**SLAAC and DHCPv6**

A diagram of a system

AI-generated content may be incorrect.**I. IPv6 GUA Assignment**

**II. IPv6 Host Link-Local Address**

**-** Automatic IPv6 Configuration: When automatic IPv6 addressing is selected, the host attempts to obtain and configure its IPv6 address automatically.

- Method of Obtaining Information: The host uses one of three methods defined by the ICMPv6 Router Advertisement (RA) messages it receives.

- Router Advertisement (RA): IPv6 routers on the same link send out RA messages to suggest how hosts can obtain their IPv6 addressing information.

- Link-Local Address (LLA): The host automatically creates a link-local address when it boots and the Ethernet interface is active.

- Example Output: The ipconfig output shows an automatically generated LLA on an interface.

- Absence of GUA: In the given example, the interface lacks a Global Unicast Address (GUA) because either there is no router providing network configuration instructions or the host hasn't been configured with a static IPv6 address.

A screenshot of a computer

AI-generated content may be incorrect.**III. RA Message Flag**

- **M flag (Managed Address Configuration Flag):**

* When set to 1, it indicates that the host should use DHCPv6 to obtain its IPv6 address.
* When set to 0, it suggests that the host can use stateless address autoconfiguration (SLAAC) to generate its own IPv6 address based on the prefix advertised in the RA.

- **O flag (Other Configuration Flag):**

* When set to 1, it indicates that the host should use DHCPv6 to obtain other configuration information, such as the DNS server address.
* When set to 0, it suggests that other configuration information is not available via DHCPv6.

**IV. SLAAC Overview (Stateless Address Configuration - Tự động Cấu hình Địa chỉ Không Trạng thá)**

- Not every network has access to a DHCPv6 server but every device in an IPv6 network needs a GUA.

- Enables hosts to create their own unique IPv6 global unicast address

- Stateless service

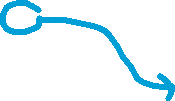
- Periodic ICMPv6 RA messages – every 200 seconds

- Router Solicitation (RS) sent by hostO

Link-Local Address

- Deployed as SLAAC only, or SLAAC with DHCPv6.

Special group

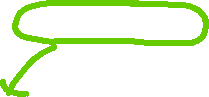


Multicast group

Prefix



Subnet portion



Subnet mask



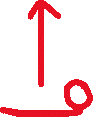
Global Unicast Address



Default gateway



Host portion



A computer screen with white text and yellow text

AI-generated content may be incorrect.**V. Enable SLAAC**

A screen shot of a computer

AI-generated content may be incorrect.

All router



All node



**VI. SLAAC Only Method**A screenshot of a computer program

AI-generated content may be incorrect.