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IS-IS Authentication

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Last updated: April 23, 2016

Note:

This task assumes that you have already completed the Single-Level IS-IS (http://labs.ine.com/workbook/view/service-provider-v4/task/single-level-is-is-MjgzNw%3D%3D) task. Refer to the **Base IPv4 Diagram** in order to complete this task.

Task

- Configure clear text IS-IS Authentication between R6 and XR1 using the password “INECLEAR”.
- Configure MD5 IS-IS Authentication between R5 and XR1 using the password “INEMD5”.

Configuration **Click to *collapse***

```
R5:
key chain ISIS
 key 1
  key-string INEMD5
!
interface GigabitEthernet1.519
 isis authentication mode md5 level-2
 isis authentication key-chain ISIS


R6:
key chain ISIS
 key 1
  key-string INECLEAR
!
interface GigabitEthernet1.619
 isis authentication mode text level-2
 isis authentication key-chain ISIS


XR1:
router isis 1
 !
 interface GigabitEthernet0/0/0/0.519
  hello-password hmac-md5 INEMD5
  !
 !
 interface GigabitEthernet0/0/0/0.619
  hello-password text INECLEAR
  address-family ipv4 unicast
  !
 !
!
```

Verification

ISIS has several authentication methods, each one designed for a specific purpose. Authentication information is carried inside of the Authentication Information TLV, type 10, in all PDUs. Interface level authentication is used to authenticate the hello (IIH) packets. It can be configured using either clear text with the legacy 'isis password' command, or MD5 using key-chains at the interface level. The level can also be specified, by default both L1 and L2 hello packets are authenticated.

Area and Domain authentication are used to authenticate LSPs, CSNPs, and PSNPs in L1 and L2 respectively. Neither of these authentication mechanisms authenticate hellos. Domain and Area authentication mechanisms have been superseded by a newer protocol level authentication. The newer mechanisms is configured at the routing process with key-chains and supports authentication LSPs, CSNPs, and PSNPs in L1 and L2 using MD5 or clear text.

```
RP/0/0/CPU0:XR1#show isis adjacency

Sat Apr 25 23:52:39.087 UTC


IS-IS 1 Level-2 adjacencies:

System Id      Interface        SNPA           State Hold Changed  NSF IPv4 IPv6
                                                                    BFD  BFD
 R6             Gi0/0/0/0.619    0050.569e.5cec Up    7    00:10:06 Yes None None
 R5             Gi0/0/0/0.519    *PtoP*         Up    28   01:09:33 Yes None None
XR2            Gi0/0/0/0.1920   0050.569e.27ac Up    29   01:09:39 Yes None None


Total adjacency count: 3
```

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