



PFS Internet Development Workshops

All the materials are in the public domain, and are free to use for non-commercial purposes, unmodified, and with full attribution. See [Creative Commons](#) licence.

The workshop materials are based on the content of the extremely successful Cisco ISP/IXP Workshop programme which ran from 1997 until 2011. While the programme is no longer active within Cisco, many industry friends and volunteers still use and develop the materials for use in workshops taking place in the Network Operations Group fora and other gatherings around the world.

Category	Presentation
Routing	Internet Introduction
	Routing Introduction
	OSPF Introduction
	OSPF for ISPs
	OSPF in detail
	ISIS Introduction
	ISIS for ISPs
	ISIS in detail
	Comparing ISIS with OSPF
	Migration from OSPF to ISIS
BGP	BGP Introduction
	Scaling BGP
	32bit AS Numbers
	BGP Attributes
	BGP Policy
	BGP Best Current Practices
	Transitioning to BGP
	Simple Multihoming
	Advanced Multihoming
	BGP Communities

Category	Presentation
IPv6	IPv6 Introduction
	The IPv6 Protocol
	IPv6 Address Planning
	IPv6 Address Planning Exercise
	IPv6 Routing
	Introduction to OSPFv3
	ISIS for IPv6
	BGP for IPv6
	IPv6 Transition Planning
	Securing IPv6 Transition Mechanisms
	IPv6 Deployment Study
	IPv6 Deployment Planning
	IPv6 Security
	IPv6 Device Hardening
	IPv6 Routing Security
Design	The Value of Peering
	ISP Network Design
	ISP Systems Design
	IXP Design
	LINX History
	Network Monitoring
	Choosing Routers
Security	Remotely Triggered Blackhole Filtering

Category	Lab Modules	Notes
IPv4	Workshop Setup	
	Introducing ISIS or Introducing OSPF	
	Introducing iBGP	
	OSPF Areas	
	BGP Route Reflector	
	Cisco IOS Essentials	
	Policy Routing	
	ISIS, iBGP & eBGP or OSPF, iBGP & eBGP	
	ISIS, iBGP & eBGP from scratch	For IXP Workshop
	BGP Route Filtering	
	BGP Policy	
	BGP Best Practices	
	Simple IXP	
	Advanced ISIS & iBGP or Advanced OSPF & iBGP	
	Multi-AS (ISIS) & Advanced IXP or Multi-AS (OSPF) & Advanced IXP	
	Address Plan for single AS lab	
	Address Plan for 4 AS lab	

Category	Lab Modules	Notes
IPv6	Workshop Setup	
	Introducing ISIS or Introducing OSPFv3	
	Introducing iBGP	
	OSPF Areas	
	BGP Route Reflectors	
	Migrating from OSPF to ISIS	
	Migrating Dual Stack OSPF to ISIS	
	ISIS, iBGP & eBGP or OSPFv3, iBGP & eBGP	
	ISIS, iBGP & eBGP from scratch	for IXP Workshop
	BGP Route Filtering	
	BGP Policy	
	IPv6 Access	
	Simple IXP	
	Advanced ISIS & iBGP or Advanced OSPFv3 & iBGP	
	Multi-AS (ISIS) & Advanced IXP or Multi-AS (OSPF) & Advanced IXP	
	Address Plan for single AS Labs	
	Address Plan for 4 AS Labs	

From:

<https://bgp4all.com/pfs/> - **Philip Smith's Internet Development Site**

Permanent link:

<https://bgp4all.com/pfs/workshops/start?rev=1466931528>

Last update: **2016/06/26 08:58**

