N+1 High Availability

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N+1 mode of high availability in Cisco Catalyst 9800 Series Wireless Controllers allows a single wireless controller (WLC) to be used as a backup controller for 'N' primary controllers. This solution allows high availability to be configured on controllers that are geographically on separate Layer 3 networks or across WAN links.

A single backup controller can be used to provide backup for multiple primary WLCs. These WLCs are independent of each other and do not share configuration or IP addresses on any of their interfaces. Each of these controllers need to be managed separately, and can run a different hardware and a different software version.

Note If the software version is different between the primary and secondary controllers, the AP will download the software upon joining the secondary controller, which can result in a higher failover time.

N+1 high availability is stateless, no state information about APs and clients is shared between controllers. As a result, the AP CAPWAP state machine is restarted when the primary controller fails. If the fallback option is enabled, APs fall back from the backup WLC to the primary WLC automatically when the primary WLC resumes operation. APs with the highest priority on the primary connect first to the backup controller.

N+1 mode of high availability can be configured in combination with AP Stateful Switchover (SSO), where the primary and/or secondary controllers are their own SSO pair.

We recommend that you have the same configuration in terms of WLANs, profiles, mobility group, policy, RF and site tags, as well as AP-to-tag mappings on the primary, secondary, and tertiary controllers to avoid AP flaps and service disruptions during failovers.

For more information, see the Cisco Catalyst 9800 Wireless Controller N+1 High Availability White Paper.

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