What is the prefix associated with the IPv6 address 2001:db8:d15:ea:cc44::1/64?

1. 2001::/64

2. 2001:db8::/64

3. 2001:db8:d15:ea::/64

4. 2001:db8:d15:ea:cc44::/64.

Step 1: Answer

2001:db8:d15:ea::/64

Step 2: Explanation

The network and subnet IPv6 fields are represented by the /64. The subnet ID is the fourth field of hexadecimal numbers. This address's subnet ID is 2001:db8:d15:ea::/64

A /64 thus denotes the fixed nature of the first 64 bits of the 128-bit IPv6 address. You can use all 64 of the remaining bits, which are flexible in this scenario.

An endpoint device in an IPv6 network is identified by an IPv6 address, which is a 128-bit alphanumeric value. The IPv6 addressing infrastructure replaces the IPv4 addressing infrastructure, which had constraints that IPv6 was created to address.