System Configuration

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Supported Access Points

- C9105AX

- C9115AX

- C9120AX

- C9130AX

- C9124AX

- C9136I

- CW9162I

- CW9164I

- CW9166I

Note C9115AX APs support only scanning and advertising.

Supported Platforms

- Cisco Catalyst 9800-L Wireless Controller

- Cisco Catalyst 9800-CL Wireless Controller

Note

- In newer C9800-CL platform deployment (Cisco IOS XE 17.15.1 release onwards), choose one of the two App Heavy deployment configurations to allocate additional resources for IoT Orchestrator. Once the C9800-CL node comes up, you must configure the **platform resource app-heavy** command in the configuration prompt mode before starting the IoT Orchestrator Day 0 deployment. To activate the template, you will need to save and reboot the controller.

- You cannot install IoT Orchestrator in C9800-CL running small or medium templates. You will need additional resources.

- Ensure that proper CPU allocation is in place before installing the IoT Orchestrator.

To do so, perform the following:

1. Ensure that the C9800-CL VM has the following resources 16 vCPU, 40 GB RAM, and 32 GB disk space.

2. Verify the current CPU allocation using the following command:

```
Device# show platform software cpu alloc
CPU alloc information:

  Control plane cpu alloc: 0-7

  Data plane cpu alloc: 8-15

  Service plane cpu alloc: 0

  Platform plane cpu alloc: 0-7

  Slow control plane cpu alloc:
  Template used: None
```

Based on the **Templated used** field, the following are the three different scenarios:

a. If the **Templated used** is **CLI-app_heavy**, no action needs to be performed and C9800-CL is ready for IoT Orchestrator installation.

b. If the **Templated used** is **None**, no template is allocated to C9800-CL. To configure the **app-heavy** template, issue the following commands:

```
Device# configure terminal
Enter configuration commands, one per line.  End with
CNTL/Z.
Device(config)# platform resource app-heavy
Please reboot to activate this template

Device(config)#
Device(config)# end
Device# write memory
Building configuration...
[OK]
Device# reload
Reload command is being issued on Active unit, this will
 reload the whole stack
```

```
Proceed with reload? [confirm]
```

Once the C9800-CL reboots, verify if the template is correctly applied or not using the following command:

```
Device# show platform software cpu alloc
CPU alloc information:

  Control plane cpu alloc: 0-7

  Data plane cpu alloc: 14-15

  Service plane cpu alloc: 8-13

  Platform plane cpu alloc: 0-7

  Slow control plane cpu alloc:
  Template used: CLI-app_heavy
```

c. If the **Templated used** is **Error**, this means that the specified template is configured and C9800-CL does not have the resources necessary to create the CPU allocation.

To resolve this after verifying that the resources are allocated to the virtual machine, perform the following:

- Unconfigure the template.

  In this example, the **CLI-app_heavy** template is errored.

  ```
  Device# configure terminal
  Enter configuration commands, one per line.  End with
   CNTL/Z.
  Device(config)# no platform resource app-heavy
  Please reboot to activate this template

  Device(config)#
  Device(config)# end
  Device# write memory
  Building configuration...
  [OK]
  Device# reload
  Reload command is being issued on Active unit, this
   will reload the whole stack
  Proceed with reload? [confirm]
  ```

- Once the C9800-CL reboots, verify that the template is deleted using the following command:

  ```
  Device# show platform software cpu alloc
  CPU alloc information:

    Control plane cpu alloc: 0-7

    Data plane cpu alloc: 8-15

    Service plane cpu alloc: 0

    Platform plane cpu alloc: 0-7

    Slow control plane cpu alloc:
    Template used: None
  ```

- Reconfigure the CPU allocation using the **app_heavy** template by issuing the following commands:

  ```
  Device# configure terminal
  Enter configuration commands, one per line.  End with
   CNTL/Z.
  Device(config)# platform resource app-heavy
  Please reboot to activate this template

  Device(config)#
  Device(config)# end
  Device# write memory
  Building configuration...
  [OK]
  Device# reload
  Reload command is being issued on Active unit, this
   will reload the whole stack
  ```

```
                                    Proceed with reload? [confirm]
```

- Verify if the template is correctly applied after the C9800-CL reboots using the following command:

```
Device# show platform software cpu alloc
CPU alloc information:

   Control plane cpu alloc: 0-7

   Data plane cpu alloc: 14-15

   Service plane cpu alloc: 8-13

   Platform plane cpu alloc: 0-7

   Slow control plane cpu alloc:
   Template used: CLI-app_heavy
```

- Cisco Catalyst 9800-40 Wireless Controller

- Cisco Catalyst 9800-80 Wireless Controller

- Cisco Catalyst CW9800M Wireless Controller

- Cisco Catalyst CW9800H1 and CW9800H2 Wireless Controllers

Scale Requirements

Table 1: Scale Requirements

Platform	Published Scale (Without IoT Orchestrator)	Target Scale (With IoT Orchestrator)
C9800-L	500 Aps, 10K WiFi clients	500 Aps, 10K clients (WiFi + BLE)
C9800-40	2K Aps, 32K WiFi clients	2K Aps, 32K clients (WiFi + BLE)
C9800-80	6K Aps, 64K WiFi clients	6K Aps, 64K clients (WiFi + BLE)
C9800-CL (Small)	1K Aps, 10K WiFi clients	1K Aps, 10K clients (WiFi + BLE)
C9800-CL (Medium)	3K Aps, 32K WiFi clients	3K Aps, 32K clients (WiFi + BLE)
C9800-CL (Large)	6K Aps, 64K WiFi clients	6K Aps, 64K clients (WiFi + BLE)
CW9800M	3K Aps, 32K WiFi clients	3K Aps, 32K clients (WiFi + BLE)
CW9800H1 and CW9800H2	6K Aps, 64K WiFi clients	6K Aps, 64K clients (WiFi + BLE)