Digging into EIGRP Relationships



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Forming a Neighborship



Forming a Neighborship

EIGRP Timers





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EIGRP Timers

Introduction to the EIGRP Packet

EIGRP Neighborships



Form a trusted bond between devices

EIGRP Neighborships





Form a trusted bond between devices

Once formed, information can be exchanged

Matching:

Autonomous system number (ASN)

Matching:



Matching:

Authentication parameters

Matching:

IPv4 subnet





Normal establishment is automatic



Normal establishment is automatic

Uses multicast hello packets (224.0.0.10 or FF02::A)



Normal establishment is automatic

Uses multicast hello packets (224.0.0.10 or FF02::A)

Neighborship still possible with static configuration

Multicast and unicast messages are exchanged





- Hello



- Hello
- Hold



- Hello
- Hold

Indicates how often hello packets sent



- Hello
- Hold

Indicates how often hello packets sent

Hello packet:

- Discovers new neighbors



- Hello
- Hold

Indicates how often hello packets sent

Hello packet:

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- Acts as keepalive



- Hello
- Hold

Indicates how often hello packets sent

Hello packet:

- Discovers new neighbors
- Acts as keepalive
- Communicates k-values and hold timer value



- Hello
- Hold

Indicates how often hello packets sent

Hello packet:

- Discovers new neighbors
- Acts as keepalive
- Communicates k-values and hold timer value
- Acknowledges other packet types

Hello timer often set to 5 seconds

Hold timer determines when neighbor is down

Hold timer often set to 3X hello timer Neighbors not receiving hello packet within hold timer will be considered down



Timers don't need to match





Timers don't need to match

Devices use neighbors advertised hold timer value EIGRP packet details can be dry





EIGRP



EIGRP

Assigned IP protocol number of 88



EIGRP

Assigned IP protocol number of 88 Use this number while monitoring

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Update (1)

Update (1) Request (2)

Update (1) Request (2) Query (3)

Update (1) Request (2) Query (3) Reply (4)

Update (1) Request (2) Query (3) Reply (4) Hello (5)

Update (1) Request (2) Query (3) Reply (4) Hello (5) SIA query (10)

Update (1) Request (2) Query (3) Reply (4) Hello (5) SIA query (10) SIA reply (11)

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INIT

INIT

Conditionally received (CR)

INIT

Conditionally received (CR)

Restart (RS)

INIT

Conditionally received (CR)

Restart (RS)

End-of-table (EOT)

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Multiple combinations possible





Further coverage in next module





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