Workshop Development Notes

Needs to cover:

- setting up IS-IS
  - NSAP address plan
  - setting metrics, level-2, wide metrics
  - selecting DIS
  - multi-topology
  - point-to-point ethernets
  - **Notes:**
    - **all done in existing IS-IS Lab**
- securing IS-IS (with OSPF side example)
  - neighbour authentication
  - no IS-IS outside ASN
  - **Notes:**
    - **all done in existing IS-IS Lab**
    - **need to add OSPF footnote example**
- setting up BGP securely
  - RFC8212 - filters in and out on eBGP
  - passwords on eBGP and iBGP sessions
  - RIR checks on assigned address space of customers - jwhois
  - RFC6890 filtering of bogons & Team Cymru bogon BGP feed
  - Notes:
    - **8212 needs to be explicitly mentioned in eBGP lab**
    - **the rest all covered in BGP Best Practices slide deck**
- BGP scalability & stability features
  - iBGP between loopbacks & next-hop-self
  - route reflector
  - deterministic-med
  - BGP distance > IGP distance
  - stable announcement of covering aggregates out of all eBGP peers
  - **Notes:**
    - **All done in existing BGP materials & labs**
- BGP security features
  - maxas-limit
  - max-prefix
  - ttl-security aka GTSM
  - community propagated for iBGP by default, eBGP selective
  - strip private ASNs
  - **Notes:**
    - **Needs a new lab “Securing BGP Lab”**
- Setting up Communities for BGP scaling

    - security feature → consistent policies across the ASN
- Control plane security
    - setting up SSH on routers
    - protecting VTYs with access filters
- uRPF
    - show how to set up
- RTBH
    - set up within an AS
    - set up between ASNs
        - need to have done communities for this
- BGP SEC
    - Creating ROAs (RIR dependent, but explain the process)
    - Installing and operating NLnet Labs Routinator
        - need containers on VTP for this
    - Setting up RPKI support on a router
    - Implementing route origin validation & related policies
        - Need address space that has been validated - APNIC offered their blocks, but longer term we should have our own.
    - propagating validation state across iBGP
        - standards which vendors aren't supporting, or DIY?
- Troubleshooting BGP Security Operations
    - RouteViews: for analysis, monitoring, troubleshooting
    - Looking Glasses supporting ROA/ROV
        - SEACOM
        - HE BGP Tool: bgp.he.net
    - RIPE NCC: bgpplay
- MANRS
    - conclude with summary of MANRS and what it is about

Back to Home page

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

Permanent link:
https://mail.bgp4all.com/pfs/training/riso/development?rev=1562240365

Last update: **2019/07/04 11:39**