



Deploying the Cisco Application Services Engine in a Physical Appliance (ISO) (Fabric External Mode)

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Prerequisites

Complete the following pre-requisites before you start:

- For configuring the Cisco Application Services Engine, you must provide application overlay network. This network must not overlap with any other services in your fabric.
- You must have a NTP server configured in your environment. You must have provided the NTP server information as part of the Cisco Application Services Engine installation procedure.



Note All nodes for fabric internal deployment must be in POD1.

Deploying the Cisco Application Services Engine in a Physical Appliance (ISO)

This procedure is used for setting up fabric external mode of the Cisco Application Services Engine cluster.

Step 1 Download the Cisco Application Services Engine image.

- a) Navigate to the [Software Download](#) page.
- b) Choose the Cisco Application Services Engine ISO image (apic-sn-dk9.1.1.2h.iso).

Step 2 Begin the apic-sn setup utility.

- a) Specify the mode. To specify that the configuration is not obtained from the Cisco APIC cluster enter **n**.

- b) Enter the serial number and a unique hostname for the service node.
- c) Enter the domain name for the service node. The domain name is equivalent to the name of the cluster or the domain name of the fabric.
- d) Enter the password for the rescue-user.

```
Setup utility for apic-sn with SerialNumber CiscoSN01 and running version
2019-07-15.0-se-h1-0-gf2543725
Is this running in ACI mode? (y/n) n
Enter node hostname: atomix1
Enter node domain: atomix.local
Enter the password for rescue-user:
Reenter the password for rescue-user:
```

Step 3 Enter the physical network management IP address and mask.

The physical network management IP address is the out-of-band management IPv4 or IPv6 address used to access the Cisco Application Services Engine GUI, CLI, or API.

```
Enter physical network management IP address and mask: 192.168.3.2/24
```

Step 4 Enter the physical network gateway IP address.

The physical network gateway IP address is used for communication to the external networks using out-of-band management.

```
Enter physical network gateway IP address: 192.168.3.1
```

Step 5 Enter the number of masters in the cluster.

```
Enter number of masters in the cluster (recommended is 3) 3
```

Step 6 Enter the management IP address and serial number of the other master nodes in the cluster.

Step 7 You must assign one node in the cluster as the first master in the cluster. If the cluster already exists, enter **n**.

```
Is this the first node in a new cluster? (y/n) y
```

Step 8 Enter the application overlay network IP address and mask.

It is the private IP address block, /16 network that is required for the container or pod network.

```
Enter application overlay network IP address and mask: 1.1.0.0/16
```

Step 9 Enter the service network IP address and mask.

It is the private IP address block, /16 network that is required for the container or pod network.

```
Enter service network IP address and mask: 2.2.0.0/16
```

Step 10 Enter the search domain.

```
Enter the search domain as a space-separated list: cisco.com
```

Step 11 Enter the addresses of the DNS name servers.

It is the IP address list required for resolving DNS names outside the cluster.

```
Enter nameserver addresses as a space-separated list: 171.70.168.183
```

Step 12 Enter the IP address of the NTP servers. It is required to sync the clock between all the master nodes in the cluster.

```
Enter the ntp servers as a space-separated list: 192.168.13.101
```

Step 13 Perform steps 1- 11 on the other two service nodes.

For node two and three, the management IP addresses, and the serial number of the other master nodes in the cluster are different.

Step 14 After all three service nodes are bootstrapped, wait for 15-30 mins and execute the following command:

```
Server # acidiag health  
cluster is healthy
```

Verify that a “healthy” status is displayed to indicate that the installation was performed successfully.

Step 15 Cisco Application Services Engine is available to deploy the Cisco MSO application.
