FHRP (First-Hop Redundancy Protocol)

Giao thức Dự phòng Chặng Đầu

I. FHRP Fundamental

First Hop Redundancy Protocol (FHRP) is a computer networking protocol designed to provide redundancy for the default gateway in a network. It allows multiple routers to work together to present a single virtual gateway to the end devices on a local network. This ensures that if the primary gateway router fails, a backup router can seamlessly take over, minimizing network downtime and ensuring continuous connectivity.

A diagram of a computer network

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Now, two PCs can ping each other by the default gateway router R2. So what if the R2, two PCs can ping each other through the R1 but they still choose the R1? It’s time FHRP works.

A computer network diagram with white text

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VRRP

FHRP

**II. HSRP (Hot Standby Router Protocol)**

- HSRP Multicast: Devices running HSRP send and receive multicast UDP hello packets every 3 seconds to communicate with each other:

+ Version 1: 224.0.0.2

+ Version 2: 224.0.0.102

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AI-generated content may be incorrect.  
  
A screen shot of a computer

AI-generated content may be incorrect.- Active Router Election: Highest priority -> Highest IP Address

- Version 1: 0000.0CƠ.AC**XX -> Group ID**

- Version 2: 0000.0C9F.F**XXX -> Group ID**

A diagram of a computer system

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AI-generated content may be incorrect.**III. VRRP(Virtual Router Redundancy Protoco)**

**MASTER ROUTER ELECTION:**

- Ip Address Owner -> Highest Priority – Highest IP Address

- 0000.5e00.01XX -> Group IP

- VRRP MULTICAST: VRRP Master devices send advertisements to the below multicast address. VRRP: 224.0.0.18

**iv. GLBP (Gateway Load Balancing Protocol).**

- GLBP MULTICAST: Devices running GLBP send and receive multicast UDP hello packets every 3 seconds to communicate with each other

+ Multicast: 224.0.0.102

+ UDP Port: 3222

A diagram of a network

AI-generated content may be incorrect.- Active Router election: Highest Priority -> Highest IP Address

0007.b400.**XX**.**YY**:

+ XX: Group ID

+ **YY: AVF ID**

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