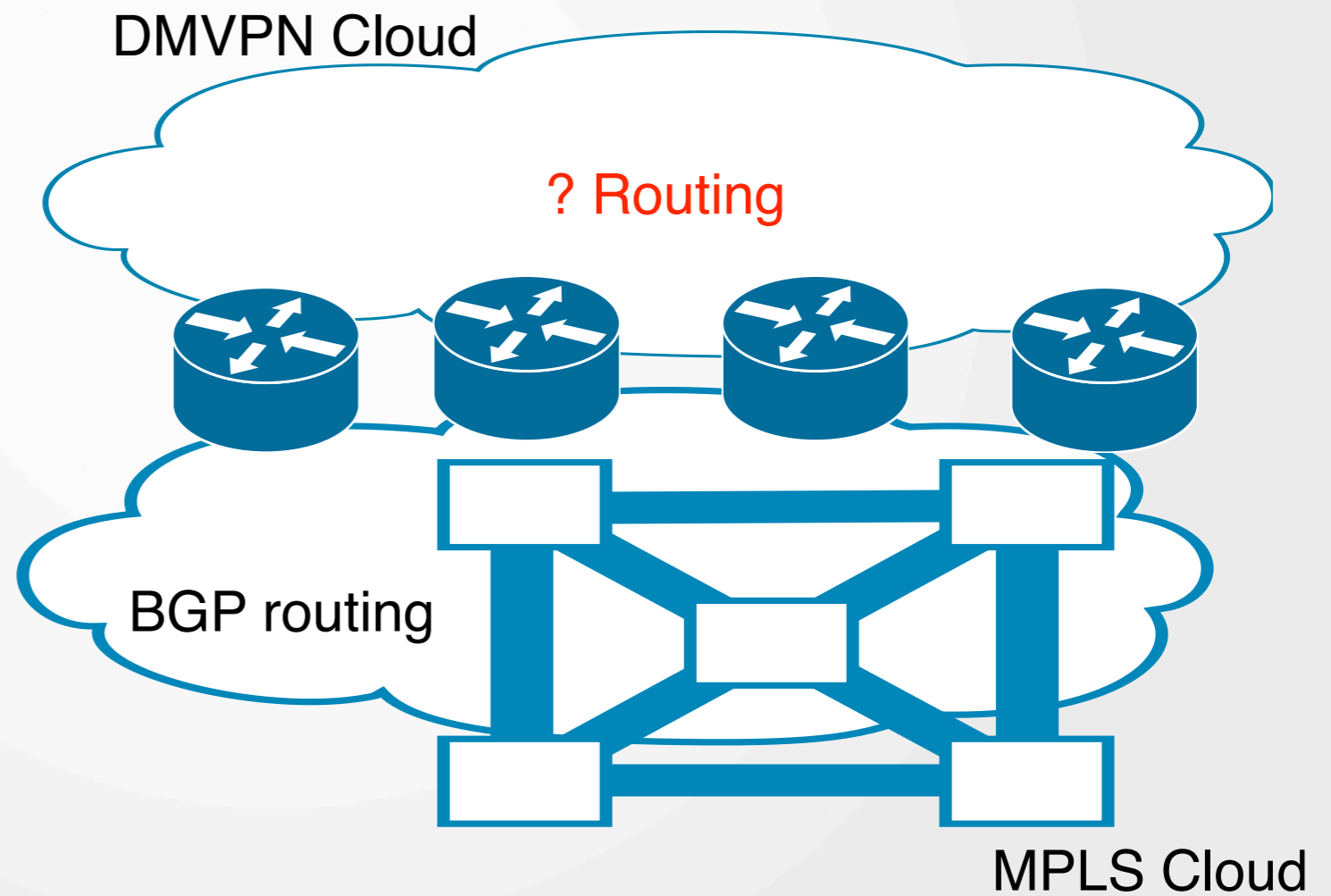
The Requirements

- Internet connectivity in every site
- Backup the MPLS connectivity over Internet



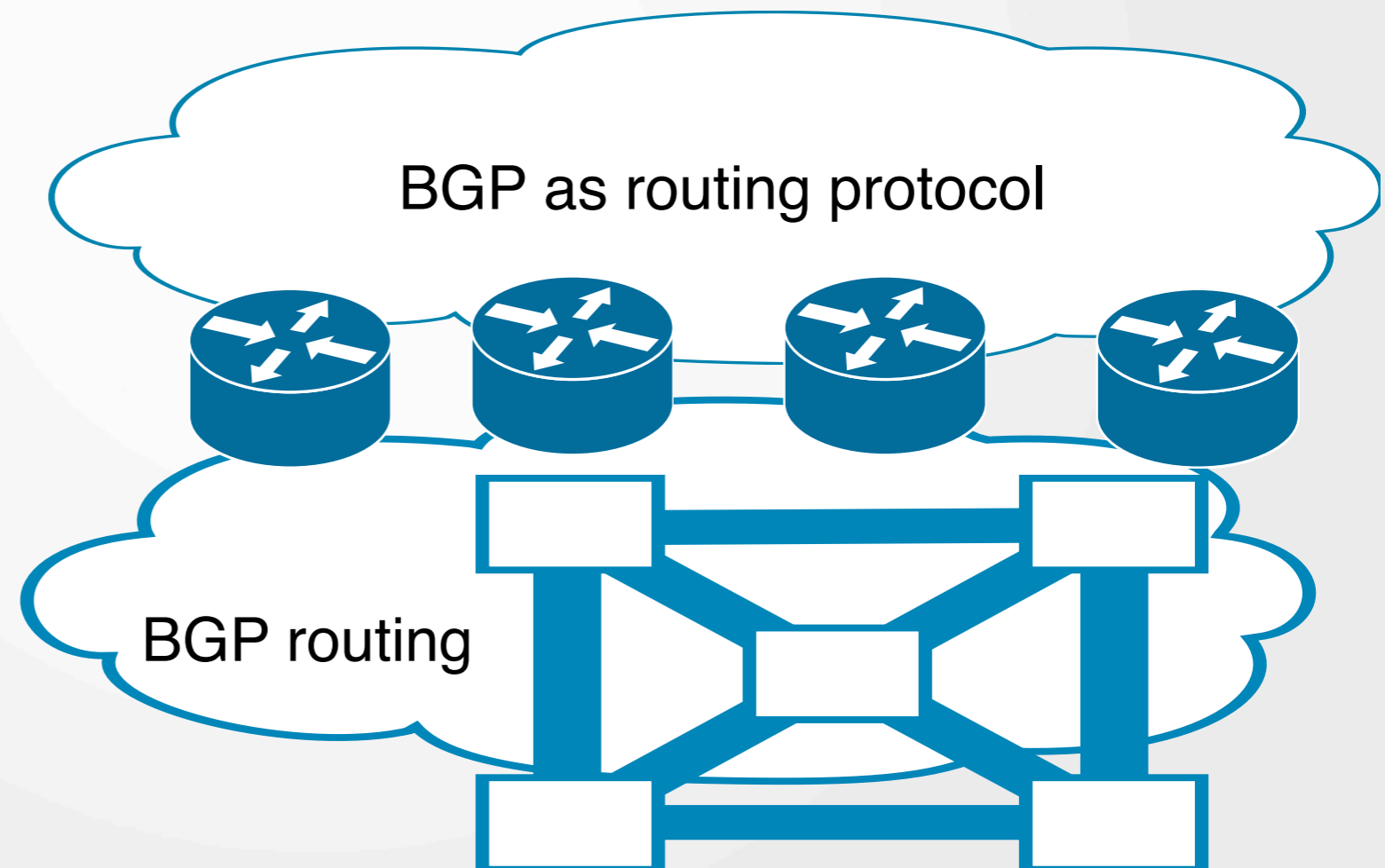
The Problem

- OSPF ???
- EIGRP ???
- RIP ???
- BGP ???



The Solution

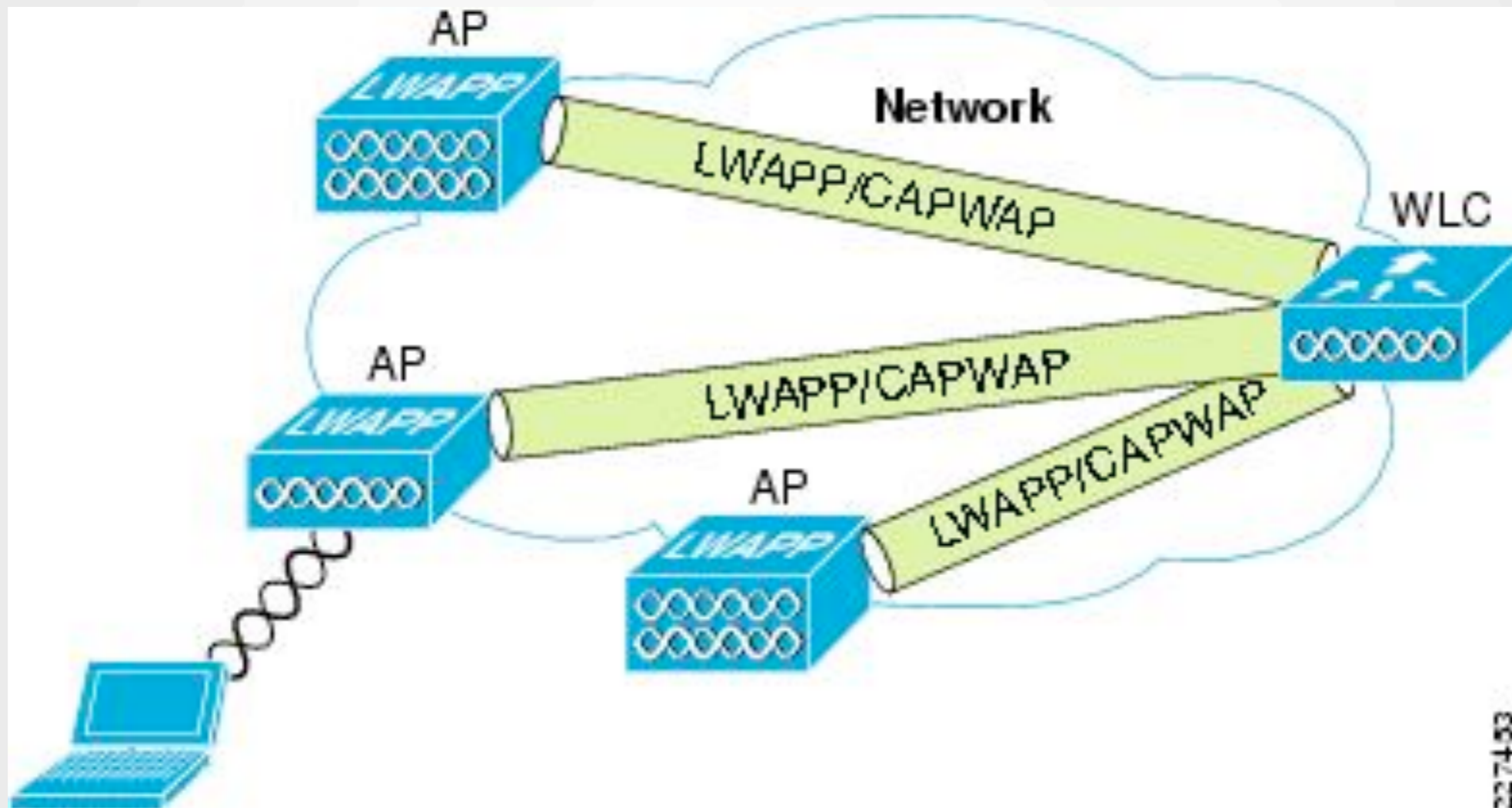
- BGP as routing protocol
- Prepend DMVPN routes
- Proper local preference for DMVPN routes



Wireless Extender - Terminology

- CAPWAP - Control and Provisioning of Wireless Access Points
- WLC - Wireless Controller

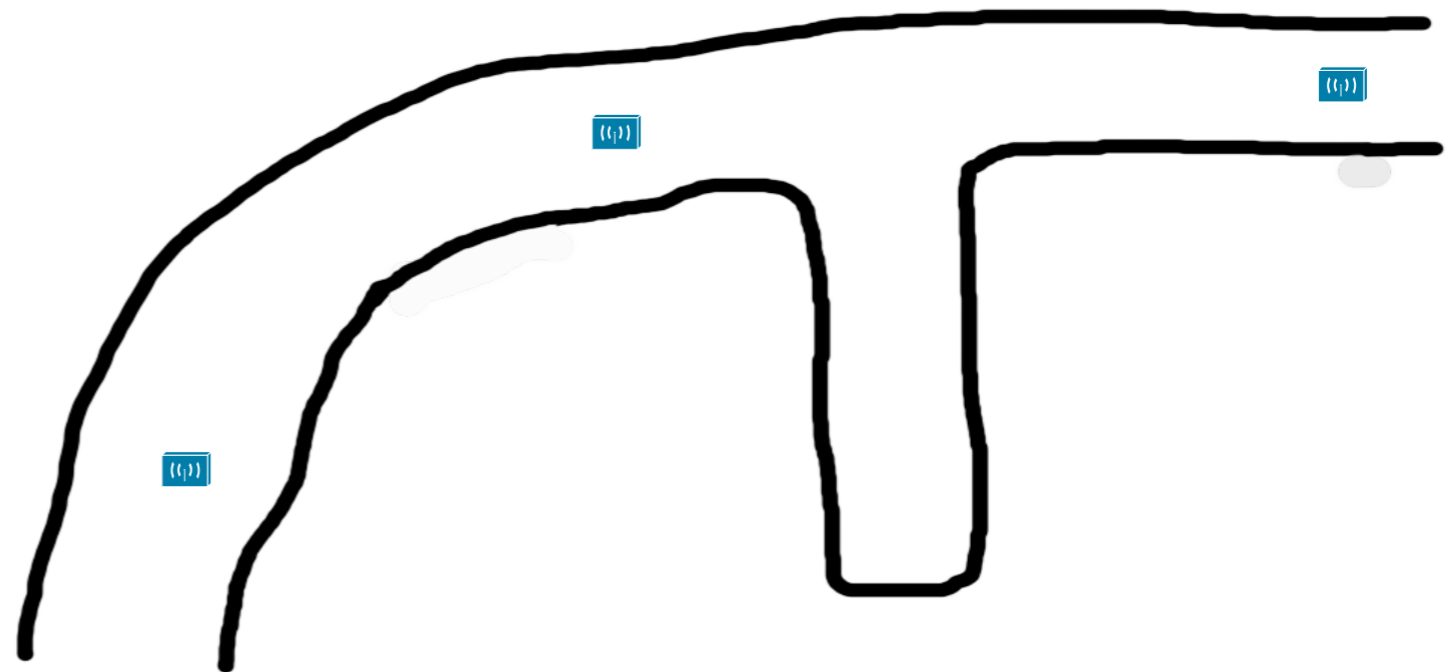
Wireless Extender - Technology



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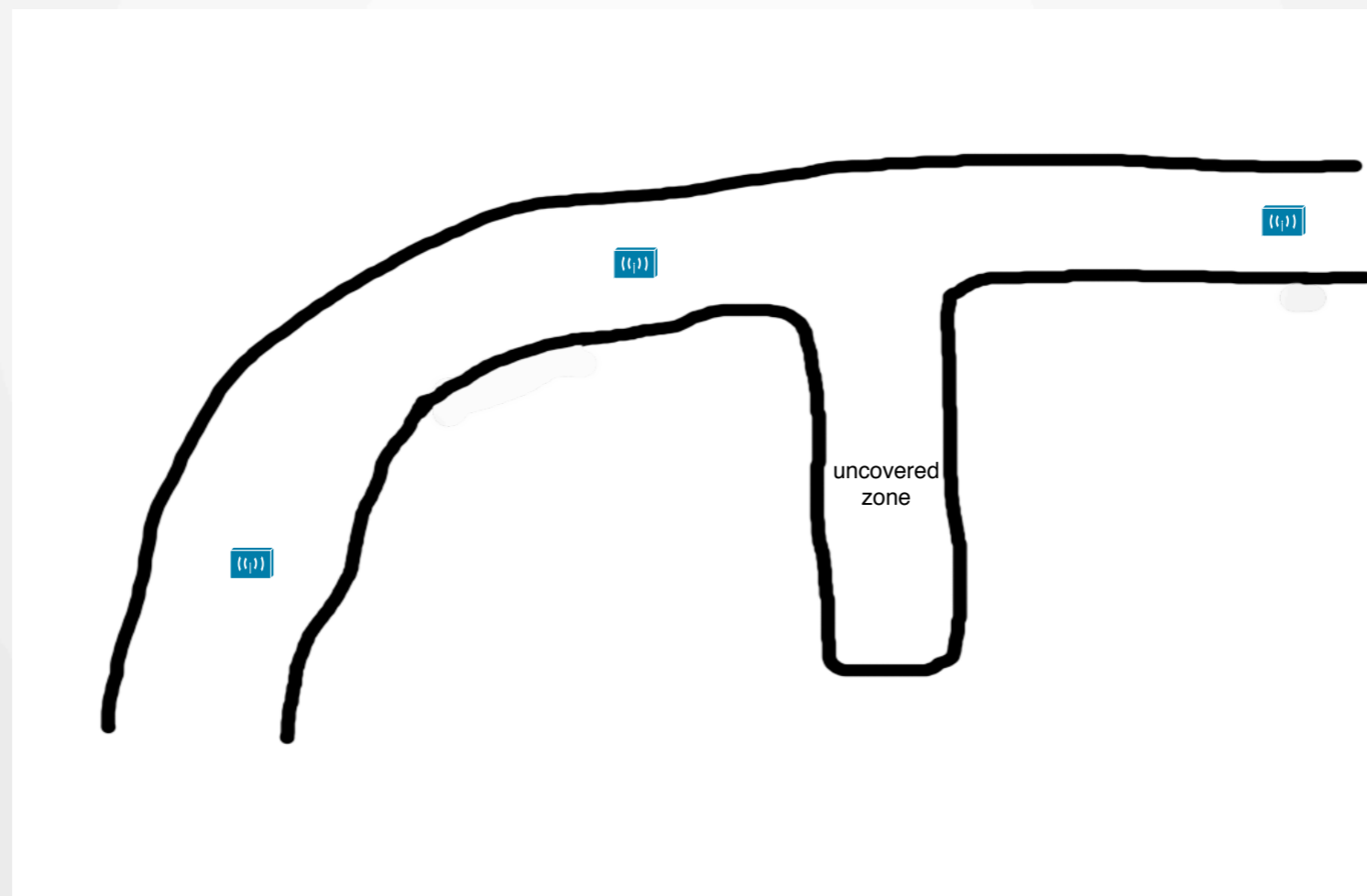
The Starting Point

- Cisco Wireless Access Points
- Cisco Wireless Controller driven Wireless Network (CAPWAP)
- Galleries to be covered



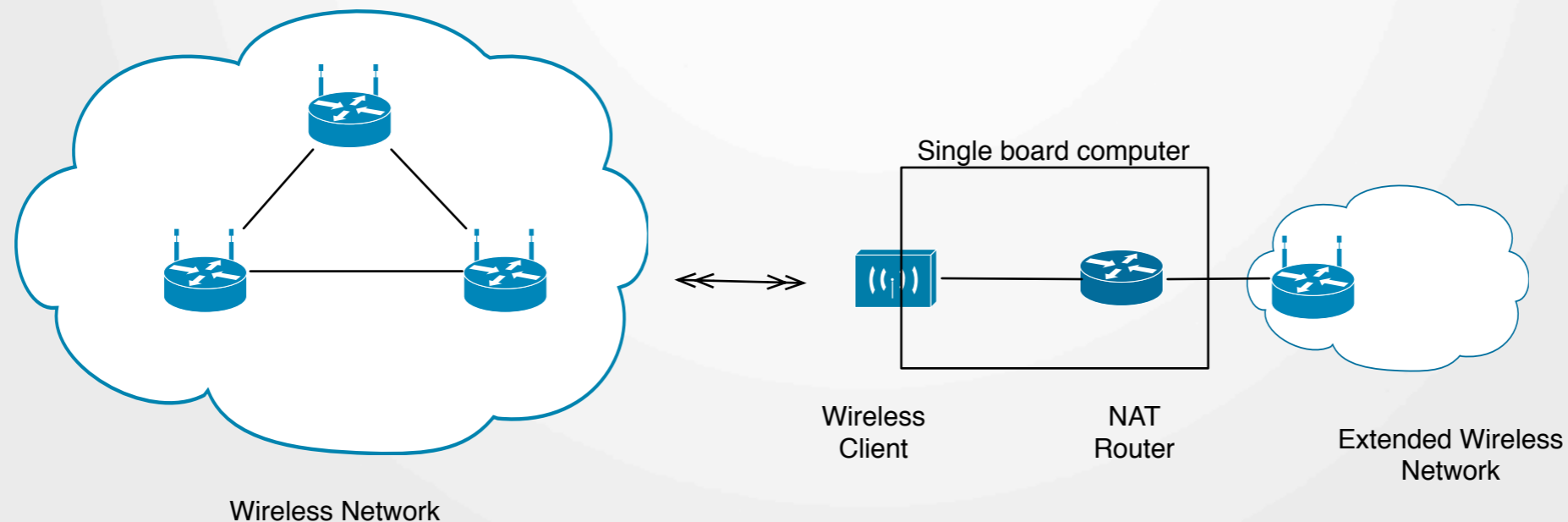
The Problem

- Need coverage in dead zones



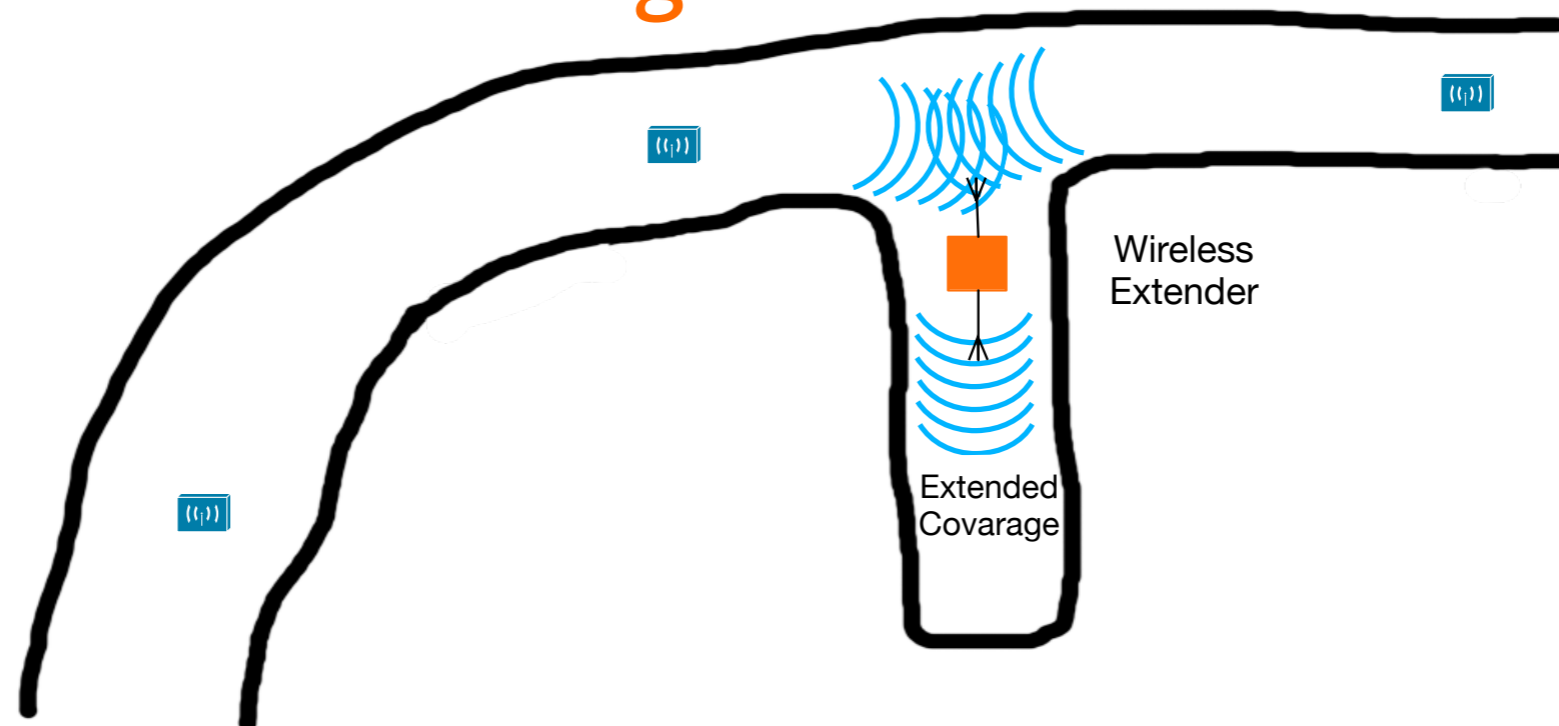
The Solution

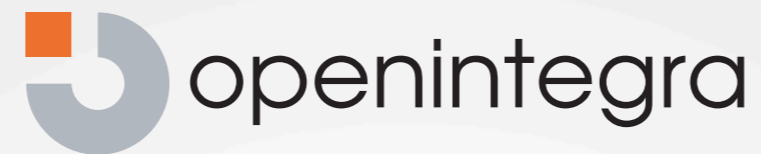
- Wireless Client
- NAT Router
- Extender AP connected to WLC via CAPWAP



The Achievement

- Battery powered mobile device
- Easy to extend wireless coverage





Thanks!

That's all for today

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