

EIGRP Summarization:

Auto-Summarization:

Auto Summarization is a feature, which allows Routing Protocols to summarize its routes to their classful networks automatically. By default, EIGRP has auto summary feature enabled. Because of this, routes are summarized to classful address at network boundaries in the routing updates. The Auto-Summarization can be disabled with a command of no auto-summary from the router prompt.

EIGRP Summarization:

By default, EIGRP has auto summary feature enabled. Because of this, EIGRP automatically summarizes networks at the classful boundary. One of the advantages of EIGRP over other routing protocol like, OSPF is that manual summarization can be done on any router within a network. A single route can be used to represent multiple routes, which reduces the size of routing tables in a network. Manual summarization is configured on a per-interface basis on EIGRP. The syntax of the command is (config-if) ip summary-address eigrp ASN SUMMARY_ADDRESS SUBNET_MASK

Manual Summarization:

The manual summarization is a process of creating a summary route that will be used to represent multiple routes and can be used to reduce the sizes of routing tables in a network. Manual summarization is configured differently on different protocols. The manual summarization in EIGRP is configured on the per-interface basis. The **ip summary-address eigrp** configuration command allows you to configure manual summary addresses on a per-interface basis

Advantages of Summarization:

Saves Memory	Routing tables will be smaller which reduces memory requirements.
Saves Bandwidth	There are less routes to advertise so we save some bandwidth.
Saves CPU Cycles	Less packets to process and smaller routing tables to work on.
Stability	Prevents routing table instability due to flapping networks.

