Building an IXP

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Hurricane Electric / LONAP / IXLeeds
MENOG 9, Muscat Oman
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Agenda

- Before you buy a switch
- After installation, before customers
- Turn up customers!

Steal this presentation! ☺

Downloadable notes

www.menog.net

Before you buy a switch

Planning

Photo courtesy
Orange County Archives

Community

Nomadic Lass - http://www.flickr.com/photos/nomadic_lass/5416543588/

Legal Structure

Legal Entity

Commercial

Association

Define your offering

- Peering LAN
- Closed User Groups?
- Interlink own network?
- Transit OK?

Jason Jones - http://www.flickr.com/photos/jay69/4050881930/

www.ripe.net/lir-services/resource-management

Internet Coordination | Data & Tools | LIR Services | RIPE Community | Site Map | Contact | Help | RIPE Database Search

RIPE NCC RIPE NETWORK COORDINATION CENTRE

LIR Portal | About The RIPE NCC | Member Support

IPv4 • IPv6 • AS Numbers • Direct Assignments | Certification • FAQs • Contact Registration Services • RIPE NCC Resource Quality Assistance

Number Resources

End User Contract

No PI from last /8

Special IX v6 rules

You are here: Home > LIR Services > Resource Management

Resource Management

Information to help RIPE NCC Members (LIRs) and Direct Assignment users manage Internet number resources.

IPv4 Exhaustion

With the remaining IPv4 address pool held by the Internet Assigned Numbers Authority (IANA) exhausted, what happens now?

Read More

Can I split up assignments? How and when do I request an allocation? How do I request an AS Number?

Quick Links

- Request Forms & Supporting Notes
- IPv4 Evaluation Procedures
- IPv4
- IPv6
- AS Numbers
- Certification
- Reverse DNS
- Resource Quality
- Contact Registration Services

Get Resources Direct | **Tools for LIRs** | **FAQ**

End Users can request independent resources directly

The RIPE NCC has produced a range of utilities to manage

FAQ: IPv4 Address space

Jumbo Frames

> 1500/1522

Peering LAN / CUG

ISLs

Spanning Tree

MRP

Layer 2 Resilience Protocols

VPLS

EAPS

Trill
one day!

Flex Links

Port Security

‘n’ MACs per port

Storm Prevention

Leaky ISP Layer 2

Mike Zebble - http://www.flickr.com/photos/zebble/6030627/

Other Switch Features

(c) LONAP

Colocation

Independence

Support

Partnership

Ian Harvey, AQL - Photograph of Salem DC2, Leeds - colocation of IXLeeds

Collector
(BGP Router)

Debug

Monitor

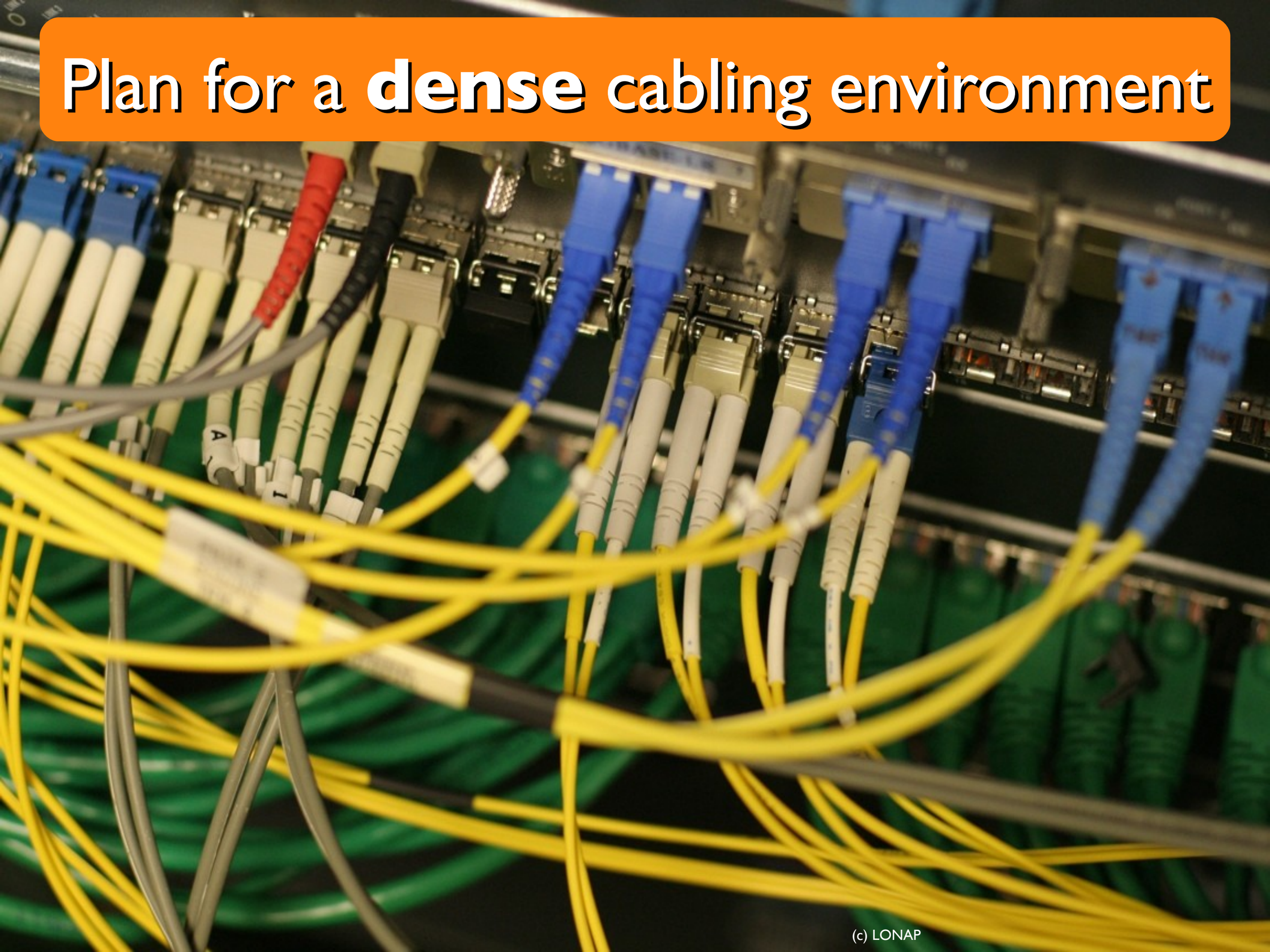
Support

After installation

Monitoring

- Availability
- Performance
- Ethernet OAM?

Plan for a **dense** cabling environment



(c) LONAP

SFlow

Customers

Top Peers

Exchange

Marketing
Resilience
Missed Ops

Service Levels

Cost to Exchange funds

Commercial v Association

Communications

Tech Support

Organisational

New Member

Operations

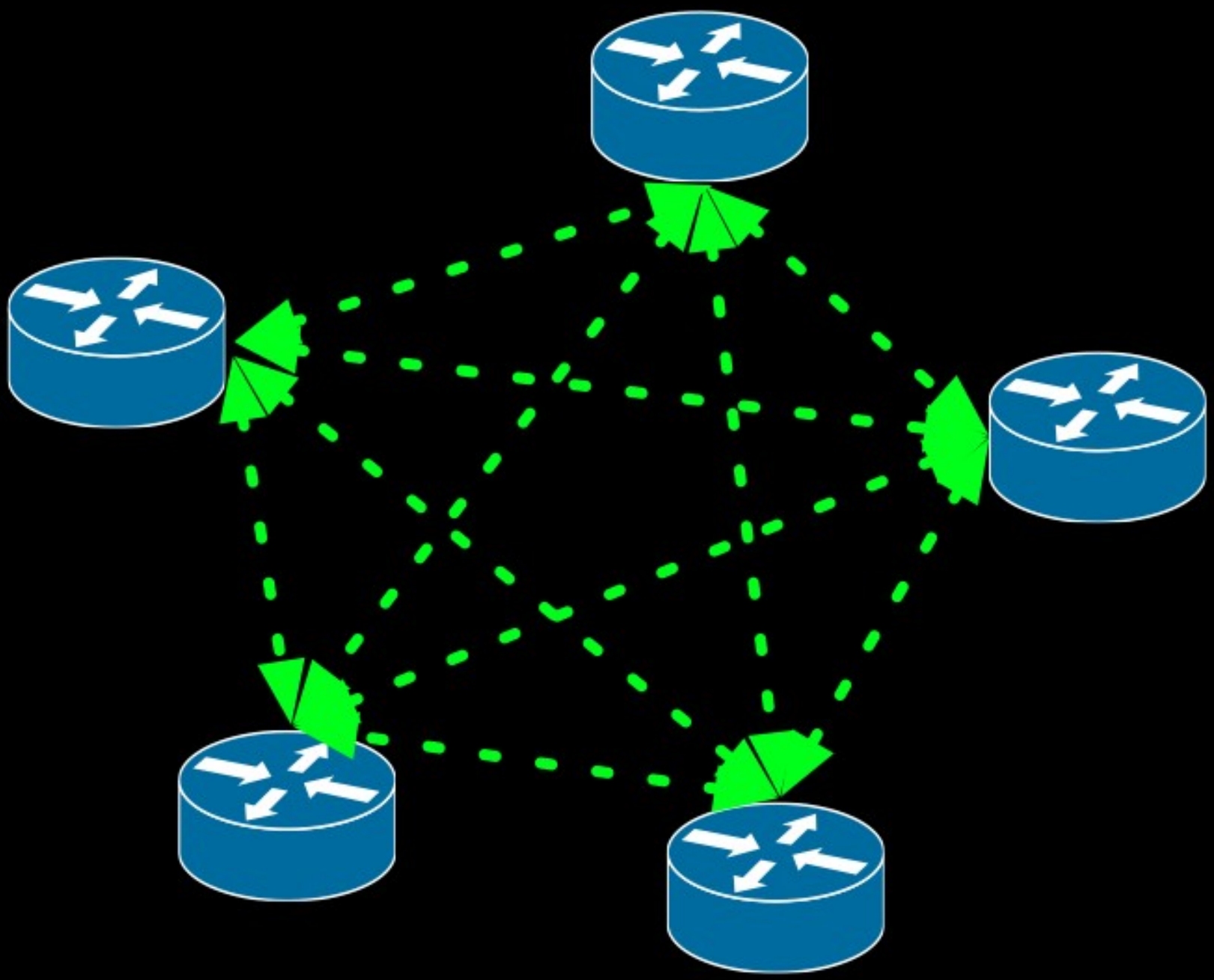
Route Servers

1 Session, Many Peers

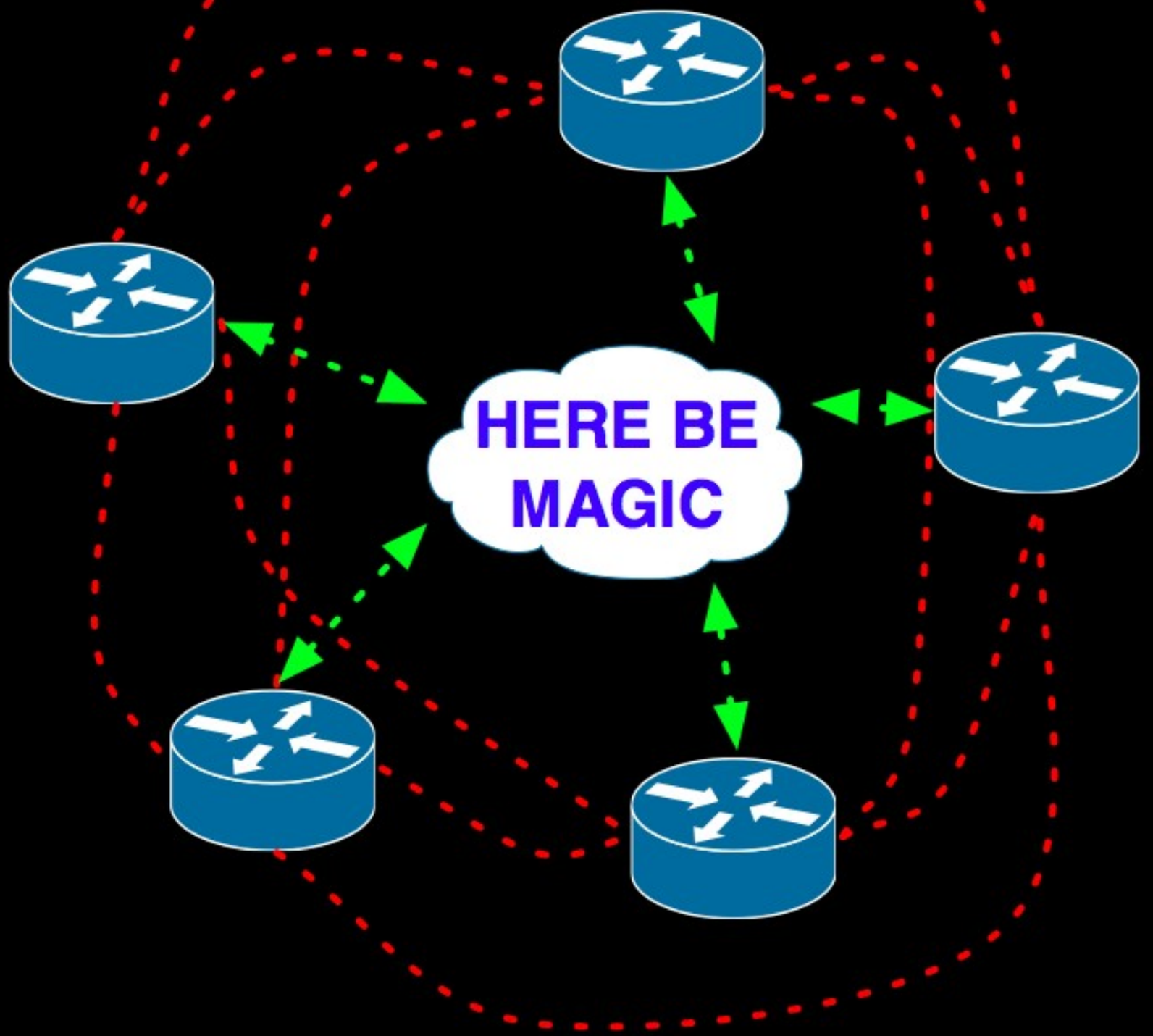
Make it reliable

Make it optional

Election night crowd, Wellington, 1931. Alexander Turnbull Library

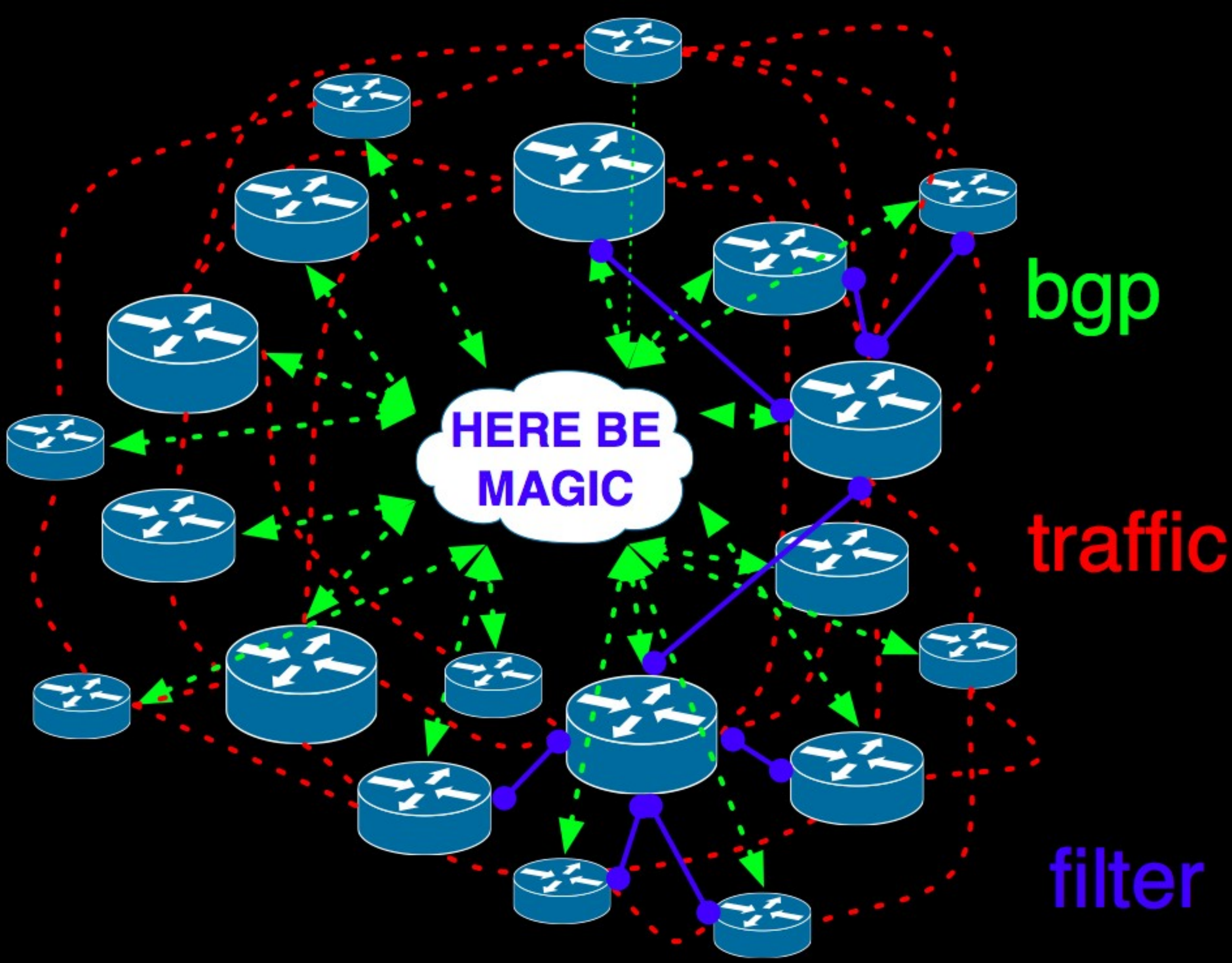


bgp



bgp

traffic


HERE BE
MAGIC
bgp
traffic
filter

Turn up customers!

Announce

Monitor

Connection

Quarantine

Cabling

New customers!

Quarantine Process

New customers

Naughty customers

Prohibited Traffic

BGP Clue

Magnus http://www.flickr.com/photos/magh/2159618408/

1 2 3 4 5 **6**

Offer **IPv6**

From day one

Same service level

Congestion

Member Ports

ISLs

Naoya Fujji - http://www.flickr.com/photos/naoyafujji/3327996845/

ARP Sponge

When larger

Limits spurious broadcasts

Any Questions?

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