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peer router may be compromised



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* BGPTCP MD5 hack:

always good to have, but doesn't protect against IP/ethernet layer attacks



Risk #1: taking over IP address

```
conf t
in gi3/0
ip address 193.148.15.1
^Z
```



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```
conf t
in gi3/0
ip address 193.148.15.1
^Z
```

- * Rogue router answers ARP requests for this IP #
- * Alternating correct/incorrect ARP entries for address
- * Feel it right away, harder to find out what the exact problem is



Risk #2: taking over MAC address

```
conf t
in gi3/0
mac 0005.dc66.1008
^Z
```



Risk #2: taking over MAC address

```
conf t
in gi3/0
mac 0005.dc66.1008
^Z
```

- * Switches keep learning different addresses
- * Feel it right away, but invisible on routers, so AMS-IX NOC must diagnose





* Static ARP tables on member routers solve taking over IP address



- Static ARP tables on member routers solve taking over IP address
- Only allowing predefined MAC addresses for each member port solves taking over MAC address



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- * Only allowing predefined MAC addresses for each member port may solve other stuff as well



- * Static ARP tables on member routers solve taking over IP address
- * Only allowing predefined MAC addresses for each member port solves taking over MAC address
- * Only allowing predefined MAC addresses for each member port may solve other stuff as well
- * No ARP needed any more, maybe even filter ALL broadcasts?





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- * Are there any benefits if not all ports are filtered?
- * Management:
 - Yes, more work
 - Should be doable if MAC addresses are assigned by AMS-IX (any equipment that doesn't support configurable MAC address?)



Questions?



Thanks for listening!

comments:

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