1. **Brief about SplitMAC architecture and how it improves the AP's performance**

**Split-MAC Architecture:**

In Split-MAC architecture, the responsibilities of a traditional wireless access point are divided. The AP takes care of the immediate, real-time wireless tasks like transmitting and receiving frames, while the central Wireless LAN Controller (WLC) handles the management and control functions such as user authentication, roaming decisions, and policy enforcement. This separation helps simplify the AP's role and enables centralized network control.

**How it Improves AP Performance**

* It alleviates the processing burden on each AP by outsourcing difficult decision-making to the WLC. This frees up resources on the AP to focus purely on handling wireless traffic.
* Because the AP is largely involved in real-time operations such as encryption/decryption and frame processing, it can function more effectively and with less latency.
* The performance of the overall network is enhanced since the AP can transmit data more quickly and reliably, leading to increased throughput.
* Enhances the user experience, particularly in situations with numerous devices connected.
* It also streamlines AP deployment and management, with configurations and updates handled centrally by the WLC.